

B.ED. SPL. EDUCATION

# HUMAN GROWTH & DEVELOPMENT



SECP-01



MADHYA PRADESH BHOJ (OPEN) UNIVERSITY

# HUMAN GROWTH & DEVELOPMENT

**B.Ed. Spl. Ed**

**(SECP 01)**

**MADHYA PRADESH BHOJ (OPEN) UNIVERSITY,  
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# **Bachelor of Special Education**

**B.Ed. Spl. Ed.**

A Collaborative Programme of



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## UNIT 1

# Human Development as a Discipline from Infancy to Adulthood

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# **BLOCK 1**

## **Approaches to Human Development**



## UNIT 1

# Human Development as a Discipline from Infancy to Adulthood

### 1.1. INTRODUCTION

Human beings keep changing. During their lives, they change in size, appearance and psychological makeup. The way they change differs from individual to individual. However, the fundamental underlying patterns of growth and development remain more or less the same and take place in an orderly way. Each individual, with his unique heredity and the way he is nurtured, determines the way he traverses the broad highway of his life at his rate of progress. He will attain the size, shape, capacities and developmental status in a way, which is peculiar to him at each stages of life.

In this unit, we shall discuss the concept, principles and various stages of growth & development. Children differ in physical, cognitive, social, and emotional growth patterns. They also differ in the ways they interact with and respond to their environment as well as play, affection. Having an understanding of the sequence of growth and development prepares teachers to help and give attention to all the children.

## 1.2. OBJECTIVES

After studying this unit you should be able to

- To understand about Human Development
- To understand about various stages of Human Development
- list the meaning of developmental changes
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

## 1.3. HUMAN DEVELOPMENT

Can you recall events from your early childhood say the second or third year? You might have a few vague and blurred memories about your childhood. The experiences of that period form the basis of the type of person you are today. How human beings grow, change and adjust themselves to their environment is the focus of development and behaviour as also the concepts, principles and theories of growth of development.

The human being is never static. From conception to death, he undergoes changes. There are progressive changes in response to environmental conditions. His body organs and psychological functions show the curves of capacity and achievement as well as slow erosion and decay. Cognitive abilities develop and then degenerate; basic metabolism reaches a peak, then

declines, the endocrine function flourishes, and then fades. There is a rise and fall of physical energy in terms of both the force and speed of action with age. In fact, no organ or function of human beings has yet been found which is independent of age determinants. At the time of conception, a child has genetic potentialities that are partly predictable and partly unpredictable.

#### 1.4. STAGES OF HUMAN DEVELOPMENT

Any development process proceeds through some stages and each development stage differs from the other. Each stage of development has its characteristic. Psychologists have separated human life span into stages or periods and identified specific changes that may be expected during each stage. The transition from one stage to the next is gradual rather than sudden. The age groups assigned to each stage of the development are general as shown in the Table 1.0.

**Table 1.0**  
**Stages of Development**

Age Groups (Years)	Stage of Development	Description of Each Stages
Birth to 2	Infancy	<b>Neonate:</b> This stage is a period from birth to two weeks. <b>Babyhood:</b> This stage is of rapid growth and development. There are changes in body proportions as well as intellectual growth.



2 to 6	Early childhood	This is the preschool period. It is also called the pre-gang age. In this stage, the child seeks gain control over his environment. He also starts to learn to make social adjustment.
6 to 12	Late childhood	This is the primary school age. Here child is expected to acquire the rudiments of knowledge that are considered essential for successful adjustment to adult life. He/She are also expected to learn certain essential skills.
12 to 18	Adolescence	This is the period of physiological change. It is the period when children become sexually mature. It is also the period of intensified personal interaction with peers of the same and opposite sex.
18 to 40	Young adulthood	The responsibilities of adulthood include important decisions like choosing a career, a life partner, etc. Young adulthood begins with setting goals and aspirations.
40 to 60	Middle adulthood	After settling down in thirties and having lived through with rooting phase, the individual starts feeling sense of uprooting and dissatisfaction during the forties. A physical decline in the form of wrinkles, thickening waistlines, greying and thinning

		hair start appearing. The changes are often termed middle life transition, middle age revolt, mid-career crisis or middle-age slump. These terms point U, the loss of youth and the coming of old age. In women, hormonal changes of menopause (ending of menstruation) generate anxiety and depression.
Over 60	Late adulthood	Aging is a process, which causes loss of vitality. Aged adults are more concerned about their health and death. Their visit to doctors is more frequent. Retirement has the worst impact on aged adults. They gradually lose their sense of meaningfulness in life. Some develop interests in social service and spend their time in financial planning, reading, travelling, visiting religious places and enjoying nature.

### 1.5. INFANCY

From birth until the first year, the child is referred to as an infant. Developmental psychologists vary widely in their assessment of infant psychology, and the influence the outside world has upon it, but certain aspects are relatively clear.

The majority of a newborn infant's time is spent in sleep. At first this sleep is evenly spread throughout the day and night, but after a couple of months, infants generally become diurnal.

Infants can be seen to have six states, grouped into pairs:

- quiet sleep and active sleep (dreaming, when REM sleep occurs)
- quiet waking, and active waking
- fussing and crying

### 1.5.1. Infant perception

Infant perception is what a newborn can see, hear, smell, taste, and touch. These five features are better known as one's "five senses". Infants respond to stimuli differently in these different states.

- **Vision** is significantly worse in infants than in older children. Infant sight tends to be blurry in early stages but improves over time. Color perception similar to that seen in adults has been demonstrated in infants as young as four months, using habituation methods. Infants get to adult-like vision in about six months.
- **Hearing** is well-developed prior to birth, unlike vision. Newborns prefer complex sounds to pure tones, human speech to other sounds, mother's voice to other voices, and the native language to other languages. Scientist believes these features are probably learned in the womb. Infants are fairly good at detecting the direction a sound comes from, and by 18 months their hearing ability is approximately equal to an adult's.

- **Smell and taste** are present, with infants showing different expressions of disgust or pleasure when presented with pleasant odors (honey, milk, etc.) or unpleasant odors (rotten egg) and tastes (e.g. sour taste). Newborns are born with odor and taste preferences acquired in the womb from the smell and taste of amniotic fluid, in turn influenced by what the mother eats. Both breast- and bottle-fed babies around 3 days old prefer the smell of human milk to that of formula, indicating an innate preference. There is good evidence for older infants preferring the smell of their mother to that of others.
- **Touch and feel** is one of the better-developed senses at birth considering it's one of the first senses to develop inside the womb. This is evidenced by the primitive reflexes described above, and the relatively advanced development of the somatosensory cortex.
- **Pain:** Infants feel pain similarly, if not more strongly than older children but pain-relief in infants has not received so much attention as an area of research. Glucose is known to relieve pain in newborns.

### 1.5.2. Language

Babies are born with the ability to discriminate virtually all sounds of all human languages. Infants of around six months can differentiate between phonemes in their own language, but not between similar phonemes in another language. At this stage infants also start to babble, producing phonemes.

### 1.5.3. Infant cognition: the Piagetian era

An early theory of infant development was the sensorimotor stage of Piaget's theory of cognitive development. Piaget suggested that an infant's perception and understanding of the world depended on their motor

development, which was required for the infant to link visual, tactile and motor representations of objects. According to this view, it is through touching and handling objects that infants develop object permanence, the understanding that objects are solid, permanent, and continue to exist when out of sight.



Special methods are used in the psychological study of infants.

Piaget's sensorimotor stage comprised six sub-stages. In the early stages, development arises out of movements caused by primitive reflexes. Discovery of new behaviors results from classical and operant conditioning, and the formation of habits. From eight months the infant is able to uncover a hidden object but will persevere when the object is moved.

Piaget came to his conclusion that infants lacked a complete understanding of object permanence before 18 months after observing infants' failure before this age to look for an object where it was last seen. Instead infants continue to look for an object where it was first seen, committing the "A-not-B error." Some researchers have suggested that before the age of eight to nine months, infants' inability to understand

object permanence extends to people, which explains why infants at this age do not cry when their mothers are gone ("Out of sight, out of mind").

#### **1.5.4. Recent findings in infant cognition**

In the 1980s and 1990s, researchers have developed many new methods of assessing infants' understanding of the world with far more precision and subtlety than Piaget was able to do in his time. Since then, many studies based on these methods suggest that young infants understand far more about the world than first thought.

Other research has suggested that young infants in their first six months of life may possess an understanding of numerous aspects of the world around them, including:

- an early numerical cognition, that is, an ability to represent number and even compute the outcomes of addition and subtraction operations;
- an ability to infer the goals of people in their environment;
- An ability to engage in simple causal reasoning.

#### **1.5.5. Critical periods of development**

There are critical periods in infancy and childhood during which development of certain perceptual, sensorimotor, social and language systems depends crucially on environmental stimulation. Feral children such as Genie,

deprived of adequate stimulation, fail to acquire important skills and are unable to learn in later childhood. The concept of critical periods is also well-established in neurophysiology, from the work of Hubel and Wiesel among others.

#### **1.5.6. Developmental delays**

Children with developmental delays (DD) are at heightened risk for developing clinically significant behavioral and emotional difficulties as compared to children with typical development (TD). However, nearly all studies comparing psychopathology in youth with DD employ TD control groups of the same chronological age (CA). This comorbidity of DD and a mental disorder is often referred to as dual diagnosis. Epidemiological studies indicate that 30–50% of youth with DD meet the clinical cutoff for behavioral and emotional problems and/or diagnosable mental disorder. Studies that include comparison samples of children with typical development (TD) highlight the considerable difference in risk for psychopathology, with the relative risk for youth with DD (to youth with TD) ranging from 2.8–4.1 to 1.

### **1.6. ADULTHOOD**

#### **1.6.1. Early adulthood**

Early adulthood, according to theorists such as Erik Erikson, is a stage where development is mainly focused on maintaining relationships. Examples

include creating bond of intimacy, sustaining friendships, and ultimately making a family. Some theorists state that development of intimacy skills rely on the resolution of previous developmental stages. A sense of identity gained in the previous stages is also necessary for intimacy to develop. If this skill is not learned the alternative is alienation, isolation, a fear of commitment, and the inability to depend on others.

A related framework for studying this part of the life span is that of emerging adulthood. Scholars of emerging adulthood, such as Jeffrey Arnett, are not necessarily interested in relationship development. Instead, this concept suggests that people transition after their teenage years into a period not characterized as relationship building and an overall sense of constancy with life, but with years of living with parents, phases of self-discovery, and experimentation.

### **1.6.2. Middle Adulthood**

#### **Middle adulthood**

Middle adulthood generally refers to the period between ages 25 to 69. During this period, middle-aged adults experience a conflict between generativity and stagnation. They may either feel a sense of contributing to society, the next generation or their immediate community or a sense of purposelessness.

Physically, the middle-aged experience a decline in muscular strength, reaction time, sensory keenness, and cardiac output. Also, women experience menopause and a sharp drop in the hormone estrogen. Men experience an equivalent endocrine system event to



menopause. Andropause in males is a hormone fluctuation with physical and psychological effects that can be similar to those seen in menopausal females. As men age, lowered testosterone levels can contribute to mood swings and a decline in sperm count. Sexual responsiveness can also be affected, including delays in erection and longer periods of penile stimulation required to achieve ejaculation.

### **1.6.3. Lateral Adulthood (Old Age)**

#### **Old age**

The World Health Organization finds “no general agreement on the age at which a person becomes old.” Most “developed countries” set the age as 60 or 65. However, in developing countries inability to make “active contribution” to society, not chronological age marks the beginning of old age. According to Erikson's stages of psychosocial development, old age is the stage in which individuals assess the quality of their lives. In reflecting on their lives, people in this age group develop a feeling of integrity if deciding that their lives were successful or a feeling of despair if evaluation of one's life indicates a failure to achieve goals.

Physically, older people experience a decline in muscular strength, reaction time, stamina, hearing, distance perception, and the sense of smell. They also are more susceptible to diseases such as cancer and pneumonia due to a weakened immune system. Programs aimed at balance, muscle strength, and mobility have been shown to reduce disability among mildly (but not more severely) disabled elderly.

Sexual expression depends in large part upon the emotional and physical health of the individual. Many older adults continue to be sexually active and satisfied with their sexual activity.

Mental disintegration may also occur, leading to dementia or ailments such as Alzheimer's disease. It is generally believed that crystallized intelligence increases up to old age, while fluid intelligence decreases with age. Whether or not normal intelligence increases or decreases with age depends on the measure and study. Longitudinal studies show that perceptual speed, inductive reasoning, and spatial orientation decline. An article on adult cognitive development reports that cross-sectional studies show that "some abilities remained stable into early old age."

### 1.7. SUMMARY

The individual from infancy to adulthood grows and develops with specific abilities and aptitudes, interest and talent, temperament and traits, capacity and capability. The sequential physical and mental, social and emotional developments have great significance in the acquisition of learning experiences. Each developmental period accounts for differential psychological attributes which have great significance in educational attainments and learning outcomes.









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UNIT 2

# Concepts and Principles of Development

## STRUCTURE

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### 2.2. Objectives

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##### 2.3.1.2. Psychological perspective

##### 2.3.1.3. Sociological perspective

##### 2.3.1.4. Historical perspective

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**2.6. Check Your Progress**

**2.7. Assignment/Activity**

**2.8. Points For Discussion And Clarification**

**2.9. References / Further Readings**

## UNIT 2

# Concepts and Principles of development

### 2.1. INTRODUCTION

Each of us develops partly like all other individuals, partly like some other individuals, and partly like no other individual. Most of the time, our attention is captured by a person's uniqueness. But psychologists who study life-span development are interested in our shared, as well as our unique, characteristics. As humans we have all traveled common paths. Each of us walked about one year of age, engaged in fantasy play as a young child, sought more independence as an adolescent, and worked at some occupation as a young adult. Each of us, if we live long enough, will experience hearing problems and deaths of family members.

### 2.2. OBJECTIVES

**After going through the unit you will be able to:**

- Understand the meaning of growth and development;
- Explain principles of development;
- To understand the basic fundamental principles of growth and development.
- Understand the influences of heredity (genetic) and environmental influences on growth and development;

### 2.3. CONCEPTS OF GROWTH AND DEVELOPMENT

Although, the terms *growth* and *development* are used interchangeably, they are different and neither takes place alone. *Growth* refers to an actual biological or quantitative increase in size, such as the enlargement of the body or any of its component parts by an increase in the number of cells. An infant who is 20 inches long at birth and later measures 30 inches as grown 10 inches. Increases in head size, heart size, arm and leg length, weight, and so on are generally referred to as results of the growth process.

When we speak of *development*, we mean a pattern of movement or change that begins at conception and continues throughout the life span. Development refers to qualitative changes. These changes are directional and they lead to forward rather than backward. Also there is a definite relationship between a given stage and the stages which precede or follow it. Most development involves growth, although it also consists of decay (as in death). The pattern of change is complex because it is the product of several processes--- biological, cognitive, and socio-emotional.

*Biological processes* involve changes in the individual's physical nature. Genes inherited from parents, the development of the brain, height and weight gains, changes in motor skills, the hormonal changes of puberty, and cardiovascular decline all reflect the role of biological processes in development.

*Cognitive processes* involve changes in the individual's thought, intelligence, and language. Watching a colourful mobile swinging above the crib, putting together a two-word sentence, memorizing a poem, imagining what it would be like to be a

movie star, and solving a crossword puzzle all reflect the role of cognitive processes in development.

*Socioemotional processes* involve changes in the individual's relationships with other people, changes in emotions, and changes in personality. An infant's smile in response to her mother's touch, a young boy's aggressive attack on a playmate, a girl's development of assertiveness, an adolescent's joy at the senior prom, and the affection of an elderly couple all reflect the role of socioemotional processes in development. These three processes are intricately interwoven because we study the development of an integrated individual with a mind and body that are interdependent.

### **2.3.1. NEW WAYS OF LOOKING AT GROWTH AND DEVELOPMENT**

The lifespan approach views development from a number of perspectives. Four of these are especially helpful for understanding children and adolescents: biological, psychological, sociological, and historical perspective.

#### **2.3.1.1. Biological perspective**

*Biological perspective. Development* is the orderly set of changes that occur over time as individuals move from conception to death. Three features characterize these changes: growth, differentiation, and complexity. *Growth* is the result of metabolic process in which proteins are broken down and used to make new cells. New cells are produced when old cells divide; the process is called mitosis. Gains in height of several inches each year are a striking example

of growth during adolescence. Although growth this rapid may feel chaotic to adolescents and parents, it is still an orderly process. This is fortunate, because someone estimated that if we continued to grow at the rate governing the very first cell divisions of life, we would weight two billion times the weight of the earth by the time we reached adulthood. Development progresses from the general to the specific. This aspect of growth is known as *differentiation*. Differentiation brings new complexity, and with it, a need to organize new cells into a functioning whole.

**2.3.1.2. *Psychological perspective.*** The significance of biological changes should not be confused with inches, pounds, curves, or hairs. The real significance of biology, even when it is one's own, is determined by others. Biological change is always interpreted. Does muscular development signal a new maturity or the burden of adult responsibility? Does the onset of menstruation mean that one has become a woman, or the loss of childhood? A psychological perspective on development considers the impact of changes such as these on adolescents' sense of mastery over his body and surroundings.

**2.3.1.3. *Sociological perspective.*** Seen from this perspective, development involves a change in social roles. The sociological perspective views development in terms of the progress people make in passing through social institutions. One's role in the family, in school, or at work change with age. Individuals move from role to role and enter and leave institutions in response to societal

expectations for different ages. This pattern of change is known as age-grading.

**2.3.1.4. Historical perspective.** Societies, like individuals, change with time. Our society has changed in significant ways even within our lifetime. These changes affect us at every stage of the lifespan. For example, the experience of adolescence, or, for that matter, of any age, is as much a product of our society as video games or personal computers. Even though the pattern of growth is the same for each generation, people age in different ways depending on when they are born. Their year of birth defines their *cohort* group. Members of a cohort group undergo similar experiences in the course of their development, experiences they share and that frequently set them apart from other cohorts. Societal changes affect the availability of jobs or scholarships, the number of potential mates, the quality of schools and housing, and innumerable other life circumstances.

## **2.4. Principles Of Development**

**Certain things greatly affect human development. These cannot be put in a serial order according to their importance. These things may be found during childhood. These may be regarded as fundamental principles of child development.**

### **2.4.1 General to Specific Pattern of Development.**

The development of human being proceeds on a well-organized pattern. Every phase of human development is the result of earlier phase. Each phase broadens the path of the future phase. All children follow a similar

developmental pattern, with one stage leading to the next. For example, the baby stands before he walks. In no instance is this order normally reversed. The general pattern is not altered by individual variation in speed of development. In mental as well as motor responses, general activity always precedes specific activity. The fetus moves its whole body but is incapable of making specific responses. But later the baby can use his or her specific body parts. Thus, the development of responses proceed from general to specific. This is true for all mental, physical, motor, emotional and other behavioral developments.

#### **2.4.2 Development as Continuous Process.**

Development is a continuous process. Each new event or change builds upon earlier experiences in an orderly way. Development is smooth and gradual, without any abrupt shifts along the path. No physical or mental trait springs up all of a sudden. Development starts since fertilization in the mother's womb and continues onwards. This process is very slow and runs according to a pattern. The mental and physical traits gradually go on developing in an orderly fashion and reach their peak by the end of adolescence. Since development is continuous, what happens at one stage influences the following stage.

#### **2.4.3 The Product of Maturation and Learning.**

*Maturation* is the unfolding of traits potentially present in the individual because of his hereditary endowment. Learning is development that comes



from exercise and effort. Through learning the child acquires competence in using his hereditary resources. Development of physical and mental traits comes partly from an intrinsic maturing of those traits and partly from exercise and effort on the part of the individual. Development thus depends on the interaction of the hereditary endowment and the social and cultural forces of the environment. The maturation provides the raw material for learning and determines to a large extent the more general patterns and sequences of the child's behaviour.

#### **2.4.4 Predictability of the Developmental Pattern**

Every species, whether animal or human, follows a pattern of development peculiar to that species. In human prenatal development there is a genetic sequence with certain traits appearing at fixed intervals. The same orderly pattern is evident in postnatal development, though individual rate of development may vary more in the postnatal period than in the prenatal period. For example, in physical development during both prenatal and postnatal periods there are two laws of directional sequence of development: the *cephalocaudal* law and the *proximodistal* law. According to the cephalocaudal law, development spreads over the body from head to foot. This means that improvements in structure and function come first in the head region, then in the trunk, and last in the leg region. According to the proximodistal law, development proceeds from near to far--outward from the central axis of the body toward the extremities. Thus the developmental pattern can be predicted in the light of such laws. Predicting development has practical significance too. At a fairly early age child's mature adult size or physique and his or her mental abilities can be

predicted and accordingly learning, educational and vocational plans can be prepared.

#### **2.4.5 Development Proceeds by Stages**

Human life proceeds by stages. Each stage is distinguished by a dominant feature, a leading characteristic, which gives the period its coherence, its unity, and its uniqueness. At different ages certain traits stand out more conspicuously than others. Thus it is possible to mark off major periods each characterized by a specific kind of development which overshadows all others. However, due to individual variations the age limits for these periods can be only roughly predicted. The five major developmental periods in childhood begin with the moment of conception and end when the child becomes sexually mature. These are prenatal (conception to birth), infancy (birth to 10-14 days), babyhood (2 weeks to 2 years), childhood (2 years to adolescence) and puberty (11 to 16 years).

#### **2.4.6 Each Developmental Stage has Characteristic Traits**

The behaviour of a given child is partly determined by his own basic individuality and partly by the pattern of his age level. There is a consistency in each child which stems from the way he attacks the problems that arise at each stage. This consistency results in individual differences. During every stage, some pattern of behaviour that are normal for that stage in the child's physical and mental development are judged as problem behaviour by others. At each stage the child's characteristics vary especially in terms of fear and dependency, curiosity, gregariousness,

identify and independence, heterosexuality etc.

#### **2.4.7 Early Development is Important than Latter Development**

Good physical and mental potentials can be seriously damaged by unfavourable environmental conditions during prenatal and early postnatal life. Psychologists have shown that early childhood experiences are responsible for personality maladjustment during adult life. In terms of attitudes and values people change little as life progresses, even when marked cultural changes are taking place. Thus the foundations and most of the framework of the human action system are laid down in the first decade. The conditions which affect early foundations include favourable interpersonal relationships, emotional deprivation, child-training methods and early role playing.

#### **2.4.8 Different Rates of Development**

Development is not a uniform process. There are slow, medium and rapid rates of physical development in terms of body size and proportions in the life of individual. Development is most rapid during the 9 months before birth when the individual grows from a microscopically small germ cell to an infant to approximately 7 lbs in weight and 20 inches in length. Physical development continues at a rapid rate throughout babyhood to the age of 3 years. From 3 to 6, the child continues to grow rapidly, though not so fast as before. From about the age of 6 until adolescence, his growth slows down somewhat. He develops at a more even rate, with changes occurring in proportions more than in actual size. This stage is followed by a spurt of rapid growth which lasts 2 or 3 years. Physical development is closely paralleled by mental development. When physical development is rapid, so is mental development. Just as physical development is marked

by changes in body proportions as well as by increase in size, so mental development is characterized by different rates of growth for memory, reasoning, association, and other mental abilities. While the development of different physical and mental traits is continuous, it is never uniform for the entire organism. If the body is to attain its adult proportions, inequalities in rate must occur.

#### **2.4.9 Interrelationship of Different Aspects of Development**

Different areas of development are correlated. Correlation between physical and mental development is especially marked. The relationship of the different areas of the body to one another as well as to the total form can be observed easily. There is also a marked association between sexual maturing and patterns of interest and behaviour. As a result, early maturers differ not only in physical but in mental and behavioural development from the maturers of the same age.

#### **2.4.10 Individual Differences in Development**

Although the pattern of development is similar for all children, each child follows the predictable pattern in his own way and at his own rate. Some children develop in smooth, gradual, step-by-step fashion, while others move in spurts. Some show slight swings, while others show wide ones. All children do not, therefore, reach the same point of development at the same age. Individual differences in development are influenced by both internal and external conditions. Physical development, for example, depends partly on hereditary potentials and partly on such environmental factors as food, general health, sunlight, fresh air, climate, emotions, and

physical exertion. Intellectual development is affected by such factors as inherent capacity, emotional climate, encouragement, strong intellectual drive and opportunities for experience and learning. Although the rate of development varies among children, each child displays a certain consistency of development. This means that the child will follow a pattern that is characteristically his, controlled by his unique combination of heredity and environment.

## 2.5. Summary

**Following are the fundamental principles of growth and development.**

**(i) Development follows a pattern or a sequence:**

Development tends to proceed from the head downward. This is called the **cephalocaudal principle**. According to this principle, the child first gains control of the head, then the arms, then the legs. Infants gain control of head and face movements within the first two months after birth. In the next few months, they are able to lift themselves up using their arms. By 6 to 12 months of age, infants start to gain leg control and may be able to crawl, stand, or walk.

Development also proceeds from the center of the body outward according to the **proximodistal principle**. Accordingly, the spinal cord develops before other parts of the body. The child's arms develop before the hands, and the

hands and feet develop before the fingers and toes. Fingers and toes are the last to develop.

**(ii) Development proceeds from general to specific responses:**

It moves from a generalized to localized behaviour. The newborn infant moves its whole body at one time instead of moving only one part of it. It makes random kicking with its legs before it can coordinate the leg muscles well enough to crawl or to walk.

**(iii) Development is a continuous process:**

Development does not occur in spurts. Growth continues from the moments of conception until the individual reaches maturity. It takes place at slow regular pace rather than by 'leaps and bounds'. Although development is a continuous process, yet the tempo of growth is not even, during infancy and early years growth moves swiftly and later it slacken.

**(iv) Different aspects of growth develop at different rates**

Neither all parts of the body grow at the same rate nor do all aspects of mental growth proceed equally. They reach maturity at different times. Development also depends on maturation.

**Maturation** refers to the sequence of biological changes in children. These orderly changes give children new abilities. Much of the maturation depends on changes in the brain and the nervous system. These changes assist children to improve their thinking abilities and motor skills. A rich learning environment helps children develop to their potential.

Children must mature to a certain point before they can gain some skills. For instance, the brain of a four-month-old has not matured enough to allow the child to use words. A four-month-old will babble and coo. However, by two years of age, with the help of others, the child will be able to say and understand many words.

This is an example of how cognitive development occurs from simple tasks to more tasks that are complex. Likewise, physical skills develop from general to specific movements. For example, think about the way an infant waves its arms and legs. In a young infant, these movements are random. In several months, the infant will likely be able to grab a block with his or her whole hand. In a little more time, the same infant will grasp a block with the thumb and forefinger.

**(v) Most traits are correlated in development:**

Generally, it is seen that the child whose intellectual development is above average is so in health size, sociability and special aptitudes.

**(vi) Growth is complex:**

All of its aspects are closely interrelated. The child's mental development is intimately related to his physical growth and its needs.

**(vii) Growth is a product of the interaction of the organism and environment:**

Among the environmental factors one can mention nutrition, climate the conditions in the home, the type of social organization in which individual moves and lives.

**(viii) There are wide individual differences in growth:**

Individual differences in growth are caused by differences in heredity and environment.

**(ix) Growth is both quantitative and qualitative:**

These two aspects are inseparable. The child not only grows in 'size'; he grows up or matures in structure and function too.

**(x) Development is predictable:**

It is possible for us to predict at an early age the range within which the mature development of the child is likely to fall. However, mental development cannot be predicted with the same degree of accuracy.

## **2.6. Check Your Progress**

**1) Indicate 'G' for 'growth' and 'D' for 'development' for each of the following statements.**

- a) A six-month-old baby shows signs of teething.
- b) A three-month-old baby begins to turn over and lie on its stomach.
- c) An infant begins to focus its eyes on an object dangling before it.
- d) A thirteen-year-old boy begins to have hair on his face.

**2) Write 'T' for 'true' and 'F' for 'false' for the following statements.**

- a) A child talking full sentences is part of development.
- b) The difference in height between two children is due to the different rates of their development
- 3) Differentiate between growth and development.
- 4) Describe briefly the principles of growth and development

## **2.7. Assignment/Activity**







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## UNIT 3

### **Developing Human- Stages (Prenatal development, Infancy, Childhood, Adolescence, Adulthood)**

#### **STRUCTURE**

#### **3.1. INTRODUCTION**

#### **3.2. OBJECTIVES**

#### **3.3. STAGES OF PRENATAL DEVELOPMENT**

##### **3.3.1. The zygote**

##### **3.3.2. The embryo**

##### **3.3.3. The fetus**

#### **3.4. DEVELOPMENTAL CHARACTERISTICS OF CHILDREN AND ADOLESCENTS: PHYSICAL, COGNITIVE, EMOTIONAL AND SOCIAL ASPECTS**

##### **3.4.1. Developmental Characteristics of Infancy (Birth to 2 Years)**

##### **3.4.2. Developmental Characteristics of Early Childhood (2-6 Years)**

##### **3.4.3. Developmental Characteristics of Late Childhood (Age 6-12 Years)**

##### **3.4.4. Developmental Characteristics of Adolescence (Age 12-18 Years)**

#### **3.5. SUMMARY**

#### **3.6. CHECK YOUR PROGRESS**

#### **3.7. ASSIGNMENT/ACTIVITY**

### 3.8. POINTS FOR DISCUSSION AND CLARIFICATION

### 3.9. REFERENCES / FURTHER READINGS

## UNIT 3

### Developing Human- Stages (Prenatal development, Infancy, Childhood, Adolescence, Adulthood)

#### 3.1 INTRODUCTION

Children and adolescents grow and develop at very different rates. Each individual is unique, with a distinct personality and life experience. For this reason, age is not the only sign of where a particular child or adolescent is in terms of development. The different aspects of development are as follows.

- **Physical development** – genetic make-up, ethnicity, race, gender, nutrition and diet, exercise, sleep patterns, use of tobacco, alcohol or other drugs, stress and stressful life events, environmental toxins and socioeconomic status
- **Cognitive development** – academic setting, family environment, parent or caregiver involvement, access to early education opportunities, teacher support, personal motivation, gender and cultural or ethnic context
- **Emotional development** – individual temperament, parent and family relationships, support network, life experiences and transitions; media exposure and influence and a tendency toward risk-taking or delinquent behaviours
- **Social development** – peer influence, popularity, community and societal context

### 3.2 OBJECTIVES

- To understand the concept of various stages of human development like Prenatal development, Infancy, Childhood, Adolescence, Adulthood
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

### 3.3 STAGES OF PRENATAL DEVELOPMENT

Prenatal development is typically divided into three distinct periods (zygote, embryo, and fetus). Although they are distinct in many ways, these periods should be thought of as comprising continuous phases of development, for from the moment the sperm penetrates the ovum, development involves a systematic series of sequential changes by which the organism becomes increasingly complex and differentiated.

#### 3.3.1 The Zygote

The period of zygote includes approximately the first 2 weeks of life, extending from the time a sperm fertilizes the ovum. A *zygote* is a fertilized egg. It receives one-half of its chromosomes from the mother, the other half from the father. The *zygote* begins as a single cell. The *germinal period* is the first 2 weeks after conception. After 1 week and many cell divisions, the zygote is made up of 100 to 150 cells. At the end of 2 weeks, the mass of cells attaches to the uterine wall.

### **1.3.2 The Embryo**

During the embryonic period, 2 to 8 weeks after conception, some remarkable developments unfold. Before most women even know they are pregnant, the rate of cell differentiation intensifies, support systems for the cell form, and organs appear. In the third week, the neural tube that eventually becomes the spinal cord is forming. At about 21 days, eyes begin to appear, and by 24 days, the cells of the heart begin to differentiate. During the fourth week, arm and leg buds emerge. At 5 to 8 weeks, arms and legs become more differentiated, the face starts to form, and the intestinal tract appears. All of this is happening in an organism that, by 8 weeks, weighs only 1/30 ounce and is just over 1.5 inches long.

### **1.3.3 The Fetus**

This period begins 2 months after conception and lasts, on the average, for 7 months. Growth and development continue their dramatic course, and organs mature to the point where life can be sustained outside the womb. At 4 months after conception, the fetus is about 6 inches long and weighs 4 to 7 ounces. Prenatal reflexes become more apparent, and the mother feels the fetus move for the first time. At 6 months after conception, the eyes and eyelids are completely formed, a fine layer of hair covers the fetus, the grasping reflex appears, and irregular breathing begins. By 7 to 9 months, the fetus is much longer and weighs considerably more. In addition, the functioning of various organs steps up.



### **3.4 DEVELOPMENTAL CHARACTERISTICS OF CHILDREN AND ADOLESCENTS: PHYSICAL, COGNITIVE, EMOTIONAL AND SOCIAL ASPECTS**

#### **3.4.1 Developmental Characteristics of Infancy (Birth to 2 Years)**

##### ***Physical Development***

The development of control and mastery over one's own body in both gross and fine motor skills is the infant's primary physical task, culminating toward the end of the first year in walking.

The infant perfects the gross and fine motor skills that emerged during the first year by developing balance, coordination, stability, and an improved ability to manipulate objects.

##### ***Cognitive Development***

Cognition begins with alertness, awareness, recognition, and interest in visual, auditory, and tactile (touch) stimuli. As motor development improves, the infant begins to explore and manipulate objects and develops a rudimentary understanding of their properties. Infants develop *object permanence* toward the end of the first year.

- The emergence of symbolic thought is central to cognitive development. This results in the ability to understand and produce language.

##### ***Social Development***

The most important social task is the development of attachment to the primary caretaker, most often the child's mother. The child develops affectionate and trusting relationships with other family members and with adults outside the family. The child can also be engaged in simple games and play.

### *Emotional Development*

The development of basic trust, a derivative of the positive attachment between the infant and the primary caretaker, occurs during the first year. This is a cornerstone of emotional development.

The primary developmental task involves the development of autonomy, which includes mastery and control over oneself and one's environment. Children develop a rudimentary self-concept, experiencing pride and pleasure at being "good" and embarrassment, shame, and distress at being "bad."

### **Infancy (Birth-12 Months)**

- Psychosocial Crisis: Trust vs. Mistrust
- Main question asked: "Is my world predictable and supportive?"
- Central focus: Receiving care
- Positive outcome: Trust in people and the environment
- Virtue: Hope

Developmental tasks: Attachment, maturation of sensory, perceptual, and motor functions

### **3.4.2 Developmental Characteristics of Early Childhood (2-6 Years)**

#### *Physical Development*

The child develops increased strength and uses motor skills to master challenges in the environment, such as bicycles, stairs, balls, playground equipment, eating utensils, crayons, and other objects. The child is developmentally ready to master toilet training. Most basic gross motor

abilities have emerged. Existing skills are practiced and perfected, and the child develops mastery in applying motor skills to increasingly challenging and complex situations.

### ***Cognitive Development***

Perfection of language skills and the use of language to communicate with others is the principle cognitive task. Language develops rapidly. Grammar and syntax are refined, and vocabulary increases geometrically. The child uses language as a communication tool. Thinking is concrete and egocentric in nature. Problem solving is illogical and magical thinking and fantasies are prevalent.

### ***Social Development***

The child develops rudimentary relationships with other children, which are usually characterized by "parallel play," that is playing in the presence of, rather than in interaction with, other children. Children also begin to imitate social roles at this time.

Toilet training represents a significant internalization of social rules and expectations.

The child expands social relationships outside the family and develops interactive and cooperative play skills with peers. The child begins to understand, explore, imitate, and practice social roles. The child learns concepts of "right" and "wrong" and begins to understand the nature of rules. He experiences guilt when he has done something wrong.

### ***Emotional Development***

The preschool child has been described as "on the make." Erikson refers to the child's primary mode of operation during this stage as initiative. The

child is intrusive, takes charge, is very curious and continually tries new things, actively manipulates the environment, and is self-directed in many activities. The child's ability to understand "right" and "wrong" leads to self-assessments and affects the development of self-esteem.

### **3.4.3 Developmental Characteristics of Late Childhood (Age 6-12 Years)**

#### ***Physical Development***

The child practices, refines, and masters complex gross and fine motor and perceptual-motor skills.

#### ***Cognitive Development***

Concrete operational thinking replaces egocentric cognition. The child's thinking becomes more logical and rational. The child develops the ability to understand others' perspectives.

#### ***Social Development***

Relationships outside the family increase in importance, including the development of friendships and participation in a peer group. The child imitates, learns, and adopts age appropriate social roles, including those that are gender-specific. The child develops an understanding of rules. Rules are relied upon to dictate proper social behaviour and to govern social relationships and activities.

#### ***Emotional Development***

The child is industrious, purposeful, and goal directed in her activities. She is confident and self-directed. The child is developing a better sense of herself as an individual, with likes and dislikes and special areas of skill. She is capable of introspection. The child evaluates her worth by her

ability to perform. Self-esteem is largely derived from one's perceived abilities.

#### **3.4.4 Developmental Characteristics of Adolescence (Age 12-18 Years)**

##### ***Physical Development***

Physiological changes at puberty promote rapid growth, the maturity of sexual organs, and development of secondary sex characteristics.

##### ***Cognitive Development***

During early adolescence, precursors to formal operational thinking appear, including a limited ability to think hypothetically and to take multiple perspectives. During middle and late adolescence, formal operational thinking becomes well developed and integrated in a significant percentage of adolescents.

##### ***Social Development***

Social relationships in early adolescence are centered in the peer group. Group values guide individual behaviour. Acceptance by peers is critical to self-esteem. Most peer relationships are still same-sex.

Young adolescents become interested in sexual relationships, but most contact is through groups. Some youth may begin to experiment with sexual behaviour, but many early adolescents are not sexually active with other youth. Social roles are still largely defined by external sources.

During middle and late adolescence, values become individualized and internalized after careful consideration and independent thought. Friends are more often selected on personal characteristics and mutual interests. The peer group declines in importance, individual friendships are

strengthened, and more youth "date" in one-on-one relationships. The youth experiments with social roles and explores options for career choice.

***Emotional Development***

The early adolescent is strongly identified with the peer group. Youth depend upon their peers for emotional stability and support and to help mold the youth's emerging identity. Self-esteem is greatly affected by acceptance of peers.

Early adolescents are emotionally labile with exaggerated affect and frequent mood swings. They are very vulnerable to emotional stress.

During middle and late adolescence, identity is more individualized, and a sense of self develops and stabilizes that is separate from either family or peer group. Self-esteem is influenced by the youth's ability to live up to internalized standards for behaviour. Self-assessment and introspection are common.

### 3.5 SUMMARY

#### YOU AND YOUNG CHILDREN

There are several ways that you can help a young child to develop language skills:

##### **Talk.**

All child development experts recommend that you talk to a baby long before he or she can talk back. Dr. White advises talking to babies about the concrete things they are oriented to at the moment. As babies' language develops, talk to them at or slightly above their level of development, he says.

##### **Play games.**

Even before babies talk, games prepare them for later verbal exchanges. For example, the alternation involved in a game of peek-a-boo sets the stage for the give-and take alternation of conversational dialogue. Songs introduce children to the enjoyment of sound. For older children, make-believe games help develops language skills. Fantasy play - pretending to be parents or clerks or doctors - gets kids talking and stretches their vocabularies.

##### **Read aloud.**

Experts stress reading stories to children to encourage language growth. Show the child pictures and then label them with words. Later ask the child to identify the picture. Respond to vocalizations that sound like words.

##### **Respond.**

Young children's language is not always easy to understand. When a tot asks, "Bekka do way so no?" what do you say? Experts stress the importance of trying to understand and respond because the reinforcement stimulates children to speak more.

### 3.6 Check Your Progress

1) Match the columns of physical development of the following stages:-

**A**

1. Infancy
2. Childhood
3. Adolescence

**B**

- a. considerable stability is attained.
- b. Physical maturity attained at optimum level.
- c. Motor & neuromuscular coordination begins.

2) Match the columns of social development of the following stages:-

**A**

1. Infancy
2. Childhood
3. Adolescence

**B**

- a. Radical outlook and questioning of the social norms.
- b. Social response directed towards family members.
- c. Social values, attitudes and interests are developed.

2) What is a neonate?

- a) A newborn baby    b) An irritable baby    c) An unloved baby.    d) An abnormal baby.



### 3.7 Assignment/Activity

#### 3.11 Points For Discussion And Clarification

After going through this Unit you might like to have further discussion on some points and clarification on others

##### 3.11.1 Points for discussion

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**3.11.2 Points for clarification**

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## UNIT 4

# Nature Vs Nurture

### STRUCTURE

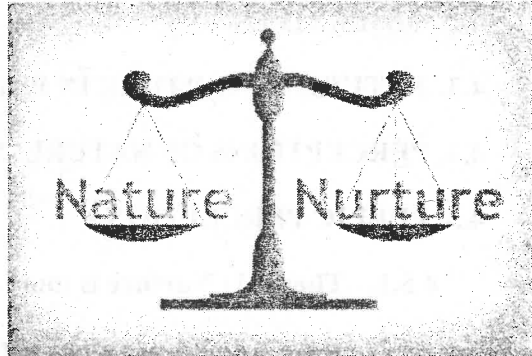
- 4.1. INTRODUCTION
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## UNIT 4

# Nature Vs Nurture

### 4.1. INTRODUCTION

Each theory describes the course of human development, and also each theory takes a stance on a major question about its underlying causes: Are genetic or environmental factors important in determining development?



This is the age-old nature-nurture controversy. By nature, we mean inborn biological givens-the hereditary information we receive from our parents at the moment of conception. By nurture, we mean the complex forces of the physical and social world that influence our biological makeup and psychological experiences before and after birth. Even though all theories grant at least some role to both nature and nurture, they vary in emphasis. For example, consider the following questions: Is the developing person's ability to think in more complex ways largely the result of an inborn timetable of growth? Or is it primarily influenced by stimulation from parents and teachers? Do children acquire language rapidly because they are genetically predisposed to do so or because parents tutor them from an

early age? And what accounts for the vast individual differences among people-in height, weight, physical coordination, intelligence, personality, and social skills? Is nature or nurture more responsible? The theories take a stand on nature versus nurture affect their explanations of individual differences. Some theorists emphasize stability- that individuals who are high or low in a characteristic (such as verbal ability, anxiety, or sociability) will remain so at later ages. These theorists typically stress the importance of heredity. If they regard environment as important, they usually point to early experiences as establishing a lifelong pattern of behavior. Powerful negative events in the first few years, they argue, cannot be fully overcome by later, more positive ones. Other theorists take a more optimistic view. They emphasize plasticity-that change is possible and likely if new experiences support it.

#### **4.2. OBJECTIVES**

- To understand perceptions of nature, nurture and behavior
- To understand public perceptions
- To study about genes and environment
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

#### **4.3. NATURE VS NURTURE IN PSYCHOLOGY**

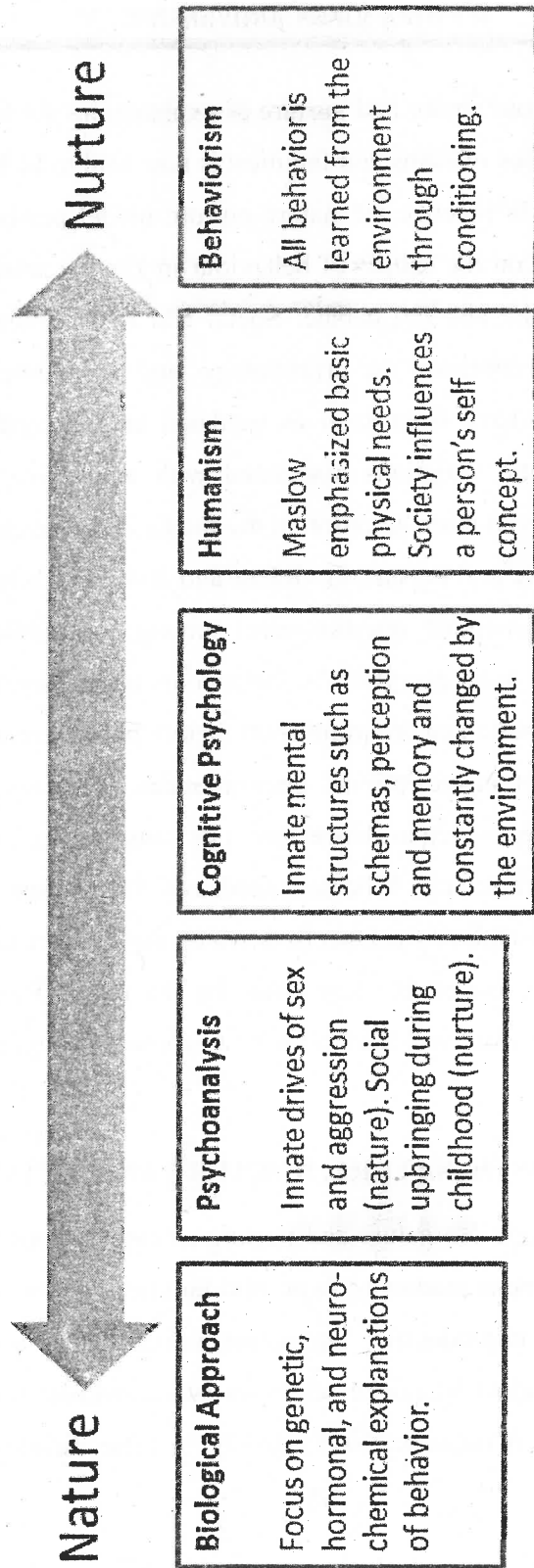
This debate within psychology is concerned with the extent to which particular aspects of behavior are a product of either inherited (i.e. genetic) or acquired (i.e. learned) characteristics.



Nature is what we think of as pre-wiring and is influenced by genetic inheritance and other biological factors. Nurture is generally taken as the influence of external factors after conception e.g. the product of exposure, experience and learning on an individual. The nature-nurture debate is concerned with the relative contribution that both influences make to human behavior.

Fig.1.1

# Approaches to Psychology



Trying to separate out nature and nurture as explanations for behaviour, as in classic genetic studies of twins and families, is now said to be both impossible and unproductive. In practice the nature-nurture model persists as a way of framing discussion on the causes of behaviour in genetic research papers, as well as in the media and lay debate. Social and environmental theories of crime have been dominant in criminology and in public policy while biological theories have been seen as outdated and discredited. Recently, research into genetic variations associated with aggressive and antisocial behaviour has received more attention in the media. This paper explores ideas on the role of nature and nurture in violent and antisocial behaviour through interviews and open-ended questionnaires among lay publics. There was general agreement that everybody's behaviour is influenced to varying degrees by both genetic and environmental factors but deterministic accounts of causation, except in exceptional circumstances, were rejected. Only an emphasis on nature was seen as dangerous in its consequences, for society and for individuals themselves. Whereas academic researchers approach the debate from their disciplinary perspectives which may or may not engage with practical and policy issues, the key issue for the public was what sort of explanations of behaviour will lead to the best outcomes for all concerned.

#### **4.4. PERCEPTIONS OF NATURE, NURTURE AND BEHAVIOR**

Trying to separate out nature and nurture as explanations for behaviour, as in classic genetic studies of twins and families, is now said to be both impossible and unproductive. The nature-nurture debate is declared to be officially redundant by social scientists and scientists, 'outdated, naive and unhelpful' (Craddock, 2011, p.637), 'a false dichotomy' (Traynor

2010, p.196). Geneticists argue that nature and nurture interact to affect behaviour through complex and not yet fully understood ways, but, in practice, the debate continues<sup>1</sup>. Research papers by psychologists and geneticists still use the terms nature and nurture, or genes and environment, to consider their relative influences on, for example, temperament and personality, childhood obesity and toddler sleep patterns (McCrae et al., 2000; Anderson et al., 2007; Brescianini, 2011). These papers separate out and quantify the relative influences of nature/genes and nurture/environment. These papers might be taken to indicate how individuals acquire their personality traits or toddlers acquire their sleep patterns; part is innate or there at birth and part is acquired after birth due to environmental influences. The findings actually refer to technical heritability which is, 'the proportion of phenotypic variation attributable to genetic differences between individuals' (Keller, 2010, p.57). In practice, as Keller illustrates, there is 'slippage' between heritability, meaning a trait being biologically transmissible, and technical heritability. This is not simply a mistake made by the media or 'media hype' but is, she argues, 'almost impossible to avoid' (ibid, p.71). While researchers are aware of the complexity of gene-environment interaction, the 'nature and nurture' model persists as a simple way of framing discussion on the causes of behaviours. It is also a site of struggle between (and within) academic disciplines and, through influence on policy, has consequences for those whose behaviours are investigated. There is general agreement between social scientists and geneticists about the past abuses of genetics but disagreement over whether it will be possible for the new behavioural genetics to avoid discrimination and eugenic practices, and about the likely benefits that society will gain from this research (Parens et al. 2006,

xxi). In a special issue of the American Journal of Sociology 'Exploring genetics and social structure', Bearman considers the reasons why sociologists are concerned about genetic effects on behaviour; first they see it as legitimating existing societal arrangements, which assumes that 'genetic' is unchangeable. Second, if sociologists draw on genetic research it contaminates the sociological enterprise and, third, whatever claims are made to the contrary, it is a eugenicist project (Bearman, 2008, vi). As we will see all these concerns were expressed by the publics in this study. Policy makers and publics are interested in explaining problem behaviour in order to change/control it, not in respecting disciplinary boundaries, and will expect the role of genetics to be considered alongside social factors.<sup>2</sup> Social and environmental theories of criminal behaviour have been dominant in criminology, and in public policy (Walsh, 2009, p.7). Genetic disorders and mental illness have provided explanations for a small minority of offenders with specific conditions. A 2007 survey of American criminologists found that 'criminologists of all ideological persuasions view alleged biosocial causes of crime (hormonal, genetic, and evolutionary factors and possibly low intelligence) as relatively unimportant' compared with environmental causes (Cooper et al., 2010). Sociology textbooks have typically discussed biological theories of criminality only as discredited (Haralambos and Holborn, 2004, Giddens, 2009). Biosocial theories are seen as attractive to 'agents of social control' and to be more likely to lead to abusive treatment of offenders. However, with increasing research and public interest in genetics more attention has been paid to biological aspects of crime and to genetic variations within the normal range. Research has focussed on violent and antisocial behaviours which are criminal or may be seen as a

precursor to criminal behaviour, for example, antisocial behaviour in young people. Media reports have headlined ‘warrior genes,’ ‘the aggressive gene’ and the ‘get out of jail free gene, all referring to levels of monoamine oxidase A (MAOA) (Lea and Chambers, 2007; Levitt and Pieri, 2009)<sup>3</sup>. Think tanks and ethics groups have considered the ethics and practicalities of genetic testing for behavioural traits (Campbell and Ross, 2004; Dixon, 2005 Nuffield Council on Bioethics, 2002). An attraction of research into genes and behaviour is the hope that identifying a genetic factor that is correlated with an increased incidence of, say, violent and antisocial behaviour, will point to a way of reducing such behaviour. Fotaki discusses the attraction of biological explanations of inequalities in health based on the assumption that genetic interventions ‘would succeed in addressing the causes of ill health that public health policies cannot.’ (Fotaki, 2011, p.641). The danger is that biological explanations ‘are once more employed for political purposes to explain away the social roots of health inequalities.’ (ibid). Social scientists, and criminologists, have presented biological/genetic explanations of behaviour as dangerous in terms of their potential effect on the individuals or groups identified as genetically at risk. There are obvious dangers of discrimination against, and the stigmatisation of, already vulnerable groups who would be the first to be tested i.e. ‘problem’ families or minority ethnic groups. Discrimination could affect education, employment and family life. The effect of an individual being told s/he has a risk based on a genetic test has been much discussed in relation to health risks (Claassen et al., 2010. While such information could be motivating, because it is personalised, it can also induce a fatalistic attitude that discourages the person from taking preventative measures.

Claasen et al. conclude that it is important to identify those vulnerable to the fatalistic impact and to tailor health risk information (ibid p.194). Identifying risk for behaviour, rather than for disease, is likely to be more problematic because of the difficulty of finding preventative measures that are within the individuals' own control. ...using DNA to assess risk, make a diagnosis or tailor treatments, may weaken beliefs in the efficacy of preventive behaviour and reinforce biological ways of reducing risk, resulting in a preference for medication as opposed to behavioural means to control or reduce risk (ibid, xiv). Claasen et al.'s comment on genetic tests for health conditions could apply equally to parents given a behavioural risk for their young child from a genetic test, perhaps before any problem behaviour was evident. The test result could weaken parents' belief that they could take action to prevent/reduce the risk of the behaviour developing in their child and pharmaceutical solutions, as posited by Caspi et al. might not be available (Caspi et al., 2002, xvii). However, it is not necessarily the case that evidence of genetic or biological influence on behaviour leads to more punitive treatment. DeLisi et al. give the example of the use of findings from adolescent brain science in the case of Roper v. Simmons in the US which abolished the death penalty for adolescents. On the basis of the research it was stated that young people under the age of 18 'are more vulnerable or susceptible to negative influences and outside pressures including peer pressure' (DeLisa et al., 2010, p.25) When evidence on genetic traits associated with criminal behaviour has been allowed by courts, mainly in the US, it has so far more often been accepted as a mitigating rather than an aggravating factor in the offenders' behaviour (Denno, 2009, Farahany and Coleman, 2006). Environmental explanations of behaviour can, of

course, also be presented as deterministic, claiming a closed future for those experiencing poverty and disadvantage. However, it is biological explanations that have caused more concern not only because of the history of eugenics but also because they may be seen as more fundamental, being there from birth, and as harder to change. The public in surveys are reported to see the greatest role for genetic factors in physical features, a lesser role in health conditions and a smaller role still in human behaviour (Condit, 2010, p.619).

#### **4.5. PUBLIC PERCEPTIONS**

The model of nature/genes and nurture/environment is still used in behavioural genetics, as well as in popular culture, and has implications for public policy, including the treatment of offenders who claim that a genetic trait has influenced their criminal behaviour. The aim of this research was to explore ideas on the causes of behaviour, particularly violent and antisocial behaviour and examine how respondents use the nature/nurture model. This qualitative research looks at the ways in which lay publics in different age groups conceptualise the factors and influences that made them who they are and their explanations for the behaviour of other people; especially violent behaviour. It was hypothesised that the increased research and media emphasis on the role of genetic factors in health and behaviour might result in an increasing interest in 'nature, biology' and genes as explanations for behaviour particularly among the young, but, when explaining their own behaviour people might prefer to see themselves as agents with control over their lives. By exploring explanations of behaviour with respondents from



different generations, age differences should be apparent. The views of 78 respondents from 3 generations were gathered by individual interview and questionnaires, using the same open ended questions and responses to two real-life criminal court case studies where environmental or genetic factors had been used by the defence team. Respondents were drawn from a group of retired people participating in an informal 'senior learners' programme at Lancaster University, a group of their mainly younger relatives and, in order to recruit more third generation respondents, a group of first year students taking a criminology module. The senior learners group had a programme of talks and discussions and could attend undergraduate lectures. They had, by definition, shown an interest in current issues in a range of fields. There were no educational or age requirements for the group but all the volunteers were retired from paid work and were aged from around 65 years to over 80 years.. They had had similar careers to those popular with social science students; social work, probation, teaching and administrative positions. The senior learners were asked to pass on questionnaires to younger relatives to investigate age differences in attitudes. The first 13 senior learners who responded were interviewed but as only 15 questionnaires were received from their relatives ethical approval was obtained to distribute the same questionnaire to Lancaster University students taking the criminology first year module. Most students were enrolled on social science degrees, including psychology and sociology, and age 18 or 19. While the sample of senior learners and relatives had only a few more women than men, 78 per cent of the students were female reflecting the gender balance on the module as a whole. This makes it difficult to comment on any gender differences in responses. No claims to generalisability are made for this

exploratory study. Responses were coded and entered on SPSS and also analysed thematically using Atlas-ti. The introduction to the interviews and questionnaire was 'I am interested in your views and ideas on what makes us the people we are; what makes people behave the way they do? What is the influence of nature and nurture?' The terms, nature and nurture were not used again until the final question. Although the terms were not defined all respondents readily used them with consistent meanings. They identified 'nature' with biology, 'what you are born with' and genes or DNA and nurture with all aspects of the environment including parenting, socio-economic conditions, the food you eat, culture and other people. Their understanding of environment was therefore similar to that used by genetic researchers; environment as everything that is external to the individual, although they tended to refer more to the social than the biological environment

A general warm-up question asked whether, in their own family, there was anything they thought of as a 'family trait'. Then respondents were asked; 'Imagine a baby swapped at birth and brought up in a completely different family- which influences do you think would be most important - the influence of the birth parents or the influences of the new family- and why?' 4 The rest of the interview schedule, and the subsequent questionnaire, consisted of open-ended questions. Respondents were asked how they would explain different kinds of behaviour if they came across a child who is kind and considerate; a young person who displays antisocial and aggressive behaviour adult and an adult with criminal convictions for violence. This was to tap into any differences in general explanations of good and bad behaviour in young people and adults. A quotation about the child killers in the Bulger case being 'unreformable'

was used to ascertain whether they saw some types of violent behavior, and the actors concerned, as immutable. In order to see how respondents conceptualized the influences of nature/biology/genes and environment/people/experiences in their own lives, respondents were asked to write down 'what or who made you what you are today' and any explanation of their responses. Comments were gathered on the introduction of an environmental factor (childhood neglect) by the defence in a violent attack by two young boys in England, and on a genetic factor (MAOA levels) introduced by the defence in an criminal court in Italy. Respondents were asked how they thought such evidence should be dealt with; whether it should affect the degree of blame and whether it should affect criminal responsibility. The final question asked if it mattered 'for individuals or society' whether nature or nurture was seen as most important in explaining problem behaviour. Those interviewed were asked if they had any further comments and there was a space for any additional comments on the questionnaire. This paper focuses on the ways in which respondents employed nature/genes and nurture/environment in their responses as a whole and what other concepts they drew on when explaining behaviour.

Respondents' explanations of what makes people behave the way they do are discussed through three themes.

1. Nurture is more influential than nature
2. Nature and nurture interact
3. Emphasising nature (but never nurture) can be dangerous

#### 4.5.1. Theme 1: Nurture is more influential than nature

##### **Theme 1: Nurture is more influential than nature**

Whether asked about influences on a baby adopted at birth, on their own lives, on an aggressive child or a violent young person, almost all respondents emphasised nurture. Parents and family were seen as the most important influences for babies and young children, moving to peer group and other relationships and experiences for a young person. The explanation for the violent behaviour of an adult had more to do with the individual and the importance of nurture/environment in explaining behaviour weakened. The quotations below explaining behaviour in a child adopted at birth, a young person and an adult illustrate the widening of influences from infancy through childhood and the onus on adults to take responsibility for themselves.

[a child] The environment in which a child grows up in, particularly the influence and role of the parents shapes how a child will grow up and what sort of adult they will be (77 Student). [a young person] I believe that upbringing shapes a person's personality. Provisions of education, lifestyle opportunities and friendship groups all determine ....outlook. You can see evidence in young people at the school I teach at (20 Relative). Once adult they have to take responsibility for themselves and address whatever has been in their background. An adult can't turn round and say it's not my fault (5 Senior Learner). Participants also saw themselves as shaped by the people surrounding them, starting with their parents, or those who brought them up.

Several mentioned the illness and/or death of a parent during their childhood and older respondents talked about separation due to the second world war. Students were especially likely to mention the influence of morals instilled in them by their parents, the core values and discipline that they were taught at home. Educational experiences were important to all. For the senior learners the school leaving age had been age 15, so whether or not they stayed on at school and took public examinations was crucial for their future, and, this decision depended largely on their parents and environment. For the student respondents who had come to university from school, life so far has been 'kind of set-out' (41 Student), in the sense that they had progressed through the education system to gain qualifications for university. For their peer group it was normal still to be in education or training at the age of 18. The lasting effects of early influences were particularly striking among the senior learners, because they were much further removed in years from their childhood. Many related stories about parental influence and also about teachers who taught them at least 50 years ago and had affected them for better or worse. For example a senior learner recalled one of her teachers; I hated primary school – the teacher in 3rd or 4th year juniors [for ages 9–11] I hated her she was not a nice woman..... I passed to go to the grammar school and it shocked her. She made a derogatory comment – may not have been directed at me but felt it was- about some who should have passed and didn't and some passing who should not have done..... I always vowed I would never be like that when I was teaching....(11 Senior Learner). Those who related negative influences presented themselves as active in response, not necessarily

at the time but later in their lives. For example a student whose mother had died wrote that 'it made me more independent' and another student who was bullied at school wrote that 'it made me stronger'. The adult had to deal with all the influences (negative or positive) and take control.

#### **4.5.2. Theme 2: Nature and nurture interact**

##### **Theme 2: Nature and nurture interact**

While respondents' view of themselves and of a child adopted at birth assigned greater influence to environment this did not mean that they held a simplistic model of, for example 60:40 nurture to nature. In this one question when they were asked to choose one or other as the major influence, almost all chose nurture, as many social scientists might do. However, in open questions and comments more complex interactive models were expressed. Environment/nurture can affect genes/nature' and vice versa. No one used the term epigenetics but responses referred to the possibility of environmental influences affecting gene expression, for example; People with certain predispositions (e.g. to violence) are affected by society, and society affects how their genes are expressed (40 Student). An older respondent reflects on personal experience of child rearing and asks whether nurture is influenced by nature; I think the nature nurture debate is very interesting. In my family I can see where my children have their own natures that have developed despite being brought up in the same family with the same boundaries etc. However, as a parent did I alter how I nurture them to take into account their

nature? (14 Senior Learner). This quotation illustrates the inseparability of nature and nurture. The child is developing within the family and the parent is developing parenting strategies informed by previous experiences and by other influences including the reactions of the children. It was obvious to respondents that both genetic and environmental factors impact on everyone (although the role of genes is not yet understood) and it will be harder for some than for others to behave well because of their genes and environment. These people may need different treatment or extra help if they have committed violent and aggressive crimes but that does not excuse their behaviour. Only in exceptional cases, like insanity, can a young person or adult be said to have no choice but to act in a particular way. It is important that people are seen as responsible while also giving them the help they need. In these two comments the treatment for environmental problems and 'biology' are similar; the individual can be helped to modify his/her behaviour. No, [nature and nurture] both play a part, but they can't be the explanation for everything. Some people grow up in broken homes and get treated appallingly- yet they seem to understand right + wrong and accept responsibility for their actions. There are too many excuses and we never solve any problems, just make them harder to resolve.....I think if you are sane and you know right from wrong you need to suffer the consequences if you've committed a crime, but I do appreciate you may need help psychologically if you have anger issues, for example. If we constantly find reasons to diminish blame from people who have committed heinous acts of crime more people will think they can get away with it and it will cause more harm than

good (78 Student). Some say you can't fight your biology, but there are social factors that can stop bad behaviour like learned restraint (72 Student). The desire to leave a space for individual agency may be linked to the finding that emphasising nature, but never nurture, could be dangerous. It is clear that as children grow up they can exercise more control over their environment, although some have more control and choices than others. On the other hand, whatever the individual is born with (genes and nature) is, or seems to be, less malleable which could lead to different criminal justice policies and different social perceptions of the criminal.



**4.5.3. Theme 3: Emphasising nature (but never nurture) can be dangerous for society as a whole as well as for the criminal and victims**

**Theme 3: Emphasising nature (but never nurture) can be dangerous for society as a whole as well as for the criminal and victims**

The question asked was whether it mattered 'for individuals or society' if either nature or nurture was seen as most important in explaining problem behavior. The two most popular answers were that both nature and nurture were needed to explain behaviour, or, that nurture was more important and that there were dangers in emphasising nature. No one in the sample regarded an emphasis on nurture as dangerous or detrimental to the individual or society. On the contrary, emphasising nurture was thought more likely to lead to non-punitive treatment of offenders. There would be attempts to alter future behaviour through improved education and parenting and spreading of knowledge in society about the impact nurture has on young people. Society as a whole would share the blame rather than the individual. As a student put it; 'society as a whole [would be] open for criticism' (55 S). An emphasis on nurture was therefore seen as more likely to lead to understanding of problem behaviours and effective treatment, however, the individuals were still to be held responsible for their behaviour. In contrast there was a mistrust of nature/genetic explanations that again centred on the practical consequences for individuals. It would affect the way criminals were

treated by others but could also change their view of themselves. Behaviour would be seen as unchangeable, out of the control of the individual or social action. As a consequence, individual accountability might be removed. The idea that individuals must normally be held responsible for their actions was constantly emphasised (Levitt, 2013). It does [matter] because [if nurture is emphasised] people will care, parent and look after and raise people with more care. However if it's proven it is nature, then people may lose the will to live (60 Student). Several SLs referred to the examination at the end of primary education (the 'eleven plus') when explaining why they emphasised environment/nurture rather than nature, or, in this case, innate intelligence. The 'eleven plus' examination was used to decide which children would be offered a place at an academically selective grammar school and was based on the idea that intelligence, and future academic achievement, could be accurately measured and predicted at the age of 10 or 11. 'The 11+ was a nature thing. I did the 11+ – it had an effect. Saying children not going to improve or change. Very embedded in the whole idea of nature – it can't really be true' (8 Senior Learner). An emphasis on nature has practical detrimental consequences for individuals. Their status is fixed, for example as 'not academic' or 'born evil' and suggests, to them and to others, that their 'nature' is unchangeable or very difficult to change by individual or social action. Yes, [it matters] hugely as position of blame is dependent on whether a person chose to do what they did .....nature suggests no control (35 Student). Those who thought an emphasis on nature meant people were irredeemable either gave that as a reason not to emphasise

nature or to suggest that in fact 'defects' of nature could be overcome, as in this comment by a student emphasising the power of education; Yes it is very important because it helps to understand if people are reformable (nurture) or irredeemable (nature). I believe we are determined by our education and thus with the proper help we can change. In the case of people with major biological defects, education is still a way to get over these obstacles and society should be ready to help these people (38 Student). It might be thought that offenders themselves would embrace a genetic explanation of their behaviour if this was interpreted, as the respondents feared, as meaning they were not responsible for their crimes. However, a small study of juvenile offenders in the Netherlands found that they gave social explanations of their crimes and most rejected the idea that biology might be a factor. They committed a crime for a specific purpose like to get money or to impress others or they gave environmental reasons such as a deprived background or peer pressure or explained their offences were due to psychological conditions brought on by the use of alcohol and soft drugs (Horstkötter et al., 2012, p.291). Whether they gave goal directed or environmental reasons 'most of them also state that they had a choice and that it was their choice to commit the crime' (ibid p.292). As one young offender said in interview; In the end the person makes the choice himself... The choices I have made also had a share in my past. But in the end I am the one who has made these choices (ibid).

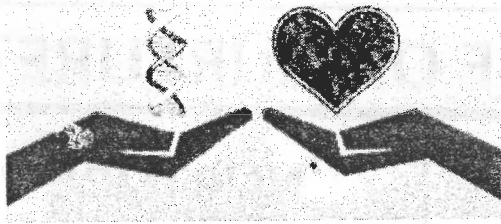
#### 4.6. GENES AND ENVIRONMENT

Respondents were at ease with the language of nature and nurture which was only used in the introduction to the questionnaire or interview. They readily equated genes with nature and nurture with all sorts of environmental influences. There was an acknowledgement that our understanding of environmental factors is greater than our understanding of genetics but that that would change. Older respondents were more likely to be concerned about such a change. They're going to be doing a lot more with genetics. Influences policy profoundly and people have to be very careful. It worries me that seen to be [more determining]. The complexities don't get looked at. If you emphasise environment it is safer from a policy point of view because given that most people don't know what they are talking about it is safer to see the person as redeemable than to come down on the side of genetics and write people off (3 Senior Learner). This quotation is typical in its view that nature/genes are seen as determining even though the influences on behaviour are, in reality, complex. Like the studies quoted at the beginning of the article respondents often acknowledged the complexities as nature and nurture interact but separated them when explaining the causes of specific behaviours. Students were less likely to be fearful of genetic explanations of behaviour despite their academic interest in social science. However, the hypothesis that young people might be more likely to be interested in genetic explanations for behaviour was not shown in this small study. The senior learners were more likely to refer to reading on genes and display knowledge of genetics. Older respondents and their relatives more often

echoed the sociologists' concerns about behavioural genetics discussed by Bearman earlier (Bearman, 2008). For those who feared the practical consequences of genetic explanations, like the respondent quoted above, 'it is safer' to keep away from them. Some respondents in all age groups were prepared for advances in genetics to change their understanding of behaviour and prepared for current views of genes/nature as more basic, fixed and unchanging to change too. One of the youngest relatives, in her 20s, emphasised our incomplete knowledge of genetic influences on behaviour as a reason for focussing on nurture 'at present'; It is very tricky as we cannot see genes and I am not sure that I totally trust the idea of blaming genes for violent behaviour- maybe the person has a gene for passive behaviour as well. ....In any case we can change nurture but at present we cannot change nature so let's do one thing at a time (20 Relative). As respondents in this small study grappled with explanations for their own and others' behaviour they focussed on the practical consequences leading to a greater concern over explanations based on nature than the more familiar ones based on a complex web of environmental factors. Whereas academic researchers approach the debate from their disciplinary perspectives which may or may not engage with practical and policy issues, the key issue for the public was what sort of explanations of behaviour will lead to the best outcomes for all concerned.

#### 4.7. SUMMARY

Our behavior reflects a combination of both nature (genetics) and nurture (environmental conditioning).



Man, a social being, is a product of the evolutionary process of Nature. Evolution is a continuous, self-transforming process in time generating novelty and variety. The evolution of Nature has run into three successive phases. - cosmological (inorganic), biological (organic), and, psychosocial (mental) evolving mater, life and mind. In time scale, cosmological evolution started with the origin of the present Universe, what the scientists guess, about 15 billion years ago; life originated 3 billion years ago; and, man is a new comer originating around 3 million years ago. In the cosmic phenomena man is a living entity. To be more specific, man is an animal among living beings, a vertebrate among animals, a mammal among vertebrates, a primate among mammals, a hominid among primates and Homo sapiens among hominids. Thus all that live are our kins. With man evolved mind and initiating the psychosocial phase of evolution.

**4.8. Check Your Progress**

- 1. Are genetic or environmental factors important in determining development?**
- 2. Is it nature or nurture?**

<b>IS IT NATURE OR NURTURE?</b>	
<p><b>NATURE:</b></p> <ul style="list-style-type: none"><li><b>*Be able to do it easily and consistently using minimal energy. Just feels right.</b></li><li><b>*Intuitively feel energized and motivated.</b></li><li><b>*Enjoy doing it...derive intrinsic satisfaction.</b></li></ul>	<p><b>NURTURE:</b></p> <ul style="list-style-type: none"><li><b>*Doesn't come naturally. Can do it (and do it well), but it takes effort to learn and maintain.</b></li><li><b>*Can be draining over time. You have to put out a lot of energy.</b></li><li><b>*If primarily operating in this mode, will end up trying to avoid that task.</b></li></ul>







#### 4.9 References / Further Readings

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## UNIT 5

### **Domains (Physical, Sensory- Perceptual, Cognitive, Socio- Emotional, Language & Communication, Social Relationship)**

#### **STRUCTURE**

##### **5.1. INTRODUCTION**

##### **5.2. OBJECTIVES**

##### **5.3. DEVELOPMENTAL DOMAINS & TYPICAL SEQUENCES OF DEVELOPMENT**

###### **5.3.1. Motor/Physical Domain**

###### **5.3.2. Cognitive Domain**

###### **5.3.3. Social/Emotional Domain**

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## UNIT 5

### **Domains (Physical, Sensory- Perceptual, Cognitive, Socio-Emotional, Language & Communication, Social Relationship)**

#### **5.1. INTRODUCTION**

When assessing child development, it is important to note that as a child grows, there are both quantitative and qualitative differences. Quantitative differences in child development refer to the changes children encounter as they acquire more knowledge and grow physically larger and stronger. An example of quantitative differences would be a child who, after two years, has grown two inches and gained 10 pounds. Growth in height and weight indicates a quantitative difference.

Qualitative differences focus on changes in the way children think, behave, and perceive the world differently as they mature. An example of qualitative differences would be a child that at a young age has difficulty understanding the perspectives of others (otherwise known as egocentrism). Children's perceptions in thinking change as they get older and evolve into the ability to see things from others' perspectives. This change in perception represents a qualitative difference.



## 5.2. OBJECTIVES

- To study of developmental domains & typical sequences of development
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

## 5.4. DEVELOPMENTAL DOMAINS & TYPICAL SEQUENCES OF DEVELOPMENT

As previously stated, when looking at child development, several domains or developmental areas are considered: motor/physical, cognitive, social/emotional, communication/language, and self-help. Each domain and a brief description of the typical developmental sequences for each are noted below.

### 5.4.1. Motor/Physical Domain

The motor/physical domain involves both gross motor and fine motor skills as well as physical growth. Since muscle and bone tissue grows very rapidly during the first two years, infant growth is very rapid and increases in strength, coordination, and stamina occur. Typical infant growth and development proceed from the head downward and from the center of the body outward. At birth, the newborn's head is about 70 percent of its eventual adult size - creating an infant that is top-heavy. The same developmental sequence occurs for muscle control with infants gaining



control over muscles that support their head and neck first, then the trunk, and eventually developing muscle control needed for reaching. Muscle control needed for walking is the last to develop. During infancy, motor abilities evolve in a specific sequential order. However, it is important to note that the rate of motor development differs among children (e.g., standing, walking).

Developmental Period	Motor Domain Milestones
Birth - 4 months	The typical sequence of motor development begins with raising head and chest, sitting up with adult support, rolling over and batting at objects
4 - 8 months	Infants begin to gain control of head, trunk, and arm movements, and sit up alone.
8 -12 months	Infants begin to reach for and grasp objects, begin to creep, and stand up holding on. Pincer grasp has evolved which allows a child to pick up objects bringing together the thumb and index finger
12 - 24 months	Toddlers begin to creep, stand alone, and then walk alone. Toddlers begin to creep up stairs, run, draw on paper, and kick a ball.
24 - 36 months	Child can use crayons, ride a tricycle, and jump off a step. Children are typically not ready for toilet training until the end of their second year or beginning of their third year.

	Prior to this time, muscles that retain and release urine and bowel movements cannot be controlled.
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The preschool years are characterized by striking physical and psychological changes. The brain and nervous system grow rapidly and important parts of the brain attain their mature form. The child continues to grow, from an average height of about 33 inches at age 2, to about 45 inches at age 6. Motor skills also improve substantially. During this age children's baby fat disappears, their legs lengthen, accounting for a larger proportion of their height, and the relation of head size to body size becomes more adult-like. As will be discussed in this chapter, physical development of the young child corresponds closely to changes in cognitive, language, and social behaviors.

### **Physical Development**

In general children during the first two years of life quadruple their weight and increase their height by two-thirds. This rate slows down between 2 and 3 years when children gain only about 4 pounds and grow only about 3.5 inches. Between the ages 4 and 6, the increase in height slows still further and children grow about 2.5 inches and gain 5 to 7 pounds on the average. As a result of the slower growth rate following age 2, most 3 and 4 year olds seem to eat less food. While causing alarm in some parents, the change in food intake is normal. Children do not eat less food but rather they eat fewer calories per pound of body weight. The decrease growth rate requires less calories to build their developing muscles, bones, and nerves. Although normal children follow the same growth pattern, there are wide individual variations. A child with a slow growth rate may continue to gain in height and weight until age 20 while a child with a fast growth rate may complete full growth by 16 years of age.

Physical development results from the interaction between individual factors of heredity and environmental forces. Abnormal growth patterns often reflect this interaction. A striking illustration of this effect is the failure to thrive syndrome in which children suffering from prolonged neglect or abuse simply stop growing. In these children, psychological stress produced by their social environment causes the pituitary gland to stop secreting growth hormones. When the environmental stress is alleviated, and the child receives care, affection, and stimulation, growth resumes often at a rate that enables catch-up growth to occur. In body growth, brain growth, and all other aspects of physical and psychological development, genes and environment collaborate to produce normal development. Physical developments are affected by the environment no less than psychological ones. A healthy environment is necessary for normal growth of the body, brain, and nervous system.

The brain continues to grow rapidly during the preschool period. At age 2, the child's brain has reached 55% of its adult size; by six years of age it has grown to more than 90% of its adult size (Tanner, 1978). While brain growth during this period is often uneven, most has occurred before 4 to 4.5 years of age. There appears to be a spurt in growth at age 2 followed by a major decrease in growth rate between 5 and 6 years of age. The increase in brain size reflects changes in the organization and size of nerve cells rather than an increase in the number of cells. The growth also reflects an increase in the number of glial cells that feed and support the nerve cells and to the increasing myelination of nerve fibers. Myelin is the coating around nerve fibers that serves to channel impulses along the fibers and to reduce the random spread of impulses between adjacent fibers, thus helping the nervous system to function quickly and accurately.

In appearance the human brain consists of two symmetrical hemispheres that specialize in different functions. The left hemisphere controls verbal, reasoning, and mathematical skills, while the right hemisphere specializes in nonverbal skills such as spatial ability, perception of patterns and melodies, and the expression and recognition of emotion.

### **Motor Development**

There are significant advances in motor control during the preschool period. These advances depend both on physical maturation of brain and body systems and on the increasing skill that comes through practice. They involve both the large muscles such as those used in running, jumping and climbing, and the small muscles such as those used in drawing and tying a knot. Several factors contribute to the growth in motor development. In the first instance, this development reflects the gradual transition from the reflex behavior of the newborn to the voluntary actions of the preschooler. A second factor is the child's increasing ability to accurately perceive body size, shape and position of its parts. Increasing bilateral coordination, the coordination of the two halves of the body, also contributes to increased motor performance. Virtually every motor skill requires some sort of cooperation between the two sides of the body, moving in some kind of alternatively timed relationship.

The capacity to perform activities as walking, running, and jumping does not necessarily imply the ability to perform them skillfully or smoothly. For example, the young toddler's steps are awkward. Yet by the end of toddlerhood, walking becomes a skilled activity. The stride lengthens, speed increases, balance stabilizes, and the child can walk for long periods without resting. By the age of 4, the child's walk is essentially the same as the adult's. In most cases the

development of a motor skill involves the gradual integration of existing movements into a smooth, continuous pattern. In other cases new movements must be acquired. For example learning to throw a ball skillfully involves the integration of existing movements and the acquisition of new ones.

In contrast to large muscle skills, small or fine muscle skills refer to the use of hands and fingers in the manipulation of objects. Also known as eye-hand coordination, fine motor control is the ability to coordinate or regulate the use of the eyes and the hands together in efficient, precise, and adaptive movements. This coordination enables the development of a wide variety of skills including writing, drawing, and the manipulation of small objects and or instruments. Preschool children learn to manipulate objects through visual feedback which indicate whether or not they are doing what the child wants the objects to be doing. Thus the preschool period is an important time for the development of manipulation skills which in turn prepare children to deal successfully with the challenges of primary school.

Differences in motor development are striking and some children are simply better coordinated, stronger and more athletic than others. What accounts for these individual differences which tend to persist throughout the life-span? Genes unquestionably play a role and evidence suggests that identical twins are more alike than fraternal twins in their performance of motor skills during the preschool years. Nutrition is also critical and children who have been undernourished for long period of time are likely to be retarded in their motor development. The capacity to catch up with their better nourished agemates depends on the duration, severity, and timing of the nutritional deficiency. Experience and opportunities to practice both the large muscle and fine muscle skills also contributes to differences in the development and functioning of these skills.

In addition to these factors, there appear to be consistent gender differences in physical development throughout the early childhood period. On the average, girls are physically more mature while boys are physically more muscular. Motor differences are also apparent and boys on the average have larger muscles than girls which enables them to run faster, jump farther, and climb higher. Girls seem to be more advanced in other aspects of motor development particularly in manipulation skills such as using scissors and fastening buttons. They are also ahead in large muscle activities that require coordination rather than strength such as skipping, hopping, and balancing on one foot. Despite these gender differences, there is a striking similarity in the overall pattern of children's physical and psychological development during the preschool years.

#### **5.4.2. Cognitive Domain**

The cognitive domain refers to intellect or mental abilities. Cognition involves receiving, processing, and organizing information that has been perceived through the senses and using the information appropriately. Cognition entails interaction between the individual child and his/her environment or events in the environment. Survival and primitive learning in infants begin with reflexive behaviors.



Developmental Period	Cognitive Domain Milestones
Birth - 4 months	During the first few months of life, babies track objects, begin to study their hands, distinguish some tastes, begin to mouth objects, imitate gestures that are modeled, and look in the direction of a sound source.
4 - 8 months.	Cause and effect is developed. Babies begin to realize that they can cause interesting reactions. Another concept learned at this age is object permanence - the world is more permanent than previously thought. The toy that was hidden under the box did not actually vanish but is still there under the box. Depth perception is also evident.
8 -12 months	Babies can follow simple instructions, reach for toys that are out of reach but within sight, and show appropriate use of everyday items by pretending.
12 - 24 months	Children enjoy object-hiding activities, use three to four objects in combination, name many everyday objects, and move objects across the midline (passes something from one hand to another).
24 - 36 months	By age 3, children say on average, 272 words, understand simple pictures, like to look at books, and say phrases and simple sentences.

### 5.4.3. Social/Emotional Domain

The social/emotional domain encompasses feelings and emotions, behaviors, attachments and relationships with others, independence, self-esteem, and

temperament. Infants like to be held and cuddled when awake and begin to establish a bond or emotional attachment with parents and caregivers which evolve into a sense of trust and security.

Developmental Period	Social/Emotional Domain Milestones
Birth - 4 months	Infants can react differently to changes in adult voices (frown, smile), coo and squeal when awake, stop crying when parent/caregiver nears, and recognize and reach out to familiar faces and objects.
4 - 8 months	Infants develop a beginning awareness of self, become more outgoing, laugh out loud, and begin to exhibit stranger anxiety.
8 -12 months	Babies want parent/caregiver to be in constant sight, offer toys and objects to others, repeat behaviors that get attention, and begin to exhibit assertiveness.
12 - 24 months	Babies become less wary of strangers, play alone for short periods, begin to assert independence, enjoy adult attention, and often imitate adults in play.
24 - 36 months	Children begin to show signs of empathy and caring, become impatient, often become defiant, increase temper tantrums, and use physical aggression if frustrated or angry.

## **SOCIAL AND EMOTIONAL DEVELOPMENT**

Social development is a two-sided process in which children become increasingly integrated into the larger social community as distinct individuals. The process of acquiring the standards, values, and knowledge of communities and society is known as socialization. The way in which individual children develop a characteristic sense of themselves and a unique way to think and feel is known as personality formation (Damon, 1983). Socialization which begins as soon as a child is born is especially important during early childhood as the first understanding of the child's community is constructed. It is a process that requires the active participation of both adults and children. Caregivers set expectations for children's proper behavior as well as the rewards or punishments for their conduct. Caregivers also select and create the social contexts within which children experience their environments and learn the rules of behavior. Children are active participants in this process. What they learn depends in part on their interpretation of their environments and on what they select as important from the barrage of available information.

Children need to understand the social categories, roles, rules and expectations of their families and communities in order to function in a social world. Effective socialization assures that if a child comes to consider herself a girl, she will acquire the appropriate behavior for girls as defined by a particular social group. In order to understand the requirements of this role, however, she must have certain skills and abilities.

For each child, the combination of characteristics that shape personality is unique since the particular mix of genetic endowment and personal experience is never completely shared with another human being. Some elements of personality are obvious immediately after birth as when infants display a particular temperament.

Personality is more than individual temperament as it includes the way people conceive of themselves and their characteristic style of interacting with others.

Thus individual personality development and socialization are two sides of a single developmental coin. Social development during the preschool years is closely linked to achievements in cognitive and linguistic skills. All the feedback received from the social environment is crucial to development of a sense of self. One of the most remarkable facts about social development is the extent to which children adopt as necessary the rules defined by their social group. By the time children reach their 6th birthday a great deal has been learned about the roles they are expected to play and how to behave in accordance with them, how to control anger and aggressive feelings, and how to respect the rights of others. How does all this learning take place and what are the elements that enter into it?

#### **5.4.4. Communication/Language Domain**

The communication/language domain refers to perceiving, understanding and producing communication/language. Communication abilities will vary on age ranging from crying and fussing to eventually communicating with spoken sounds and words.

Developmental Period	Communication/Language Domain Milestones
Birth - 4 months	The infant communicates both directly and indirectly through crying, fussing, blinking, shifting eyes, showing preferences for certain sounds, turning head toward voice/sound and making sounds other than crying.
4 - 8 months	Babies respond appropriately to their own name and simple requests (i.e. Bye-bye). Babbling begins such as "ba, ba, ba" at this age and imitates nonspeech sounds (i.e. cough, lip smacking).
8 -12 months	Babies begin to shake head for "no" and nod for "yes" and say "da-da" and "ma-ma."
12 - 24 months	Children follow simple directions. Speech is intelligible around 40 percent of the time and typically uses five to 50 words. Children also respond to simple questions with "yes" and "no" and appropriate head movement.
24 - 36 months	At 2 years of age, children use from 50 to 300 different words with vocabulary increasing constantly. Speech becomes as much as 75 percent intelligible and repeatedly ask, "What's that" Receptive language is more developed than expressive language (know more than they can talk about).

#### 5.4.5. Self-Help/Adaptive Domain

**Self-Help/Adaptive Domain**

The self-help or adaptive domain involves adapting to the environment and ability to do things for oneself. Some skills associated with this domain include feeding, dressing, toileting, and drinking independently.

<b>Developmental Period</b>	<b>Self-Help/Adaptive Domain Milestones</b>
Birth - 4 months	Babies express the need for food by crying. They also signal the need for diaper changes and express pleasure when placed in warm water (bathing). Eventually during this time, they begin to help by using their own hands to guide the nipple.
4 - 8 months	Babies show interest in feeding activities. Also during this time, babies can pull off own socks, and Velcro closures on clothing.
8 -12 months	Children begin to hold their own cup and drink, and begin to eat finger foods. They also begin to pull off soiled or wet diaper. Generally, children during this age begin to sleep until 6 or 8 am.
12 - 24 months	Children use a spoon to some degree to feed themselves and have good control of a cup. They also begin to try and wash themselves, help with dressing, and by age 2 they may begin to gain control of bowels and bladder.
24 - 36 months	Children are increasingly able to feed self and use cup/glass. They can generally undress themselves and show signs of being ready for toilet training.

### 5.4.6. Perceptual Development

#### Perceptual Development

While the ability to see, hear, and integrate sensory information is well established by six months of age, more complex and less obvious perceptual abilities develop throughout early childhood.

For example, precision of visual concepts such as shape and size increases. As a results of these evolving perceptual mechanisms, a child correctly observes an object's size and shape regardless of the angle at which it is perceived. While such mechanisms are present in infancy, they lack accuracy. Infants may know that a distant object takes up less visual field than a closer object, they must learn how much less. This type of learning occurs through active and lively exploration of the environment and is critical in the development of accurate size, shape, and distance perception.

Another aspect of perception often taken for granted is the ability to interpret pictorial representations of objects and people in the environment. Research indicates that 3 year olds respond appropriately to depth cues such as shading and the convergence of lines. Sensitivity to such cues, however, improves with age. The ability to obtain accurate information from pictures reflects children's eye movements fixation patterns. Adults use only leaping eye movements to sweep around the picture as a whole, and short eye movements when concentrating on

particular details. By contrast, young preschool children tend to have shorter eye movements and focus their gaze to small areas near the middle or edge thus ignoring or missing much of the information available.

The study of children's art provides some insight into the integration of their growing perceptual, cognitive and motor abilities. The 2.5 year old grasps a crayon in his hand and scribbles while the 4 year old can draw a recognizable human form know as the "tadpole person." The tadpole person is characterized by a big head, sticks for legs, and no body. The transition from drawing scribbles to the tadpole person usually occurs sometime between the 3rd and 4th year. Increased motor control and eye-hand coordination is one of the factors involved in this achievement. Drawing skills undergo a second transition sometime between the 4th and 5th year and the tadpole person is transformed into a complete person with a body as well as a head. Like the preschool child themselves, their art is delightfully full of life, energy, and creativity. According to one psychologist's review

A summit of artistry is achieved at the end of the preschool period... Drawings by youngsters of this age are characteristically colorful, balanced, rhythmic, and expressive, conveying something of the range and the vitality associated with artistic mastery... And the often striking products reinforce a general notion of the child as a young artist--an individual participating in a meaningful way in processes of creation, elaboration, and self-expression.



## 5.5. SUMMARY

Developmental change evolves more slowly in early childhood, the period from 2 to 6 years of age, than in infancy. During this time, children lose their baby fat, their legs grow longer and thinner, and they move around the world with increasing dexterity. They present a bewildering patchwork of vulnerability and ability, logic and magic, insight and ignorance. Children at this age can talk in endless sentences but are keen listeners when an interesting story is being told. Their present desires can be curtailed with promises of later rewards, but they may not necessarily accept the offered terms, negotiating for an instant as well as a delayed reward. They develop theories about everything, and these are constantly measured against the world around them. However, despite their developing independence, 3- year-olds need assistance from adults and siblings. They cannot hold a pencil properly or string a loom or tie a knot. They do not have the ability to concentrate for long periods of time without a great deal of support, and they wander on tangents in their games and conversations. Preschool children's thought processes are characterized by great awareness; yet these islands of sophistication exist in a sea of uncertainty. Children during this period still understand relatively little about the world in which they live and have little or no control over it. They are prone to fears and they combat their growing self-awareness of being small by wishful, magical thinking.

Traditionally, scientists have sorted these changes into separate categories- cognitive, language, physical and social development. Development in each of these areas, however, affects and interacts with every other type. For example, cognitive development creates the need for more sophisticated speech in order to express new knowledge. Language development leads children to master new words that capture new ideas. Physical development allows them to perform more

complicated tasks than they could earlier, bringing them into greater social contact with others. The information presented in the following sections discusses some of the major achievements in each of these areas of development.

**5.5. Check Your Progress**

**5.6. Assignment/Activity**





## 5.8 References / Further Readings

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## **BLOCK 2**

# **Theoretical Approaches to Development**

## UNIT 1

# Cognitive & Social- Cognitive Theories

(Piaget, Vygotsky, Bruner, Bandura)

### STRUCTURE

1.1. INTRODUCTION

1.2. LEARNING OBJECTIVES

1.3. BEHAVIORAL PERSPECTIVE

1.4. DEVELOPMENTAL PERSPECTIVE

1.5. COGNITIVE PSYCHOLOGY

1.6. SOCIAL COGNITIVE PERSPECTIVE

1.7. PIAGET'S THEORY

1.8. VYGOTSKY'S THEORY

1.9. BANDURA'S THEORY

1.10. BRUNER'S THEORY

1.11. SUMMARY

1.12. CHECK YOUR PROGRESS

1.13. ASSIGNMENT/ACTIVITY

1.14. POINTS FOR DISCUSSION AND CLARIFICATION

1.15. REFERENCES / FURTHER READINGS

## UNIT 1

# Cognitive & Social- Cognitive Theories

(Piaget, Vygotsky, Bruner, Bandura)

### 1.10. INTRODUCTION

The major developmental theorists you should be familiar with include some of the theorists we have discussed, such as Piaget, but also include **Erik Erikson**, who proposed the stages of psychosocial development; **Lawrence Kohlberg**, best known for his stages of moral development; and **James Marcia**, known for the theory of identity achievement.

Thoughts and feelings are formed in it. Knowledge develops through the cognitive activity of abstractions and follows a generally predictable sequence as Jean Piaget's (1970) Cognitive Development Theory. As per Exogenous Constructivism, acquisition of knowledge represents reconstruction of structures influenced by the external world, such as experiences, teaching methods and social interactions. Contemporary Information Processing Theories reflect this notion in concepts like productions and memory networks. Dialectical Constructivism views knowledge is the outcomes of mental contradictions that results from interactions between persons and their environments. Jerome Bruner's Theory of Cognitive Growth (1964 & 1985), Lev Vygotsky's (1978)

Socio-Cultural Theory and A. Bandura's (1986 & 2001) Social Cognitive Theory are reflective of Dialectical Constructivism.

In this unit, you will learn how the social cognitive perspective helps psychologists study personality by combining the interactions of traits, thoughts, and environment.

### 1.11. OBJECTIVES

**By the end of this unit you will be able to:**

- contextualise the constructivist movement and understand its place in the scheme of psychological theory related to learning.

And you will have:

- considered the beginnings of constructivist learning theory;
- been given an overview of the social constructivist approach to theory;
- been given and considered an introduction to social constructivist ideas and to some of its proponents;
- been given an overview of related social learning theories developed by such people as Bandura, and Lave and Wenger.
- To understand about Human Development
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

### 1.12. BEHAVIORAL PERSPECTIVE

**Behaviorism** is the theoretical perspective in which learning and behavior are described and explained in terms of stimulus-response relationships. The key assumptions of behaviorism are:

- *The environment influences behavior.* Behaviorists believe that people's behaviors are a result of their interaction with the environment. Specifically, people become conditioned, or molded, to respond in certain ways based on responses like feedback, praise and rewards.
- *Learning is described through stimuli and responses.* Behaviorists focus on observable events rather than events that occur inside a person's head, such as thoughts, feelings and beliefs.
- *Learning must involve a behavioral change.* Theorists believe that learning has not occurred unless there is an observable change in behavior.
- *Learning must result when stimulus and response occur close together in time.* Learners must associate their response with a stimulus. In order for that to occur, the two must happen in conjunction with each other, or, in other words, be contiguous.
- *Animals and humans learn in similar ways.* Behaviorists, unlike many other theorists, performed their experiments using animals because they believed the study of animals could explain human learning behavior.

### 1.13. DEVELOPMENTAL PERSPECTIVE

The developmental perspective encompasses theories that are continuous and discontinuous in nature.

**Discontinuous theories** are stage-like. The processes of learning and development involve distinct stages, which are characterized by qualitative differences in behavior. Theorists who posit discontinuous theories propose a specific beginning and end period for each stage.

**Continuous theories**, in contrast, explain that learning and development occur in incremental processes. Learning involves gradual and ongoing changes throughout the lifespan.

#### 1.14. COGNITIVE PSYCHOLOGY

**Cognitive psychology** is the theoretical perspective that focuses on learning based on how people perceive, remember, think, speak and problem-solve. The cognitive perspective differs from the behaviorist perspective in two distinct ways. First, cognitive psychology acknowledges the existence of internal mental states disregarded by behaviorists. Examples of these states are belief, desire, ideas and motivation (non-observable states). Second, cognitive psychologists claim memory structures determine how information is perceived, processed, stored, retrieved and forgotten. Cognitive psychology encompasses perception, categorization, memory, knowledge representation, language and thinking processes.

The major cognitive psychologists you should be familiar with include **Jean Piaget**, who developed Piaget's theory of cognitive development and stages of cognitive development; **Lev Vygotsky**, best known for his sociocultural development theory; **Noam Chomsky**,

referred to as the father of modern linguistics; and **Jerome Bruner**, who coined the term 'scaffolding.'

### 1.15. SOCIAL COGNITIVE PERSPECTIVE

Jane has always been pretty plain, and she gets lost in the crowd easily. No one ever paid much attention to her. But Jane's best friend Cathy has an eating disorder, and her parents, friends and even the teachers and principal at their school are giving Cathy lots of support. Jane realizes that by not eating, Cathy is getting all the attention and love that Jane herself doesn't get, so she too develops an eating disorder.

The **behavioral model** of abnormal psychology says that psychological issues are a result of learning negative behaviors. Just like Jane has learned that eating disorders will get her attention, behavioral theorists believe that people learn maladaptive behaviors, which lead to issues.

In some ways, this seems pretty intuitive. After all, if I steal something and am caught and harshly punished, I've learned not to do that. But what if I don't steal anything? What if I see someone else steal and get punished? Will I still learn my lesson?

**Social cognitive theory** says that people learn behaviors through their interactions and observations of others, as well as their direct experience. Remember that Jane learned from watching Cathy how much attention an

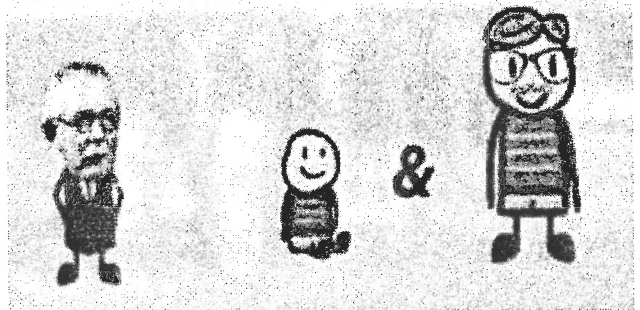
eating disorder could get a person. This is social cognition. Jane is learning from her interactions with and observations of her friend.

### 1.16. Piaget's Theory

**Jean Piaget's theory of cognitive development** described and explained the changes in logical thinking of children and adolescents. Piaget proposed that children proceed through four stages based on maturation and experience.

Piaget's theory is guided by assumptions of how learners interact with their environment and how they integrate new knowledge and information into existing knowledge. Briefly, he proposed that:

#### Jean Piaget's Theory of Cognitive Development



## Piaget's Theory

Based on cognitive development using three basic components. The three components are: **Schemes** - the building blocks of knowledge, **Adaption Process** -that enables transitions to one stage to the next and the **Stages of Development** such as: Sensorimotor, Preoperational, Concrete Operational and Formal Operational.

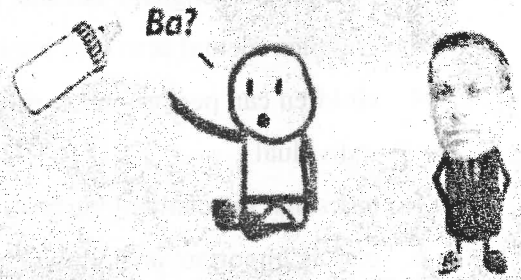


1. children are active learners who construct knowledge from their environments
2. they learn through assimilation and accommodation, and complex cognitive development occurs through equilibration
3. the interaction with physical and social environments is key for cognitive development
4. development occurs in stages

### 1.17. Vygotsky's Theory

Lev Vygotsky's cultural-historical theory focused on the role of culture and social interactions. Vygotsky maintained that speech is a major psychological tool in the child's development of thinking. As children age and develop, their basic speech becomes more complex.

#### Lev Vygotsky's Cultural-Historical Theory



### Vygotsky's Theory

Based on social development and some of the cognitive development. Vygotsky's theories stressed the fundamental role of the social interaction related to cognitive development. He is most famous for his theory on Zone of Proximal Development.

Vygotsky's theory is guided by six major assumptions:

1. children develop through informal and formal conversations with adults
2. the first few years of life are critical for development, as this is where thought and language become increasingly independent
3. complex mental activities begin as basic social activities
4. children can perform more difficult tasks with the help of a more advanced individual
5. tasks that are challenging promote cognitive development growth
6. play is important and allows children to stretch themselves cognitively

Vygotsky believes that the Zone of Proximal Development (ZPD) is the prime determinant of individual differences and development among students. He defines the Zone of Proximal Development as the discrepancy between the child's capacity to solve problems independently and the child's ability to solve problems with assistance. Vygotsky maintains that social interaction with a more knowledgeable person is critical for cognitive development. This interaction helps the child attain a higher level of development than can be achieved alone. The adult should scaffold instruction by adjusting the level of his or her assistance in response to the child's performance. If these adjustments are not made then the student will not attain a higher level of cognitive development. Vygotsky also believes that individual differences can be attributed to culture. He states that students first make learning connections on the social level with their environment and other people; then, learning connections are manifested at the individual level. Since culture plays an essential role in cognitive development, it should be incorporated during

instruction. Out of school experiences should be related to school experiences for optimal learning to take place. Although Vygotsky acknowledges the relevance of individual differences, he does not believe that we should focus on a child's individual differences in isolation. Instead, educators should focus more on the student's potential by facilitating problem solving in a social context.

### **Theory Similarities**

Vygotsky's theory was similar to Piaget's in that Vygotsky's theory was based on social development with involvement of some cognitive development.

Both Bruner and Vygotsky emphasized a child's environment, especially the social environment, more than Piaget. Bruner and Vygotsky agreed that adults should play a very active role in the child's learning. Because of this agreement Bruner developed Scaffolding, which is similar to Vygotsky's Zone of Proximal Development.

Bruner agreed with Piaget that children are Pre- Adapted to learning, children do have a natural curiosity , that cognitive structures do develop over time, children should be the active party in their learning process and that cognitive development skills entail the acquisition of symbols.

Bruner and Vygotsky Bruner and Piaget Bandura and Vygotsky Bandura's theory was the same as Vygotsky in the way that they both discussed social development. For an adult to model behavior and to have children imitate those behaviors relates to social development.

## Theory Differences

Vygotsky , unlike Piaget that children's development must necessarily precede their learning was that learning is a necessary and universal aspect of the process of development. Vygotsky vs Piaget Vygotsky placed more emphasis on culture affecting and shaping cognitive development which contradicts Piaget's view of universal stages and content development. Vygotsky emphasis more on the social factors that contribute to cognitive development.

Vygotsky put more emphasis on the role of language in cognitive development while Piaget lacked the emphasis.

## Theory Differences

### Vygotsky vs Piaget

*Vygotsky placed more emphasis on culture affecting and shaping cognitive development which contradicts Piaget's view of universal stages and content development.*

*Vygotsky emphasis more on the social factors that contribute to cognitive development.*

*Vygotsky put more emphasis on the role of language in cognitive development while Piaget lacked the emphasis.*

*Piaget thought language depended on thought of development. Vygotsky thought the two were separate systems for beginning life and would merge around three years of age.*

Piaget thought language depended on thought of development. Vygotsky thought the two were separate systems for beginning life and would merge around three years of age. Brener vs. Piaget Brener didn't agree with Piaget when it came to development. Brener didn't think that development happened in stages, he believed it was a continuous process and a part of life.

## 1.18. BANDURA'S THEORY

Bandura's theory of learning relies heavily on the concepts of self-efficacy, self-regulation, and modeling. Each of these components is largely influenced by individual differences between learners. Self-efficacy describes how an individual feels about his or her capabilities to accomplish a particular task. Bandura notes that self-efficacy influences an individual's choices, amount of effort, persistence, and esteem. Self-efficacy is a purely individual concept. Within a classroom of students, it is likely that there are as many different levels of efficacy for a specific learning as there are students. These differing levels have a complex

influence on how best to conduct instruction.

### *Bandura's Theory*

Believed that behavior is learned from the environment through the process of observed learning. Bandura believed that children observe those around them and watch their behavior calling this Social Learning.

Bandura also notes the importance of modeling. Modeling is learning vicariously through watching others and seeing them receive rewards or

punishment. Modeling is largely influenced by individual differences. In order for modeling to be effective, a learner must find the model competent, powerful and/or prestigious, and relevant. For modeling to be effective, the rewards a model receives must be relevant to the learner. This value is determined by the individual. The determination of a model's overall effectiveness is determined solely by the individual learner.

Self-regulation is important for learning. Self-regulation is the ability an individual has to make choices concerning in which behaviors he or she will participate. Through self-regulation the learner can decide not to do something that he or she was directly reinforced for or something that he or she learned through modeling.

There are three steps of the self-regulation process:

1. Self-monitoring
2. Judging performance
3. Self-response.

Each of the steps in this process is conducted at the individual level. An individual's ability to successfully conduct the self-regulation process greatly influences success in learning.

Bandura believes that instruction should be altered to account for individual differences. Instruction must be based on modeling, self-regulation, and self-efficacy. Instructors should develop environments that create and encourage self-efficacy within individual learners, which is most effectively done by direct encouragement of students and providing opportunities for students to experience mastery or success in particular learning tasks. Self-efficacy can also be influenced through positive modeling in which students observe others experiencing success at a particular academic task. Instruction on self-regulation includes the introduction of strategies, how to use them, and what the benefits are of self-regulated learning.



## **Bandura's Bobo Doll Experiment**

Social cognitive theory has its roots in a famous experiment done by Albert Bandura in 1961. In Bandura's experiment, children were shown a video of an adult hitting, kicking and tossing a life-size clown doll, called a Bobo doll. The adults in the video showed very aggressive behavior, the kind of behavior that most people would not display.

Then, Bandura left the children alone with several toys, including the Bobo doll. Many of the children engaged in the aggressive acts that they saw the adults in the video do. They hit and kicked the doll. They shouted angry words at the doll. In short, they imitated the adults. Before the Bobo doll study, people assumed that watching an aggressive act would increase a person's level of aggression and make them less aggressive. After the study, however, people and psychologists began to pay more attention to how behavior is shaped by modeling.

Remember Jane? Just like the kids in the Bobo doll study, she learned her behavior (the eating disorder) from watching her friend Cathy. In this way, social cognition theory says that Jane has learned her way into a psychological disorder.

## 1.19. BRUNER'S THEORY

### *Bruner's Theory*

Bruner was a constructivist. He felt that showing children how to act and how to do things by providing enough support would help them in their learning and when learning new subjects. He believed the outcome of cognitive development is thinking. He called this Scaffolding.

Individuals differ in what type of prior knowledge they bring to a learning task. Each individual has a cognitive structure built from prior learning experiences,

which differs from any other learner. The instructor should adjust instruction to fit the learner's current state of understanding. Bruner believes that every individual has the ability to acquire knowledge. The key to reaching each individual with knowledge is instruction. Bruner thinks that any student learns best through a process of discovery.

Bruner classifies an individual's cognitive ability using three stages: enactive (use of manipulatives), iconic (use of visual images), and symbolic (use of language and reasoning). Unlike Piaget, Bruner sees these stages as developing and accumulating during the learner's educational process and does not link the stages necessarily to age or physical development. This aspect of Bruner's theory demonstrates an individual difference, which is the rate at which learners move through

these stages. Children should be provided with study materials, tools, and activities that are matched to and capitalize on their developing individual cognitive abilities. Bruner would alter curriculum and instruction based on an individual learner's interests. In this vein, Bruner would allow the individual students to change topics, rebuild and revisit the curriculum while simultaneously varying learning mode (enactive, iconic and symbolic) and pace to meet an individual learner's needs.

Each individual constructs a world through representation of his or her experiences with it. Education is concerned with assisting each individual in developing or constructing a world. The personalization of knowledge, i.e. making it meaningful and useful in regards to the learner's thinking, attitudes, and feelings, creates interest in learning. If instruction does not heed the individual's particular position, i.e. their prior knowledge, schema, or mental models they bring to the learning environment, then learning will not occur successfully for that individual.

1.20. SUMMARY

**Bruner and Vygotsky**

*Both Bruner and Vygotsky emphasized a child's environment, especially the social environment, more than Piaget. Bruner and Vygotsky agreed that adults should play a very active role in the child's learning. Because of this agreement Bruner developed Scaffolding, which is similar to Vygotsky's Zone of Proximal Development.*

**Bruner and Piaget**

*Bruner agreed with Piaget that children are Pre-Adapted to learning, children do have a natural curiosity , that cognitive structures do develop over time, children should be the active party in their learning process and that cognitive development skills entail the acquisition of symbols.*





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### 1.18 References / Further Readings

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## UNIT 2

# Psychosocial Theory (Erikson)

### STRUCTURE

4.1. Introduction

4.2. Objectives

4.3. Erikson's Theory of Psychosocial Development

4.4. Erikson's stages of psychosocial development

4.4.1. Hope: trust vs. mistrust (oral-sensory, Infancy, 0–2 years)

4.4.2. Will: autonomy vs. shame and doubt (muscular-anal, early childhood, 2–4 years)

4.4.3. Purpose: initiative vs. guilt (locomotor-genital, preschool, 4–5 years)

4.4.4. Competence: industry vs. inferiority (latency, school age, 5–12 years)

4.4.5. Fidelity: identity vs. role confusion (adolescence, 13–19 years)

4.4.6. Love: intimacy vs. isolation (early adulthood, 20–39 years)

4.4.7. Care: generativity vs. stagnation (adulthood, 40–64 years)

4.4.8. Wisdom: ego integrity vs. despair (maturity, 65 – death)

4.4.9. Ninth stage

**4.5. Summary**

**4.6. Check Your Progress**

**4.7. Assignment/Activity**

**4.8. Points For Discussion And Clarification**

**4.9. References / Further Readings**

## UNIT 2

# Psychosocial Theory (Erikson)

### 4.1. INTRODUCTION

Erik Erikson's theory of psychosocial development is one of the best-known theories of personality in psychology. Much like Sigmund Freud, Erikson believed that personality develops in a series of stages. Unlike Freud's theory of psychosexual stages, Erikson's theory describes the impact of social experience across the whole lifespan.

One of the main elements of Erikson's psychosocial stage theory is the development of ego identity. Ego identity is the conscious sense of self that we develop through social interaction. According to Erikson, our ego identity is constantly changing due to new experience and information we acquire in our daily interactions with others. In addition to ego identity, Erikson also believed that a sense of competence also motivates behaviors and actions. Each stage in Erikson's theory is concerned with becoming competent in an area of life. If the stage is handled well, the person will feel a sense of mastery, which he sometimes referred to as ego strength or ego quality. If the stage is managed poorly, the person will emerge with a sense of inadequacy.

In each stage, Erikson believed people experience a conflict that serves as a turning point in development. In Erikson's view, these conflicts are centered on either developing a psychological quality or failing to develop that quality.

During these times, the potential for personal growth is high, but so is the potential for failure.

## 4.2. OBJECTIVES

**After going through the unit you will be able to:**

- Understand the meaning of Erikson's Theory of Psychosocial Development
- 9 stages of Erik Erikson's theory of psychosocial development ;

## 4.3. Erikson's Theory of Psychosocial Development

### **Psychosocial Stage 1 - Trust vs. Mistrust**

- The first stage of Erikson's theory of psychosocial development occurs between birth and one year of age and is the most fundamental stage in life.
- Because an infant is utterly dependent, the development of trust is based on the dependability and quality of the child's caregivers.
- If a child successfully develops trust, he or she will feel safe and secure in the world. Caregivers who are inconsistent, emotionally unavailable, or rejecting contribute to feelings of mistrust in the children they care for. Failure to develop trust will result in fear and a belief that the world is inconsistent and unpredictable.

### **Psychosocial Stage 2 - Autonomy vs. Shame and Doubt**

- The second stage of Erikson's theory of psychosocial development takes place during early childhood and is focused on children developing a greater sense of personal control.
- Like Freud, Erikson believed that toilet training was a vital part of this process. However, Erikson's reasoning was quite different than that of Freud's. Erikson believe that learning to control one's body functions leads to a feeling of control and a sense of independence.
- Other important events include gaining more control over food choices, toy preferences, and clothing selection.
- Children who successfully complete this stage feel secure and confident, while those who do not are left with a sense of inadequacy and self-doubt.

### **Psychosocial Stage 3 - Initiative vs. Guilt**

- During the preschool years, children begin to assert their power and control over the world through directing play and other social interaction.
- Children who are successful at this stage feel capable and able to lead others. Those who fail to acquire these skills are left with a sense of guilt, self-doubt and lack of initiative.

### **Psychosocial Stage 4 - Industry vs. Inferiority**

- This stage covers the early school years from approximately age 5 to 11.



- Through social interactions, children begin to develop a sense of pride in their accomplishments and abilities.
- Children who are encouraged and commended by parents and teachers develop a feeling of competence and belief in their skills. Those who receive little or no encouragement from parents, teachers, or peers will doubt their ability to be successful.

### **Psychosocial Stage 5 - Identity vs. Confusion**

- During adolescence, children are exploring their independence and developing a sense of self.
- Those who receive proper encouragement and reinforcement through personal exploration will emerge from this stage with a strong sense of self and a feeling of independence and control.
- Those who remain unsure of their beliefs and desires will be insecure and confused about themselves and the future.

### **Psychosocial Stage 6 - Intimacy vs. Isolation**

- This stage covers the period of early adulthood when people are exploring personal relationships
- Erikson believed it was vital that people develop close, committed relationships with other people. Those who are successful at this step will develop relationships that are committed and secure.
- Remember that each step builds on skills learned in previous steps. Erikson believed that a strong sense of personal identity was important to developing intimate relationships. Studies have demonstrated that those

with a poor sense of self tend to have less committed relationships and are more likely to suffer emotional isolation, loneliness, and depression.

### **Psychosocial Stage 7 - Generativity vs. Stagnation**

- During adulthood, we continue to build our lives, focusing on our career and family.
- Those who are successful during this phase will feel that they are contributing to the world by being active in their home and community.
- Those who fail to attain this skill will feel unproductive and uninvolved in the world.

### **Psychosocial Stage 8 - Integrity vs. Despair**

- This phase occurs during old age and is focused on reflecting back on life.
- Those who are unsuccessful during this phase will feel that their life has been wasted and will experience many regrets. The individual will be left with feelings of bitterness and despair.
- Those who feel proud of their accomplishments will feel a sense of integrity. Successfully completing this phase means looking back with few regrets and a general feeling of satisfaction. These individuals will attain wisdom, even when confronting death.

**Psychosocial Stage 8 - Ego integrity vs. despair (See Next Para (1.5))**

#### 4.4. Erikson's stages of psychosocial development

**Erikson's stages of psychosocial development**, as articulated by Erik Erikson, in collaboration with Joan Erikson, is a comprehensive psychoanalytic theory that identifies a series of eight stages, in which a healthy developing individual should pass through from infancy to late adulthood. All stages are present at birth but only begin to unfold according to both a natural scheme and ones ecological and cultural upbringing. In each stage, the person confronts, and hopefully masters, new challenges. Each stage builds upon the successful completion of earlier stages. The challenges of stages not successfully completed may be expected to reappear as problems in the future.

However, mastery of a stage is not required to advance to the next stage. The outcome of one stage is not permanent and can be modified by later experiences. Erikson's stage theory characterizes an individual advancing through the eight life stages as a function of negotiating his or her biological forces and sociocultural forces. Each stage is characterized by a psychosocial crisis of these two conflicting forces (as shown in the table below). If an individual does indeed successfully reconcile these forces (favoring the first mentioned attribute in the crisis), he or she emerges from the stage with the corresponding virtue. For example, if an infant enters into the toddler stage (autonomy vs. shame and doubt) with more trust than mistrust, he or she carries the virtue of hope into the remaining life stages.

**Table 2.1: Erikson's stages of psychosocial development**

<b>Approximate Age</b>	<b>Virtues</b>	<b>Psychosocial crisis</b>	<b>Significant relationships</b>	<b>Existential question</b>	<b>Examples</b>
<b>Infancy 0-2 years</b>	Hope	Basic trust vs. mistrust	Mother	Can I trust the world?	Feeding, abandonment
<b>Early childhood 2-4 years</b>	Will	Autonomy vs. shame and doubt	Parents	Is it okay to be me?	Toilet training, clothing themselves
<b>Preschool age 4-5 years</b>	Purpose	Initiative vs. guilt	Family	Is it okay for me to do, move, and act?	Exploring, using tools or making art
<b>School age 5-12 years</b>	Competence	Industry vs. inferiority	Neighbors, school	Can I make it in the world of people and things?	School, sports
<b>Adolescence</b>	Fidelity	Identity vs.	Peers,	Who am I?	Social

<b>13–19 years</b>		role confusion	role model	Who can I be?	relationshi ps
<b>Early adulthood 20–39 years</b>	Love	Intimacy vs. isolation	Friends, partners	Can I love?	Romantic relationshi ps
<b>Adulthood 40–64 years</b>	Care	Generativity vs. stagnation	Househol d, workmate s	Can I make my life count?	Work, parenthoo d
<b>Maturity 65-death</b>	Wisdom	Ego integrity vs. despair	Mankind, my kind	Is it okay to have been me?	Reflection on life

#### 4.4.1. Hope: trust vs. mistrust (oral-sensory, Infancy, 0–2 years)

The first stage of Erik Erikson's theory centers around the infant's basic needs being met by the parents and this interaction leading to trust or mistrust. Trust as defined by Erikson is "an essential truthfulness of others as well as a fundamental sense of one's own trustworthiness."<sup>[6]</sup> The infant depends on the parents, especially the mother, for sustenance and comfort. The child's relative understanding of world and society come from the parents and their interaction with the child. A child's first trust is always with the parent or caregiver; whomever that might be; however, even the caregiver is secondary where as the parents are primary in the eyes of the

child. If the parents expose the child to warmth, regularity, and dependable affection, the infant's view of the world will be one of trust. Should the parents fail to provide a secure environment and to meet the child's basic needs; a sense of mistrust will result.<sup>[7]</sup> Development of mistrust can lead to feelings of frustration, suspicion, withdrawal, and a lack of confidence.<sup>[6]</sup>

According to Erik Erikson, the major developmental task in infancy is to learn whether or not other people, especially primary caregivers, regularly satisfy basic needs. If caregivers are consistent sources of food, comfort, and affection, an infant learns trust- that others are dependable and reliable. If they are neglectful, or perhaps even abusive, the infant instead learns mistrust- that the world is an undependable, unpredictable, and possibly a dangerous place. While negative, having some experience with mistrust allows the infant to gain an understanding of what constitutes dangerous situations later in life, yet being at the stage of infant or toddler; it is a good idea not to put them in situations of mistrust, the child's number one needs are to feel safe, comforted, and well cared for.

**4.4.2. Will: autonomy vs. shame and doubt (muscular-anal, early childhood, 2-4 years)**

- Existential Question: Is It OK to Be Me?

As the child gains control over eliminative functions and motor abilities, they begin to explore their surroundings. The parents still provide a strong base of a security from which the child can venture out to assert their will. The parents' patience and encouragement helps foster autonomy in the

child. Children at this age like to explore the world around them and they are constantly learning about their environment. Caution must be taken at this age while children may explore things that are dangerous to their health and safety.

At this age children develop their first interests. For example, a child who enjoys music may like to play with the radio. Children who enjoy the outdoors may be interested in animals and plants. Highly restrictive parents, however, are more likely to instill in the child a sense of doubt, and reluctance to attempt new challenges. As they gain increased muscular coordination and mobility, toddlers become capable of satisfying some of their own needs. They begin to feed themselves, wash and dress themselves, and use the bathroom.

If caregivers encourage self-sufficient behavior, toddlers develop a sense of autonomy—a sense of being able to handle many problems on their own. But if caregivers demand too much too soon, refuse to let children perform tasks of which they are capable, or ridicule early attempts at self-sufficiency, children may instead develop shame and doubt about their ability to handle problems.

**4.4.3. Purpose: initiative vs. guilt (locomotor-genital, preschool, 4–5 years)**

- Existential Question: Is it OK for Me to Do, Move, and Act?

Initiative adds to autonomy the quality of undertaking, planning and attacking a task for the sake of just being active and on the move. The child is learning to master the world around them, learning basic skills and principles of physics. Things fall down, not up. Round things roll. They learn how to zip and tie, count and speak with ease. At this stage, the child wants to begin and complete their own actions for a purpose. Guilt is a confusing new emotion. They may feel guilty over things that logically should not cause guilt. They may feel guilt when this initiative does not produce desired results.

The development of courage and independence are what set preschoolers, ages three to six years of age, apart from other age groups. Young children in this category face the challenge of initiative versus guilt. As described in Bee and Boyd (2004),<sup>[7]</sup> the child during this stage faces the complexities of planning and developing a sense of judgment. During this stage, the child learns to take initiative and prepare for leadership and goal achievement roles. Activities sought out by a child in this stage may include risk-taking behaviors, such as crossing a street alone or riding a bike without a helmet; both these examples involve self-limits.

Within instances requiring initiative, the child may also develop negative behaviors. These behaviors are a result of the child developing a sense of frustration for not being able to achieve a goal as planned and may engage in behaviors that seem aggressive, ruthless, and overly assertive to parents.



Aggressive behaviors, such as throwing objects, hitting, or yelling, are examples of observable behaviors during this stage. \*\*

Preschoolers are increasingly able to accomplish tasks on their own, and can start new things. With this growing independence comes many choices about activities to be pursued. Sometimes children take on projects they can readily accomplish, but at other times they undertake projects that are beyond their capabilities or that interfere with other people's plans and activities. If parents and preschool teachers encourage and support children's efforts, while also helping them make realistic and appropriate choices, children develop initiative- independence in planning and undertaking activities. But if, instead, adults discourage the pursuit of independent activities or dismiss them as silly and bothersome, children develop guilt about their needs and desires.<sup>[8]</sup>

#### 4.4.4. Competence: industry vs. inferiority (latency, school age, 5–12 years)

- Existential Question: Can I Make it in the World of People and Things?

The aim to bring a productive situation to completion gradually supersedes the whims and wishes of play. The fundamentals of technology are developed. The failure to master trust, autonomy, and industrious skills may cause the child to doubt his or her future, leading to shame, guilt, and the experience of defeat and inferiority.<sup>[9]</sup>

"Children at this age are becoming more aware of themselves as individuals." They work hard at "being responsible, being good and doing it right." They are now more reasonable to share and cooperate. Allen and Marotz (2003)<sup>[10]</sup> also list some perceptual cognitive developmental traits

specific for this age group. Children grasp the concepts of space and time in more logical, practical ways. They gain a better understanding of cause and effect, and of calendar time. At this stage, children are eager to learn and accomplish more complex skills: reading, writing, telling time. They also get to form moral values, recognize cultural and individual differences and are able to manage most of their personal needs and grooming with minimal assistance.<sup>[10]</sup> At this stage, children might express their independence by talking back and being disobedient and rebellious.

Erikson viewed the elementary school years as critical for the development of self-confidence. Ideally, elementary school provides many opportunities for children to achieve the recognition of teachers, parents and peers by producing things- drawing pictures, solving addition problems, writing sentences, and so on. If children are encouraged to make and do things and are then praised for their accomplishments, they begin to demonstrate industry by being diligent, persevering at tasks until completed and putting work before pleasure. If children are instead ridiculed or punished for their efforts or if they find they are incapable of meeting their teachers' and parents' expectations, they develop feelings of inferiority about their capabilities.<sup>[2]</sup>

At this age, children start recognizing their special talents and continue to discover interests as their education improves. They may begin to choose to do more activities to pursue that interest, such as joining a sport if they know they have athletic ability, or joining the band if they are good at music. If not allowed to discover their own talents in their own time, they will develop a sense of lack of motivation, low self-esteem, and lethargy.

They may become "couch potatoes" if they are not allowed to develop interests.

#### 4.4.5. Fidelity: identity vs. role confusion (adolescence, 13–19 years)

- Existential Question: Who Am I and What Can I Be?

The adolescent is newly concerned with how they appear to others. Superego identity is the accrued confidence that the outer sameness and continuity prepared in the future are matched by the sameness and continuity of one's meaning for oneself, as evidenced in the promise of a career. The ability to settle on a school or occupational identity is pleasant. In later stages of Adolescence, the child develops a sense of sexual identity. As they make the transition from childhood to adulthood, adolescents ponder the roles they will play in the adult world. Initially, they are apt to experience some role confusion—mixed ideas and feelings about the specific ways in which they will fit into society—and may experiment with a variety of behaviors and activities (e.g. tinkering with cars, baby-sitting for neighbors, affiliating with certain political or religious groups). Eventually, Erikson proposed, most adolescents achieve a sense of identity regarding who they are and where their lives are headed.

Erikson is credited with coining the term "Identity Crisis." Each stage that came before and that follows has its own 'crisis', but even more so now, for this marks the transition from childhood to adulthood. This passage is necessary because "Throughout infancy and childhood, a person forms many identifications. But the need for identity in youth is not met by

these." This turning point in human development seems to be the reconciliation between 'the person one has come to be' and 'the person society expects one to become'. This emerging sense of self will be established by 'forging' past experiences with anticipations of the future. In relation to the eight life stages as a whole, the fifth stage corresponds to the crossroads:

What is unique about the stage of Identity is that it is a special sort of synthesis of earlier stages and a special sort of anticipation of later ones. Youth has a certain unique quality in a person's life; it is a bridge between childhood and adulthood. Youth is a time of radical change—the great body changes accompanying puberty, the ability of the mind to search one's own intentions and the intentions of others, the suddenly sharpened awareness of the roles society has offered for later life.

Adolescents "are confronted by the need to re-establish [boundaries] for themselves and to do this in the face of an often potentially hostile world." This is often challenging since commitments are being asked for before particular identity roles have formed. At this point, one is in a state of 'identity confusion', but society normally makes allowances for youth to "find themselves," and this state is called 'the moratorium':

The problem of adolescence is one of role confusion—a reluctance to commit which may

forcing him or her to 'foreclose' on experimentation and, therefore, true self-discovery haunt a person into his mature years. Given the right conditions—and Erikson believes these are essentially having enough space and time, a psychosocial moratorium, when a person can freely

experiment and explore—what may emerge is a firm sense of identity, an emotional and deep awareness of who he or she is.<sup>[13]</sup>

As in other stages, bio-psycho-social forces are at work. No matter how one has been raised, one's personal ideologies are now chosen for oneself. Often, this leads to conflict with adults over religious and political orientations. Another area where teenagers are deciding for themselves is their career choice, and often parents want to have a decisive say in that role. If society is too insistent, the teenager will acquiesce to internal wishes, effectively. Once someone settles on a worldview and vocation, will he or she be able to integrate this aspect of self-definition into a diverse society? According to Erikson, when an adolescent has balanced both perspectives of "What have I got?" and "What am I going to do with it?" he or she has established their identity:

Dependent on this stage is the ego quality of *fidelity—the ability to sustain loyalties freely pledged in spite of the inevitable contradictions and confusions of value systems.*

Given that the next stage (Intimacy) is often characterized by marriage, many are tempted to cap off the fifth stage at 20 years of age. However, these age ranges are actually quite fluid, especially for the achievement of identity, since it may take many years to become grounded, to identify the object of one's fidelity, to feel that one has "come of age." In the biographies *Young Man Luther* and *Gandhi's Truth*, Erikson determined that their crises ended at ages 25 and 30, respectively:

Erikson does note that the time of Identity crisis for persons of genius is frequently prolonged. He further notes that in our industrial society, identity formation tends to be long, because it takes us so long to gain the

skills needed for adulthood's tasks in our technological world. So... we do not have an exact time span in which to find ourselves. It doesn't happen automatically at eighteen or at twenty-one. A *very* approximate rule of thumb for our society would put the end somewhere in one's twenties.<sup>[11]</sup>

#### **4.4.6. Love: intimacy vs. isolation (early adulthood, 20-39 years)**

- Existential Question: Can I Love?

The Intimacy vs. Isolation conflict is emphasized around the age of 30. At the start of this stage, identity vs. role confusion is coming to an end, though it still lingers at the foundation of the stage (Erikson, 1950). Young adults are still eager to blend their identities with friends. They want to fit in. Erikson believes we are sometimes isolated due to intimacy. We are afraid of rejections such as being turned down or our partners breaking up with us. We are familiar with pain and to some of us rejection is so painful that our egos cannot bear it.<sup>[14][15]</sup> Erikson also argues that "Intimacy has a counterpart: Distantiation: the readiness to isolate and if necessary, to destroy those forces and people whose essence seems dangerous to our own, and whose territory seems to encroach on the extent of one's intimate relations" (1950).

Once people have established their identities, they are ready to make long-term commitments to others. They become capable of forming intimate, reciprocal relationships (e.g. through close friendships or marriage) and willingly make the sacrifices and compromises that such relationships require. If people cannot form these intimate relationships – perhaps because of their own needs – a sense of isolation may result; arousing feelings of darkness and angst.

#### 4.4.7. Care: generativity vs. stagnation (adulthood, 40–64 years)

- Existential Question: Can I Make My Life Count?

Generativity is the concern of guiding the next generation. Socially-valued work and disciplines are expressions of generativity.

The adult stage of generativity has broad application to family, relationships, work, and society. "Generativity, then is primarily the concern in establishing and guiding the next generation... the concept is meant to include... productivity and creativity."<sup>[6]</sup>

During middle age the primary developmental task is one of contributing to society and helping to guide future generations. When a person makes a contribution during this period, perhaps by raising a family or working toward the betterment of society, a sense of generativity- a sense of productivity and accomplishment- results. In contrast, a person who is self-centered and unable or unwilling to help society move forward develops a feeling of stagnation- a dissatisfaction with the relative lack of productivity.

#### Central tasks of middle adulthood

- Express love through more than sexual contacts.
- Maintain healthy life patterns.
- Develop a sense of unity with mate.
- Help growing and grown children to be responsible adults.
- Relinquish central role in lives of grown children.
- Accept children's mates and friends.

- Create a comfortable home.
- Be proud of accomplishments of self and mate/spouse.
- Reverse roles with aging parents.
- Achieve mature, civic and social responsibility.
- Adjust to physical changes of middle age.
- Use leisure time creatively.



#### 4.4.8. Wisdom: ego integrity vs. despair (maturity, 65 – death)

- Existential Question: Is it OK to Have Been Me?

As we grow older and become senior citizens we tend to slow down our productivity and explore life as a retired person. It is during this time that we contemplate our accomplishments and are able to develop integrity if we see ourselves as leading a successful life. If we see our life as unproductive, or feel that we did not accomplish our life goals, we become dissatisfied with life and develop despair, often leading to depression and hopelessness.

The final developmental task is retrospection: people look back on their lives and accomplishments. They develop feelings of contentment and integrity if they believe that they have led a happy, productive life. They may instead develop a sense of despair if they look back on a life of disappointments and unachieved goals.

This stage can occur out of the sequence when an individual feels they are near the end of their life (such as when receiving a terminal disease diagnosis).

#### 4.4.9. Ninth stage

- Psychosocial Crises: All first eight stages in reverse quotient order

Joan M. Erikson, who married and collaborated with Erik Erikson, added a ninth stage in *The Life Cycle Completed: Extended Version*. Living in the ninth stage, she wrote, “old age in one’s eighties and nineties brings with it

new demands, reevaluations, and daily difficulties.” Addressing these new challenges requires “designating a new ninth stage.” Erikson was ninety-three years old when she wrote about the ninth stage.

Joan Erikson showed that all the eight stages “are relevant and recurring in the ninth stage.” In the ninth stage, the psychosocial crises of the eight stages are faced again, but with the quotient order reversed. For example, in the first stage (infancy), the psychosocial crisis was “Trust vs. Mistrust” with Trust being the “syntonic quotient” and Mistrust being the “diatonic.” Joan Erikson applies the earlier psychosocial crises to the ninth stage as follows.

#### **“Basic Mistrust vs. Trust: Hope”**

In the ninth stage, “elders are forced to mistrust their own capabilities” because one’s “body inevitably weakens.” Yet, Joan Erikson asserts that “while there is light, there is hope” for a “bright light and revelation.”

#### **“Shame and Doubt vs Autonomy: Will”**

Ninth stage elders face the “shame of lost control” and doubt “their autonomy over their own bodies.” So it is that “shame and doubt challenge cherished autonomy.”

**“Inferiority vs. Industry: Competence”**

Industry as a “driving force” that elders once had is gone in the ninth stage. Being incompetent “because of aging is belittling” and makes elders “like unhappy small children of great age.”

**“Identity confusion vs. Identity: Fidelity”**

Elders experience confusion about their “existential identity” in the ninth stage and “a real uncertainty about status and role.”

**“Isolation vs. Intimacy: Love”**

In the ninth stage, the “years of intimacy and love” are often replaced by “isolation and deprivation.” Relationships become “overshadowed by new incapacities and dependencies.”

**“Stagnation vs, Generativity: Care”**

The generativity in the seventh stage of “work and family relationships,” if it goes satisfactorily, is “a wonderful time to be alive.” In one’s eighties and nineties, there is less energy for generativity or caretaking. Thus, “a sense of stagnation may well take over.”

### **“Despair and Disgust vs. Integrity: Wisdom”**

Integrity imposes “a serious demand on the senses of elders.” Wisdom requires capacities that ninth stage elders “do not usually have.” The eighth stage includes retrospection that can evoke a “degree of disgust and despair.” In the ninth stage, introspection is replaced by the attention demanded to one’s “loss of capacities and disintegration.”

Living in the ninth stage, Joan Erikson expressed confidence that the psychosocial crisis of the ninth stage can be met as in the first stage with the “basic trust” with which “we are blessed.”

#### **4.5. Summary**

Erikson's theory may be questioned as to whether his stages must be regarded as sequential, and only occurring within the age ranges he suggests. There is debate as to whether people only search for identity during the adolescent years or if one stage needs to happen before other stages can be completed. However, Erikson states that each of these processes occur throughout the lifetime in one form or another, and he emphasizes these "phases" only because it is at these times that the conflicts become most prominent.

Most empirical research into Erikson has related to his views on adolescence and attempts to establish identity. His theoretical approach was studied and supported, particularly regarding adolescence, by James E. Marcia. Marcia's work has distinguished different forms of identity, and there is some empirical evidence that those people who form the most coherent self-concept in adolescence are those who are most able to make intimate

attachments in early adulthood. This supports Eriksonian theory, in that it suggests that those best equipped to resolve the crisis of early adulthood are those who have most successfully resolved the crisis of adolescence.

#### 4.6. Check Your Progress

- **Existential Question: Is it OK to Have Been Me?**
- **Existential Question: Can I Make My Life Count?**
- **Existential Question: Can I Love?**
- **Existential Question: Who Am I and What Can I Be?**
- **Existential Question: Can I Make it in the World of People and Things?**
- **Existential Question: Is it OK for Me to Do, Move, and Act?**
- **Existential Question: Is It OK to Be Me?**

#### 4.7. Assignment/Activity

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**4.8.2. Points for clarification**

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## UNIT 3

### PSYCHOANALYTIC THEORY (FREUD)

#### STRUCTURE

6.1. INTRODUCTION

6.2. OBJECTIVES

6.3. FREUD'S STRUCTURE OF THE HUMAN MIND

6.4. PSYCHOSEXUAL STAGES OF DEVELOPMENT

6.5. CRITICISM OF FREUD'S THEORIES

6.6. FREUD'S PSYCHOANALYTIC THEORIES

6.6.1. ID

6.6.2. EGO

6.6.3. SUPEREGO

6.7. THE UNCONSCIOUS MIND

6.8. FREUD'S PSYCHOSEXUAL STAGES

6.8.1. ORAL STAGE

6.8.2. ANAL STAGE

6.8.3. PHALLIC STAGE

6.8.4. LATENCY STAGE

6.8.5. GENITAL STAGE

6.9. ANXIETY AND DEFENSE MECHANISMS

**6.10. SUMMARY**

**6.11. CHECK YOUR PROGRESS**

**6.12. ASSIGNMENT/ACTIVITY**

**6.13. POINTS FOR DISCUSSION AND CLARIFICATION**

**6.14. REFERENCES / FURTHER READINGS**

## UNIT 3

### PSYCHOANALYTIC THEORY (FREUD)

#### 6.1 INTRODUCTION

Sigmund Freud's psychoanalytic theory of personality argues that human behavior is the result of the interactions among three component parts of the mind: the *id*, *ego*, and *superego*.

This theory, known as Freud's structural theory of personality, places great emphasis on the role



of unconscious psychological conflicts in shaping behavior and personality.

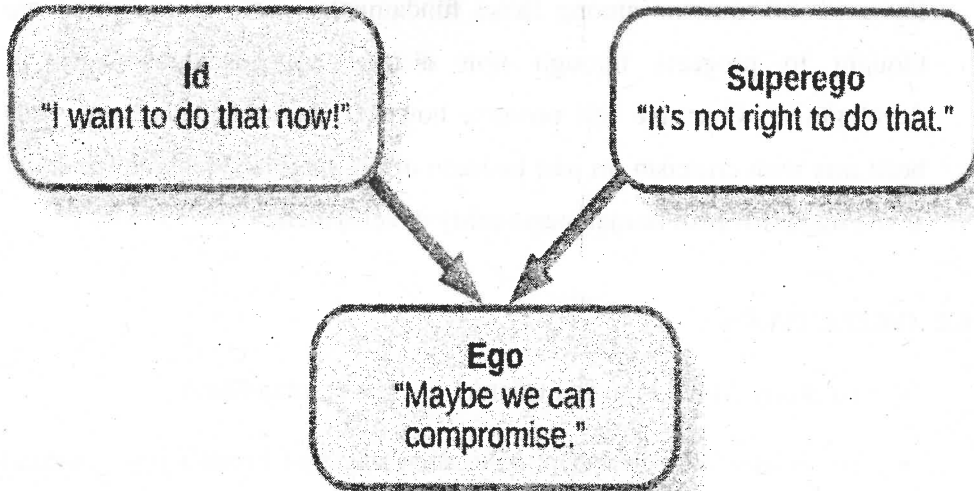
Dynamic interactions among these fundamental parts of the mind are thought to progress through five distinct psychosexual stages of development. Over the last century, however, Freud's ideas have since been met with criticism, in part because of his singular focus on sexuality as the main driver of human personality development.

## 6.2 OBJECTIVES

- To Study About Freud's Structure Of The Human Mind
- To understand the concept of various stages of Freud's psychosexual stages human development
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

## 6.3 Freud's Structure of the Human Mind

According to Freud, our personality develops from the interactions among what he proposed as the three fundamental structures of the human mind: the id, ego,



and superego. Conflicts among these three structures, and our efforts to find balance among what each of them "desires," determines how we behave and approach the world. What balance we strike in any given situation determines how we will resolve the conflict between two overarching behavioral tendencies: our biological aggressive and pleasure-seeking drives vs. our socialized internal control over those drives.

### **The Id**

The *id*, the most primitive of the three structures, is concerned with instant gratification of basic physical needs and urges. It operates entirely unconsciously (outside of conscious thought). For example, if your id walked past a stranger eating ice cream, it would most likely take the ice cream for itself. It doesn't know, or care, that it is rude to take something belonging to someone else; it would care only that you wanted the ice cream.

### **The Superego**

The *superego* is concerned with social rules and morals—similar to what many people call their "conscience" or their "moral compass." It develops as a child learns what their culture considers right and wrong. If your superego walked past the same stranger, it would not take their ice cream because it would know that that would be rude. However, if both your id *and* your superego were involved, and your id was strong enough to override your superego's concern, you *would* still take the ice cream, but afterward you would most likely feel guilt and shame over your actions.

### **The Ego**

In contrast to the instinctual id and the moral superego, the *ego* is the rational, pragmatic part of our personality. It is less primitive than the id and is partly conscious and partly unconscious. It's what Freud considered to be the "self," and its job is to balance the demands of the id and superego in the practical context of reality. So, if you walked past the stranger with ice cream one more time, your ego would mediate the conflict between your id ("I want that ice cream right

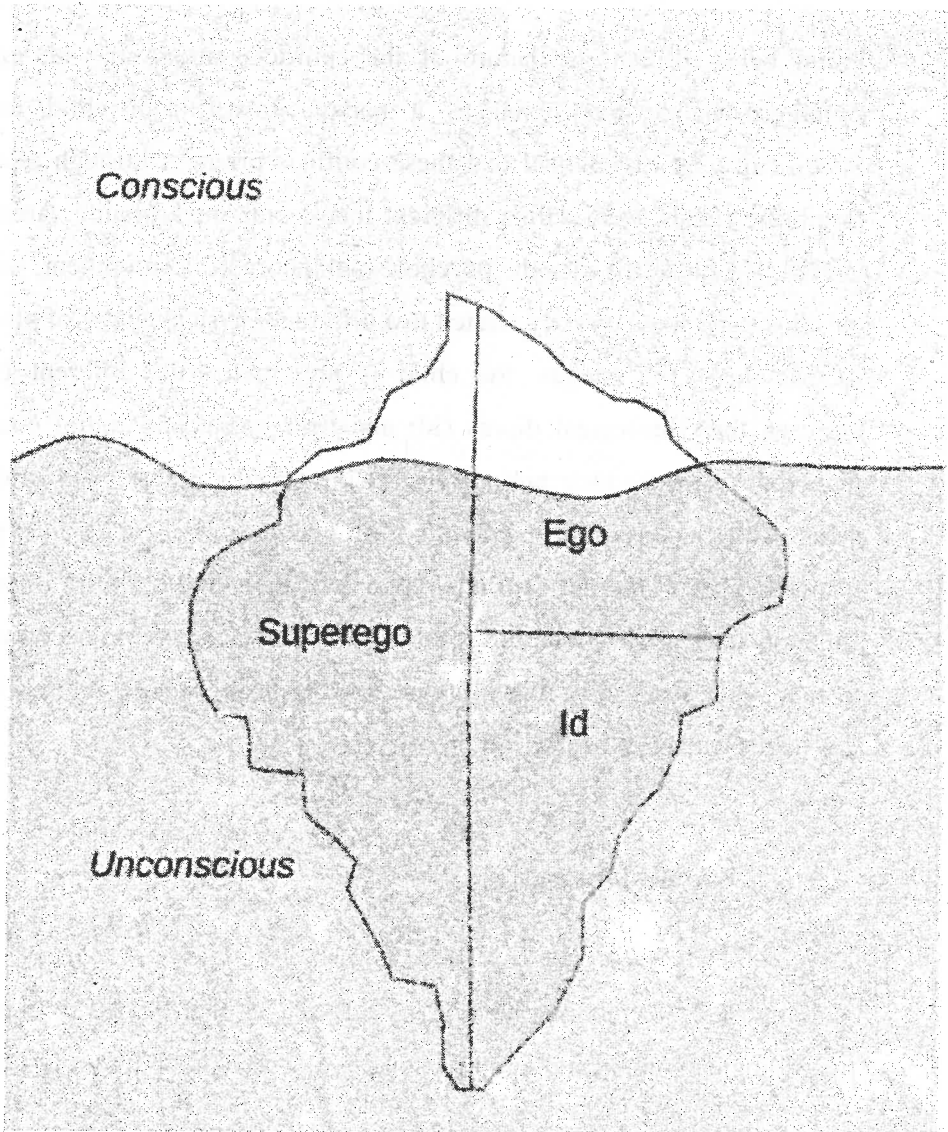


now") and superego ("It's wrong to take someone else's ice cream") and decide to go buy your own ice cream. While this may mean you have to wait 10 more minutes, which would frustrate your id, your ego decides to make that sacrifice as part of the compromise—satisfying your desire for ice cream while also avoiding an unpleasant social situation and potential feelings of shame.

Freud believed that the id, ego, and superego are in constant conflict and that adult personality and behavior are rooted in the results of these internal struggles throughout childhood. He believed that a person who has a strong ego has a healthy personality and that imbalances in this system can lead to neurosis (what we now think of as anxiety and depression) and unhealthy behaviors.

**According to Freud's structural model, the personality is divided into the id, ego, and superego. On this diagram (See Fig. 3.1), the portion above the water signifies the conscious mind, while the portion below the water illustrates the unconscious mind.**

Fig 3.1: The id, ego, and superego



#### 6.4 Psychosexual Stages of Development

Freud believed that the nature of the conflicts among the id, ego, and superego change over time as a person grows from child to adult. Specifically, he maintained that these conflicts progress through a series of five basic stages, each with a different focus: oral, anal, phallic, latency, and genital. He called his idea the psychosexual theory of development, with each psychosexual stage directly related to a different physical center of pleasure.

Across these five stages, the child is presented with different conflicts between their biological drives (id) and their social and moral conscience (superego) because their biological pleasure-seeking urges focus on different areas of the body (what Freud called "erogenous zones"). The child's ability to resolve these internal conflicts determines their future ability to cope and function as an adult. Failure to resolve a stage can lead one to become fixated in that stage, leading to unhealthy personality traits; successful resolution of the stages leads to a healthy adult.

#### 6.5 Criticism of Freud's Theories

Although Freud's theories have many advantages that helped to expand our psychological understanding of personality, they are not without limits.

##### **Narrow Focus**

In his singular emphasis on the structure of the human mind, Freud paid little to no attention to the impact of environment, sociology, or culture. His theories were highly focused on pathology and largely ignored "normal,"

healthy functioning. He has also been criticized for his myopic view of human sexuality to the exclusion of other important factors.

### **No Scientific Basis**

Many critics point out that Freud's theories are not supported by any empirical (experimental) data. In fact, as researchers began to take a more scientific look at his ideas, they found that several were *unable* to be supported: in order for a theory to be scientifically valid, it must be possible to disprove ("falsify") it with experimental evidence and many of Freud's notions are not falsifiable.

### **Misogyny**

Feminists and modern critics have been particularly critical of many of Freud's theories, pointing out that the assumptions and approaches of psychoanalytic theory are profoundly patriarchal (male-dominated), anti-feminist, and misogynistic (anti-woman). Karen Horney, a psychologist who followed Freud, saw the mainstream Freudian approach as having a foundation of "masculine narcissism." Feminist Betty Friedan referred to Freud's concept of "penis envy" as a purely social bias typical of the Victorian era and showed how the concept played a key role in discrediting alternative notions of femininity in the early to mid-twentieth century.

## **Freud's Psychoanalytic Theories**

Sigmund Freud (6 May 1856 – 23 September 1939) is considered to be the founder of the psychodynamic approach to psychology which looks closely at the unconscious drives that motivate people to act in certain ways.

The role of the mind is something that Freud repeatedly talked about because he believed that the mind is responsible for both conscious and unconscious decisions based on drives and forces. Unconscious desires motivate people to act accordingly. The id, ego, and super ego are three aspects of the mind, Freud believed to make up a person's personality. Freud believed people are "simply actors in the drama of [their] own minds, pushed by desire, pulled by coincidence. Underneath the surface, our personalities represent the power struggle going on deep within us".

### **Religion**

Freud did not believe there is any supernatural force that affects the way we think or has pre-programmed us to behave in a certain way. His idea of the id explains why people act out in certain ways, when it is not in line with the ego or superego. "Religion is an illusion and it derives its strength from the fact that it falls in with our instinctual desires.". Freud believed that people rely on religion to give explanations for anxieties and tension they do not want to consciously believe in. The basis of Christian Theology states, "God Created Humanity in his image" <sup>[3]</sup> but Freud argued that humanity created God in their image. This reverses the idea of any type of religion because he believed that it is constructed by the mind. The role of the mind is something that Freud repeatedly talked about because he believed that the mind is responsible for both conscious and unconscious decisions based on drives and forces. The idea that religion causes people to behave in a moral way is incorrect according to Freud because he believed that no other force has the power to control the ways in which people act. Unconscious desires motivate people to act accordingly. Freud did a significant amount of research studying how people act and interact in a group setting. He

believed that people act in different ways according to the demands and constraints of the group as a whole. In his book *Group Psychology and the Analysis of the Ego*, Freud argued that the church and organized religion form an “artificial group” which requires an external force to keep it together. In this type of group, everything is dependent on that external force and without it, the group would no longer exist. Groups are necessary, according to Freud in order to decrease the narcissism in all people, by creating libidinal ties with others by placing everyone at an equal level. The commonness among different people with different egos allows people to identify with one another. This relates to the idea of religion because Freud believed that people created religion in order to create these group ties that they unconsciously seek for.

### **Greek Mythology**

According to Freud’s many theories of religion, the Oedipus complex is utilized in the understanding and mastery of religious beliefs. In Freud’s psychosexual stages, he mentioned the Oedipus complex and the Electra complex and how they affect children and their relationships with their same sex parental figure. According to Freud, there is an unconscious desire for one’s mother to be a virgin and for one’s father to be an all-powerful, almighty figure. Freud’s interest in Greek mythology and religion greatly influenced his psychological theories. The Oedipus complex is when a boy is jealous of his father. The boy strives to possess his mother and ultimately replace his father as a means of no longer having to fight for her undivided attention and affection. Along with seeking his mother’s love, boys also experience castration anxiety which is the fear of losing his genitalia. Boys fear that their fathers will retaliate and castrate them as a result of desiring one’s mother. While the Oedipus complex presents itself in males, females experience a different form of incestuous rivalry known as the Electra

complex. Girls become jealous of their mothers and begin to feel desire towards their fathers. Females also experience penis envy which is the parallel reaction to the male experience of castration anxiety. Females are jealous of their fathers' penis and wish to have one as well. Girls then repress this feeling and instead long for a child of their own. This suppression leads to the girl identifying with her mother and acquiring feminine traits.

### 6.5.1 Id

The id according to Freud is the part of the unconscious that seeks pleasure. His idea of the id explains why people act out in certain ways, when it is not in line with the ego or superego. The id is the part of the mind, which holds all of human's most basic and primal instincts. It is the impulsive, unconscious part of the mind that is based on desire to seek immediate satisfaction. The id does not have a grasp on any form of reality or consequence. Freud explained that the pleasure is controlled by the id because it makes people engage in need-satisfying behavior without any accordance to what is right or wrong. Freud compared the id and the ego to a horse and a rider. The id is compared to the horse, which is directed and controlled, by the ego or the rider. This example goes to show that although the id is supposed to be controlled by the ego, they often interact with one another according to the drives of the id.

Freud defined the id as the part of the mind "cut off from the external world, [that] has a world of perception of its own. It detects with extraordinary acuteness certain changes in its interior, especially oscillations in the tension of its instinctual needs, and these changes become conscious as feelings in the pleasure-unpleasure series. It is hard

to say, to be sure, by what means and with the help of what sensory terminal organs these perceptions come about. But it is an established fact that self-perceptions—coenesthetic feelings and feelings of pleasure-unpleasure—govern the passage of events in the id with despotic force. The id obeys the inexorable pleasure principle”.

Psychoanalysis was founded by Sigmund Freud (1856-1939). Freud believed that people could be cured by making conscious their unconscious thoughts and motivations, thus gaining “insight”.

The aim of psychoanalysis therapy is to release repressed emotions and experiences, i.e. make the unconscious conscious.

Psychoanalysis is commonly used to treat depression and anxiety disorders.

It is only having a cathartic (i.e. healing) experience can the person be helped and "cured".

### 6.5.2 Ego

In order for people to maintain a realistic sense here on earth, the ego is responsible for creating balance between pleasure and pain. It is impossible for all desires of the id to be met and the ego realizes this but continues to seek pleasure and satisfaction. Although the ego does not know the difference between right and wrong, it is aware that not all drives can be met at a given time. The reality principle is what the ego operates by in order to help satisfy the id's demands as well as compromising according to reality. The ego is a person's “self” composed of unconscious



desires. The ego takes into account ethical and cultural ideals in order to balance out the desires originating in the id. Although both the id and the ego are unconscious, the ego has close contact with the perceptual system. The ego has the function of self-preservation, which is why it has the ability to control the instinctual demands from the id.

“The ego is first and foremost a bodily ego; it is not merely a surface entity, but is itself the projection of a surface. If we wish to find an anatomical analogy for it we can best identify it with the ‘cortical homunculus’ of the anatomists, which stands on its head in the cortex, sticks up its heels, faces backwards and, as we know, has its speech-area on the left-hand side. The ego is ultimately derived from bodily sensations, chiefly from those springing from the surface of the body. It may thus be regarded as a mental projection of the surface of the body, representing the superficies of the mental apparatus.”

### 6.5.3 Superego

The superego, which develops around age four or five, incorporates the morals of society. Freud believed that the superego is what allows the mind to control its impulses that are looked down upon morally. The superego can be considered to be the conscience of the mind because it has the ability to distinguish between reality as well as what is right or wrong. Without the superego Freud believed people would act out with aggression and other immoral behaviors because the mind would have no way of understanding the difference between right and wrong. The superego is considered to be the “consciousness” of a person’s

personality and can override the drives from the id. Freud separates the superego into two separate categories; the ideal self and the conscious. The conscious contains ideals and morals that exist within society that prevent people from acting out based on their internal desires. The ideal self contains images of how people ought to behave according to societies ideals.

## 6.6 The Unconscious Mind

Freud believed that the answers to what controlled daily actions resided in the unconscious mind despite alternative views that all our behaviors were conscious. He felt that religion is an illusion based on human values that are created by the mind to overcome inner psychological conflict.<sup>[6]</sup> He believed that notions of the unconsciousness and gaps in the consciousness can be explained by acts of which the consciousness affords no evidence. The unconscious mind positions itself in every aspect our life whether one is dormant or awake.<sup>[7]</sup> Though one may be unaware of the impact of the unconscious mind, it influences the actions we engage in.<sup>[8]</sup> Human behavior may be understood by searching for analysis of mental processes. This explanation gives significance to verbal slips and dreams. They are caused by hidden reasons in the mind displayed in concealed forms. Verbal slips of the unconscious mind are referred to as a Freudian slip. This is a term to explain a spoken mistake derived from the unconscious mind. Traumatizing information of thoughts and beliefs are blocked from the conscious mind. Slips expose

our true thoughts stored in the unconscious.<sup>[9]</sup> Sexual instincts or drives have deeply hidden roots in the unconscious mind. Instincts act by giving vitality and enthusiasm to the mind through meaning and purpose. The ranges of instincts are in great numbers. Freud expressed them in two categories. One is Eros the self-preserving life instinct containing all erotic pleasures. While Eros is used for basic survival, the living instinct alone cannot explain all behavior according to Freud.<sup>[10]</sup> In contrast, Thanatos is the death instinct. It is full of self-destruction of sexual energy and our unconscious desire to die. The main part of human behavior and actions is tied back to sexual drives. Since birth, the existence of sexual drives can be recognized as one of the most important incentives of life.

## 6.7 Freud's psychosexual Stages

Freud's theory of psychosexual development is represented amongst five stages. According to Freud each stage occurs within a specific time frame of one's life. If one becomes fixated in any of the five stages, he or she will develop personality traits that coincide with the a specific stage and its focus.

### 6.7.1 Oral Stage

The first stage is the oral stage. An infant is in this stage from birth to eighteen months of age. The main focus in the oral stage is pleasure seeking through the infant's mouth. During this stage the need for tasting and sucking becomes prominent in producing pleasure. Oral stimulation is crucial during this stage; if the infant's needs are not met during this time frame he or she will be fixated

in the oral stage. Fixation in this stage can lead to adult habits such as thumb-sucking, smoking, over-eating, and nail-biting. Personality traits can also develop during adulthood that are linked to oral fixation; these traits can include optimism and independence or pessimism and hostility.

### **6.7.2 Anal Stage**

The second stage is the anal stage which lasts from eighteen months to three years of age. During this stage the infant's pleasure seeking centers are located in the bowels and bladder. Parents stress toilet training and bowel control during this time period. Fixation in the anal stage can lead to anal-retention or anal-expulsion. Anal retentive characteristics include being overly neat, precise, and orderly while being anal expulsive involves being disorganized, messy, and destructive.

### **6.7.3 Phallic Stage**

The third stage in psychosexual development is the phallic stage. This stage begins at 3 years old and ends when the child reaches six years of age. The phallic stage focuses on the genitals as pleasure seeking areas of the body. Boys in this stage experience the Oedipus complex while girls experience the Electra complex. In both cases the child develops incestuous feelings for the parent of the opposite sex. Children tend to develop characteristics of the same-sex parent during this stage. Fixation in the phallic stage has different personality traits depending on one's gender. Males may take great pride in their masculinity and their sexuality while

women may become flirtatious and promiscuous. In both instances, these personality traits are a sign of low self-esteem and self-worth.

#### **6.7.4 Latency Stage**

The fourth stage is the latency stage which begins at the age of six and continues until the age of eleven. During this stage there is no pleasure seeking region of the body; instead all sexual feelings are repressed. Thus, children are able to develop social skills, and find comfort through peer and family interaction.

#### **6.7.5 Genital Stage**

The final stage of psychosexual development is the genital stage. This stage commences at the age of eleven, lasts through puberty, and ends when one reaches adulthood at the age of eighteen. The onset of puberty reflects a strong interest from one person to another of the opposite sex. If one does not experience fixation in any of the psychosexual stages, once he or she has reached the genital stage, he or she will grow into a well-balanced human being.

### **6.8 Anxiety and Defense Mechanisms**

Sigmund Freud proposed a set of defense mechanisms in one's body. These set of defense mechanisms occur so one can hold a favorable or preferred view of themselves. For example, in a particular situation when an event occurs that violates ones preferred view of themselves, Freud stated that it is necessary for the self to have some mechanism to defend itself against this unfavorable event; this is known as defense mechanisms.

Freud's work on defense mechanisms focused on how the ego defends itself against internal events or impulses, which are regarded as unacceptable to one's ego. These defense mechanisms are used to handle the conflict between the id, the ego, and the super ego.

Freud noted that a major drive for people is the reduction of tension and the major cause of tension was anxiety. He identified three types of anxiety, reality anxiety, neurotic anxiety, and moral anxiety. Reality anxiety is the most basic form of anxiety and is based on the ego. It is typically based on the fear of real and possible events, for example being bit by a dog or falling off of a roof. Neurotic anxiety comes from an unconscious fear that the basic impulses of the id will take control of the person, leading to eventual punishment from expressing the ids desires. Moral anxiety comes from the superego. It appears in the form of a fear of violating values or moral codes, and appears as feelings like guilt or shame.

When anxiety occurs, the minds first response is to seek rational ways of escaping the situation by increasing problem solving efforts and a range of defense mechanisms may be triggered. These are ways that the ego develops to help deal with the id and the superego. Defense mechanisms often appear unconsciously and tend to distort or falsify reality. When the distortion of reality occurs, there is a change in perception which allows for a lessening in anxiety resulting in a reduction of tension one experiences. Sigmund Freud noted a number of ego defenses which were noted throughout his work but his daughter, Anna Freud, developed and elaborated on them.

The defense mechanisms are as follows:

- 1) Denial- believing that what is true is actually false
  - 2) Displacement- taking out impulses on a less threatening target
  - 3) Intellectualization- avoiding unacceptable emotions by focusing on the intellectual aspects
  - 4) Projection- attributing uncomfortable feelings to others
  - 5) Rationalization- creating false but believable justifications
  - 6) Reaction Formation- taking the opposite belief because the true belief causes anxiety
  - 7) Regression- going back to a previous stage of development
  - 8) Repression- pushing uncomfortable thoughts out of conscious awareness
  - 9) Suppression- consciously forcing unwanted thoughts out of our awareness
  - 10) Sublimation- redirecting 'wrong' urges into socially acceptable actions.
- These defenses are not under our conscious control and our unconscious will use one or more to protect one's self from stressful situations. They are natural and normal and without these, neurosis develops such as anxiety states, phobias, obsessions, or hysteria.

## 6.9 SUMMARY

Sigmund Freud, the father of psychoanalysis, was a physiologist, medical doctor, psychologist and influential thinker of the early twentieth century. Working initially in close collaboration with Joseph Breuer, Freud elaborated the theory that the mind is a complex energy-system, the structural investigation of which is the proper province of psychology. He articulated and refined the concepts of the unconscious, infantile sexuality and repression, and he proposed a tripartite account of the mind's structure—all as part of a radically new conceptual and therapeutic frame of reference for the understanding of human psychological development and the treatment of abnormal mental conditions. Notwithstanding the multiple manifestations of psychoanalysis as it exists today, it can in almost all fundamental respects be traced directly back to Freud's original work.

Freud's innovative treatment of human actions, dreams, and indeed of cultural artifacts as invariably possessing implicit symbolic significance has proven to be extraordinarily fruitful, and has had massive implications for a wide variety of fields including psychology, anthropology, semiotics, and artistic creativity and appreciation. However, Freud's most important and frequently re-iterated claim, that with psychoanalysis he had



invented a successful science of the mind, remains the subject of much critical debate and controversy.

Sigmund Freud's **psychoanalytic theory** of personality argued that human behavior was the result of the interaction of three component parts of the mind: the id, ego, and superego. His structural **theory** placed great importance on the role of unconscious psychological conflicts in shaping behavior and personality.

#### 6.10 Check Your Progress

**Q.1. What is the psychoanalytic theory?**

Sigmund Freud's **psychoanalytic theory** of personality argued that human behavior was the result of the interaction of three component parts of the mind: the id, ego, and superego. His structural **theory** placed great importance on the role of unconscious psychological conflicts in shaping behavior and personality.

**Q.2. What did Sigmund Freud believe about human behavior?**

Sigmund Freud emphasized the importance of the unconscious mind, and a primary assumption of **Freudian theory** is that the unconscious mind governs behavior to a greater degree than people suspect. Indeed, the goal of psychoanalysis is to make the unconscious conscious

**Q.3. What is Sigmund Freud best known for?**

**Famous Psychologists: Sigmund Freud.** Sigmund Freud (May 6, 1856–September 23, 1939) was a physiologist, medical doctor, and father of psychoanalysis, and is generally recognized as one of the most influential and authoritative thinkers of the twentieth century.

**Q.4. Who is Freud and what did he do?**

Sigmund **Freud** was born in Freiberg, which is now known as the Czech Republic, on May 6, 1856. **Freud** developed psychoanalysis, a method through which an analyst unpacks unconscious conflicts based on the free associations, dreams and fantasies of the patient.

**6.11 Assignment/Activity**

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**6.11 Points For Discussion And Clarification**

After going through this Unit you might like to have further discussion on some points and clarification on others

**6.11.1 Points for discussion**

A series of horizontal dashed lines provided for writing notes or discussion points.



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## UNIT 4

### ECOLOGICAL THEORY (BRONFRENBRENNER)

#### STRUCTURE

#### 9.1. INTRODUCTION

#### 9.2. OBJECTIVES

#### 9.3. ECOLOGICAL SYSTEMS THEORY

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2. *Mesosystem*
3. *Exosystem*
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## UNIT 4

### ECOLOGICAL THEORY (BRONFRENBRENNER)

#### 9.1. INTRODUCTION

The Ecological Systems theory states that human development is influenced by the different types of environmental systems. Formulated by famous psychologist Urie Bronfenbrenner, this theory helps us understand why we may behave differently when we compare our behavior in the presence of our family and our behavior when we are in school or at work.

#### 9.2. OBJECTIVES

- To understand theory about Ecological systems
- To understand public perceptions
- To study about genes and environment
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

### 9.3. Ecological Systems Theory

How is a child's development affected by their social relationships and the world around them? **Ecological systems theory** provides one approach to answering this question. The ecological systems theory was developed by **Urie Bronfenbrenner**.

Bronfenbrenner believed that a person's development was affected by everything in their surrounding environment. He divided the person's environment into five different levels: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem. In this lesson, you will learn about these different environmental levels by meeting five-year-old Alex and examining the influences in his life.

#### **MICROSYSTEM**

We will begin with the first level of Bronfenbrenner's theory: the **microsystem**. The microsystem is the system closest to the person and the one in which they have direct contact. Some examples would be home, school, daycare, or work. A microsystem typically includes family, peers, or caregivers. Relationships in a microsystem are bi-directional. In other words, your reactions to the people in your microsystem will affect how they treat you in return. This is the most influential level of the ecological systems theory.

Let's look at the microsystem Alex lives in. The first part of his microsystem is his home environment. This includes his interactions with his parents and little sister. Alex's school is also part of his microsystem. His regular school interactions are with his kindergarten teacher and the other children in his class (See Fig.4.1).

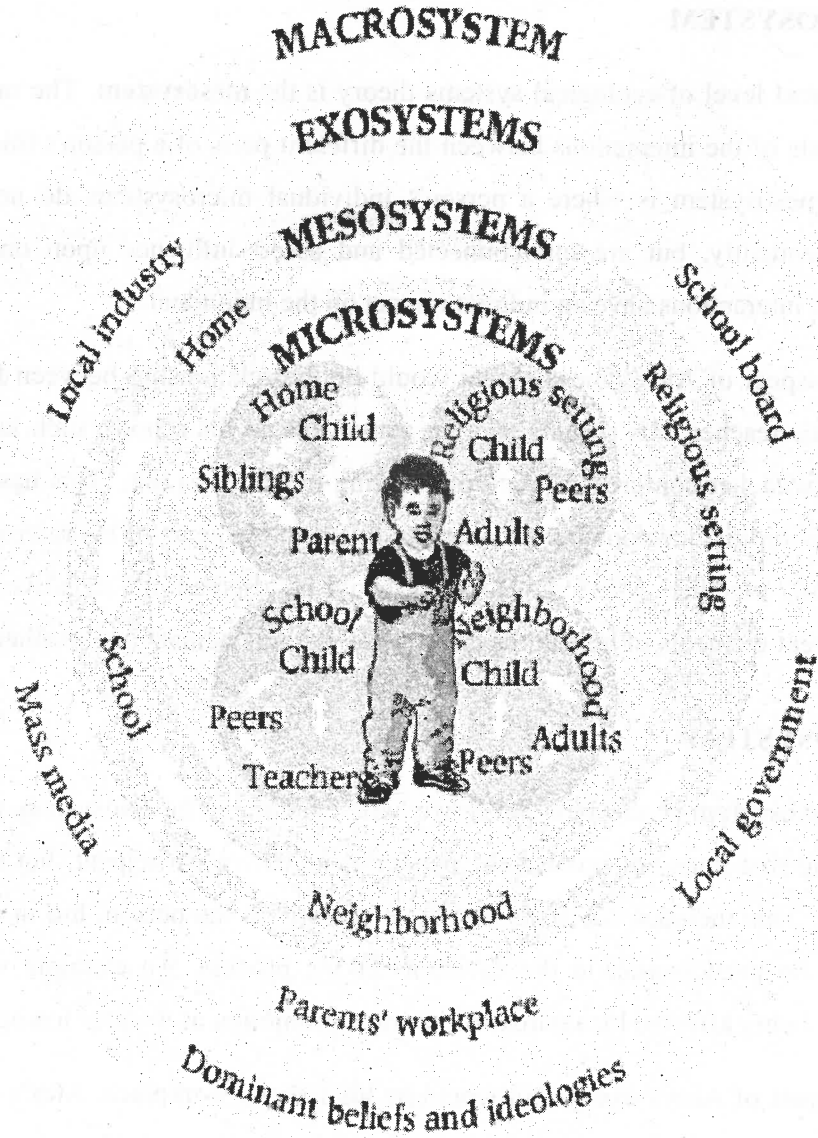


Fig. 4.1 Ecological Systems

## MESOSYSTEM

The next level of ecological systems theory is the **mesosystem**. The mesosystem consists of the interactions between the different parts of a person's microsystem. The mesosystem is where a person's individual microsystems do not function independently, but are interconnected and assert influence upon one another. These interactions have an indirect impact on the individual.

One aspect of Alex's mesosystem would be the relationship between his parents and his teacher. His parents take an active role in his school, such as attending parent/teacher conferences and volunteering in his classroom. This has a positive impact on his development because the different elements of his microsystem are working together. Alex's development could be affected in a negative way if the different elements of his microsystem were working against one another.

## EXOSYSTEM

The **exosystem** is the next level we will examine. The exosystem refers to a setting that does not involve the person as an active participant, but still affects them. This includes decisions that have bearing on the person, but in which they have no participation in the decision-making process. An example would be a child being affected by a parent receiving a promotion at work or losing their job.

One part of Alex's exosystem would be his father's workplace. Alex's father is in the Navy. This often takes him away from the family, and Alex sometimes does not see his father for months at a time. This situation impacts Alex, and he becomes anxious when his father leaves. Alex's anxiety has an effect on his development in other areas, even though he has no interaction with his father's work or say in the decision making process.

## **MACROSYSTEM**

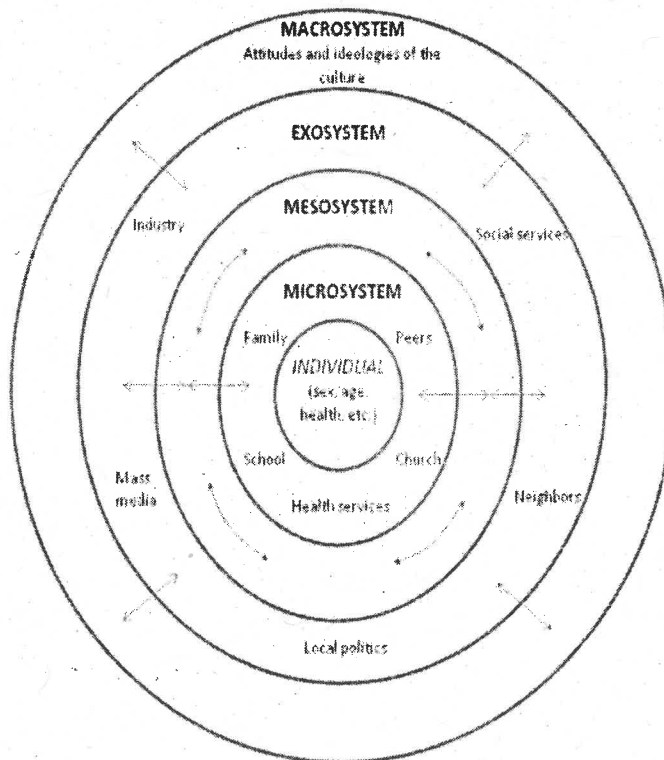
The fourth level of ecological systems theory is the **macrosystem**. The macrosystem encompasses the cultural environment in which the person lives and all other systems that affect them. Examples could include the economy, cultural values, and political systems. The macrosystem can have either a positive or a negative effect on a person's development. For an example, consider the different effects on the development of a child growing up in a third-world economy versus that of the United States.



#### 9.4. Ecological Systems Theory: The Five Systems

**Ecological systems theory**, also called **development in context** or **human ecology theory**, identifies five environmental systems with which an individual interacts. This theory provides the framework from which community psychologists study the relationships with individuals' contexts within communities and the wider society. Ecological systems theory was developed by Urie Bronfenbrenner.

**Fig.4.2: The Five Systems**



## The Five Systems

1. **Microsystem:** Refers to the institutions and groups that most immediately and directly impact the child's development including: family, school, religious institutions, neighborhood, and peers.
2. **Mesosystem:** Interconnections between the microsystems, Interactions between the family and teachers, Relationship between the child's peers and the family
3. **Exosystem:** Involves links between a social setting in which the individual does not have an active role and the individual's immediate context. For example, a parent's or child's experience at home may be influenced by the other parent's experiences at work. The parent might receive a promotion that requires more travel, which might increase conflict with the other parent and change patterns of interaction with the child.
4. **Macrosystem:** Describes the culture in which individuals live. Cultural contexts include developing and industrialized countries, socioeconomic status, poverty, and ethnicity. A child, his or her parent, his or her school, and his or her parent's workplace are all part of a large cultural context. Members of a cultural group share a common identity, heritage, and values. The macrosystem evolves over time, because each successive generation may change the macrosystem, leading to their development in a unique macrosystem.
5. **Chronosystem:** The patterning of environmental events and transitions over the life course, as well as sociohistorical circumstances. For

example, divorces are one transition. Researchers have found that the negative effects of divorce on children often peak in the first year after the divorce. By two years after the divorce, family interaction is less chaotic and more stable. An example of sociohistorical circumstances is the increase in opportunities for women to pursue a career during the last thirty years.

The person's own biology may be considered part of the microsystem; thus the theory has recently sometimes been called "Bio-Ecological Systems Theory."

Per this theoretical construction, each system contains roles, norms and rules which may shape psychological development. For example, an inner-city family faces many challenges which an affluent family in a gated community does not, and vice versa. The inner-city family is more likely to experience environmental hardships, like crime and squalor. On the other hand, the sheltered family is more likely to lack the nurturing support of extended family.

Since its publication in 1979, Bronfenbrenner's major statement of this theory, *The Ecology of Human Development*<sup>[4]</sup> has had widespread influence on the way psychologists and others approach the study of human beings and their environments. As a result of his groundbreaking work in "human ecology", these environments — from the family to economic and political structures — have come to be viewed as part of the life course from childhood through adulthood.

Bronfenbrenner has identified Soviet developmental psychologist Lev Vygotsky and German-born psychologist Kurt Lewin as important influences on his theory.

Bronfenbrenner's work provides one of the foundational elements of the ecological counseling perspective, as espoused by Robert K. Conyne, Ellen Cook, and the University of Cincinnati Counseling Program.

There are many different theories related to human development. The ecological theory emphasizes environmental factors as playing the major role to development.

## **9.5. SUMMARY**

**Ecological Systems Review** The ecological framework facilitates organizing information about people and their environment in order to understand their interconnectedness. Individuals move through a series of life transitions, all of which necessitate environmental support and coping skills. Social problems involving health care, family relations, inadequate income, mental health difficulties, conflicts with law enforcement agencies, unemployment, educational difficulties, and so on can all be subsumed under the ecological model, which would enable practitioners to assess factors that are relevant to such problems. Thus, examining the ecological contexts of parenting success of children with disabilities is particularly important. Utilizing Bronfenbrenner's (1977, 1979) ecological framework, this article explores parenting success factors at the micro- (i.e., parenting practice, parent-child relations), meso- (i.e., caregivers' marital relations, religious social support), and macro-system levels (i.e., cultural variations, racial and ethnic disparities, and health care delivery system) of practice.

## 9.6. Check Your Progress

### 3. What is the ecological systems theory?

**Ecological systems theory** was developed by Urie Bronfenbrenner. He divided the environment into five different levels. The microsystem is the most influential, has the closest relationship to the person, and is the one where direct contact occurs. The mesosystem consists of interactions between a person's microsystems.

### 4. What is CHRONOSYSTEM in child development?

**Definition.** The **chronosystem** is made up of the environmental events and transitions that occur throughout a child's life, including any sociohistorical events. The **chronosystem** is one of five systems in Bronfenbrenner's ecological systems theory.

### 5. What is a macro system?

**Macrosystem:** Describes the culture in which individuals live. Cultural contexts include developing and industrialized countries, socioeconomic status, poverty, and ethnicity. A child, his or her parent, his or her school, and his or her parent's workplace are all part of a large cultural context.



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**9.8. Points For Discussion And Clarification**

After going through this Unit you might like to have further discussion on some points and clarification on others

**9.8.1. Points for discussion**

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## UNIT 5

### HOLISTIC THEORY OF DEVELOPMENT (STEINER)

#### STRUCTURE

- 10.1. INTRODUCTION
- 10.2. OBJECTIVES
- 10.3. HOLISTIC EDUCATION
- 10.4. TOOL/TEACHING STRATEGIES OF HOLISTIC EDUCATION
- 10.5. ILLUSTRATION OF HOW TRANSDISCIPLINARY INQUIRY WORKS FROM THE HOLISTIC EDUCATION NETWORK
- 10.6. EXPLORING HOLISTIC APPROACHES FOR EARLY CHILDHOOD EDUCATORS
- 10.7. SUMMARY
- 10.8. CHECK YOUR PROGRESS
- 10.9. ASSIGNMENT/ACTIVITY
- 10.10. POINTS FOR DISCUSSION AND CLARIFICATION
- 10.11. REFERENCES / FURTHER READINGS

## UNIT 5

### HOLISTIC THEORY OF DEVELOPMENT (STEINER)

#### 10.1. INTRODUCTION

Throughout the 200-year history of public schooling, a widely scattered group of critics have pointed out that the education of young human beings should involve much more than simply molding them into future workers or citizens.

The Swiss humanitarian **Johann Pestalozzi**, the American **Transcendentalists**, **Thoreau**, **Emerson** and **Alcott**, the founders of “**progressive**” education – **Francis Parker** and **John Dewey** — and pioneers such as **Maria Montessori** and **Rudolf Steiner**, among others, all insisted that education should be understood as the art of cultivating the moral, emotional, physical, psychological and spiritual dimensions of the developing child. During the 1970s, an emerging body of literature in science, philosophy and cultural history provided an overarching concept to describe this way of understanding education — a perspective known as *holism*. A holistic way of thinking seeks to encompass and integrate multiple layers of meaning and experience rather than defining human possibilities narrowly. Every child is more than a future employee; every person’s intelligence and abilities are far more complex than his or her scores on standardized tests.

*Holistic education* is based on the premise that each person finds identity, meaning, and purpose in life through connections to the community, to the natural world, and to spiritual values such as compassion and peace. Holistic education aims to call forth from people an intrinsic reverence for life and a passionate love of learning. This is done, not through an academic “curriculum” that condenses the world into Learning packages, but through direct engagement with the environment. Holistic education nurtures a sense of wonder. **Montessori**, for example, spoke of “cosmic” education: Help the person feel part of the wholeness of the universe, and learning will naturally be enchanted and inviting. There is no one best way to accomplish this goal, there are many *paths of learning* and the holistic educator values them all; what is appropriate for some children and adults, in some situations, in some historical and social contexts, may not be best for others. The art of holistic education lies in its responsiveness to the diverse learning styles and needs of evolving human beings.

This attitude toward teaching and learning inspires many home-schooling families as well as educators in public and alternative schools. While few public schools are entirely committed to holistic principles, many teachers try hard to put many of these ideas into practice. By fostering collaboration rather than competition in classrooms, teachers help young people feel connected. By using real-life experiences, current events, the dramatic arts and other lively sources of knowledge in place of textbook information, teachers can kindle the love of learning. By encouraging reflection and questioning rather than passive memorization of “facts,” teachers keep alive the “flame of intelligence” that is so much more than abstract problem-solving skill. By accommodating differences and

refusing to label children, for example, as “learning disabled” or “hyperactive,” teachers bring out the unique gifts contained within each child’s spirit.

A parent or educator interested in learning more about holistic education can read the books and journals in this emerging field that have appeared since the 1980s, as well as classic writings by **Montessori**, **Steiner**, and **Krishnamurti**. It is also useful to become somewhat familiar with the more general holistic literature (for example work by Theodore Roszak, Fritjof Capra, Charlene Spretnak, Ken Wilber). The primary publication on holistic education is the journal **Encounter: Education for Meaning and Social Justice**, published by Holistic Education Press (P.O. Box 328, Brandon, VT 05733; ph. (800) 639-4122) which also lists several books on the subject. The **Ontario Institute for Studies in Education Press**, in Toronto, has published work by **John P. Miller** that provides a good introduction to holistic education; **OISE** also hosts courses and conferences. There are separate bodies of literature on spirituality in education, eco-literacy, multiple intelligences, whole language, and cooperative learning that address more specific aspects of holistic education.

## 10.2. OBJECTIVES

- To study of holistic theory of development
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term



#### 10.4. Holistic Education

**Holistic education** is a philosophy of education based on the premise that each person finds identity, meaning, and purpose in life through connections to the community, to the natural world, and to humanitarian values such as compassion and peace. Holistic education aims to call forth from people an intrinsic reverence for life and a passionate love of learning. This is the definition given by Ron Miller, founder of the journal *Holistic Education Review* (now entitled *Encounter: Education for Meaning and Social Justice*). The term holistic education is often used to refer to the more democratic and humanistic types of alternative education. Robin Ann Martin (2003) describes this further by stating, “At its most general level, what distinguishes holistic education from other forms of education are its goals, its attention to experiential learning, and the significance that it places on relationships and primary human values within the learning environment.”

Holism is the idea that all the properties of a given system in any field of study cannot be determined or explained by the sum of its component parts. Instead, the system as a whole determines how its parts behave. A holistic way of thinking tries to encompass and integrate multiple layers of meaning and experience rather than defining human possibilities narrowly.

#### 10.5. Tool/Teaching Strategies Of Holistic Education

With the goal of educating the whole child, holistic education promotes several strategies to address the question of how to teach and how people learn. First, the idea of holism advocates a **transformative** approach to learning. Rather than seeing education as a process of transmission and transaction, transformative learning involves a change in the frames of reference that a person may have. This change may include points of view,

habits of mind, and worldviews. Holism understands knowledge as something that is constructed by the context in which a person lives. Therefore, teaching students to reflect critically on how we come to know or understand information is essential. As a result, if “we ask students to develop critical and reflective thinking skills and encourage them to care about the world around them they may decide that some degree of personal or social transformation is required.”

Second, the idea of **connections** is emphasized as opposed to the fragmentation that is often seen in mainstream education. This fragmentation may include the dividing of individual subjects, dividing students into grades, etc. Holism sees the various aspects of life and living as integrated and connected, therefore, education should not isolate learning into several different components. Martin (2002) illustrates this point further by stating that, “Many alternative educators argue instead that who the learners are, what they know, how they know it, and how they act in the world are not separate elements, but reflect the interdependencies between our world and ourselves” . Included in this idea of connections is the way that the classroom is structured. Holistic school classrooms are often small and consist of mixed-ability and mixed-age students. They are flexible in terms of how they are structured so that if it becomes appropriate for a student to change classes, (s)he is moved regardless of what time of year it is on the school calendar. **Flexible pacing** is key in allowing students to feel that they are not rushed in learning concepts studied, nor are they held back if they learn concepts quickly.

Third, along the same thread as the idea of connections in holistic education, is the concept of **transdisciplinary inquiry**. Transdisciplinary inquiry is

based on the premise that division between disciplines is eliminated. One must understand the world in wholes as much as possible and not in fragmented parts. “Transdisciplinary approaches involve multiple disciplines and the space between the disciplines with the possibility of new perspectives ‘beyond’ those disciplines. Where multidisciplinary and interdisciplinary inquiry may focus on the contribution of disciplines to an inquiry transdisciplinary inquiry tends to focus on the inquiry issue itself.”

#### **10.6. Illustration of how transdisciplinary inquiry works from the Holistic Education Network**

Fourth, holistic education feels that **meaningfulness** is also an important factor in the learning process. People learn better when what is being learned is important to them. Holistic schools seek to respect and work with the meaning structures of each person. Therefore, the start of a topic would begin with what a student may know or understand from their worldview, what has meaning to them rather than what others feel should be meaningful to them. **Meta-learning** is another concept that connects to meaningfulness. In finding inherent meaning in the process of learning and coming to understand how they learn, students are expected to self-regulate their own learning. However, they are not completely expected to do this on their own. Because of the nature of community in holistic education, students learn to monitor their own learning through interdependence on others inside and outside of the classroom.

Finally, as mentioned above, **community** is an integral aspect in holistic education. As relationships and learning about relationships are keys to understanding ourselves, so the aspect of community is vital in this learning process. Forbes (1996) states, “In holistic education the classroom is often

seen as a community, which is within the larger community of the school, which is within the larger community of the village, town, or city, and which is, by extension, within the larger community of humanity.

### **Teacher's role**

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In holistic education, the teacher is seen less as person of authority who leads and controls but rather is seen as “a friend, a mentor, a facilitator, or an experienced traveling companion” (Forbes, 1996).<sup>[1]</sup> Schools should be seen as places where students and adults work toward a mutual goal. Open and honest communication is expected and differences between people are respected and appreciated. Cooperation is the norm, rather than competition. Thus, many schools incorporating holistic beliefs do not give grades or rewards. The reward of helping one another and growing together is emphasized rather than being placed above one another.

### **Alternative schools**

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For various reasons, many parents today are looking to alternative schools that offer different philosophies of education than mainstream schools. The diversity of alternative schools sets them apart from mainline education. Each school has its own methods and approaches to teaching. Therefore, each alternative school may have different beliefs about what education should include. Consequently, there are several types of alternative schools that have holistic values in their philosophies of education. While these schools have elements of holism incorporated in their values it would be fair to say that these schools could be placed on a continuum on how “holistic” they actually are (that is to say, some would have more holistic elements than others). Also, public and other types of private schools do not appear in the following list but that does not mean that

there are no holistic values in their individual philosophies of education. In addition, many individual teachers in different venues of education try to incorporate ideas of holism into their own classrooms.

## 10.7. Exploring Holistic Approaches for Early Childhood Educators

With a growing body of world research emphasizing the importance of holistic approaches to education, early childhood educators are being challenged to incorporate a teaching practice that focuses less on the traditional milestones of academic development, and more on the complete physical, emotional and psychological wellbeing of a child (UNESCO, 2002). The research is compelling and studies show that over time, even persons with average IQ (Intellectual Intelligence) but with high EI (Emotional Intelligence) are significantly more successful than those with much higher IQs but low EI (Goleman, 1995).

So what does this mean for an early childhood educator? The Australian Department of Education, Employment and Workplace Relations (DEEWR) as part of the Early Years Learning Framework (EYLF) describes:

*Holistic approaches to teaching and learning recognize the connectedness of mind, body and spirit. When early childhood educators take a holistic approach they pay attention to children's physical, personal, social, emotional and spiritual wellbeing as well as cognitive aspects of learning. While educators may plan or assess with a focus on a particular outcome or component of learning, they see children's learning as integrated and interconnected. They recognize the connections between children, families and communities and the importance of reciprocal relationships and partnerships for learning. They see learning as a social activity and value collaborative learning and community participation. An integrated, holistic approach to teaching and learning also focuses on connections to the natural world. Educators foster children's capacity to*

*understand and respect the natural environment and the interdependence between people, plants, animals and the land (DEEWR, 2009).*

### **Teaching Philosophies that Embrace Holistic Approaches**

Over the last few decades many varied holistic education philosophies have emerged. Montessori prescribed a “prepared environment” containing specific materials that children use, independently for the most part, to learn at their own

pace, responding to particular readiness for specific sensory and intellectual stimuli.

Rudolf Steiner’s ‘Waldorf’ approach is based on intuitive (his followers claim clairvoyant)

understanding of the needs of the

evolving soul at each level of development: children in Waldorf schools are divided into grades according to age and spend most of their time learning through group activities carefully planned and led by the teacher (who is also



supposed to have intuitive insight into children's personalities and immediate needs) (Miller, n.d). Some holistic approaches (for example, Quaker schools, or "neo-humanist" education based on the teachings of Tantric guru P.R. Sarkar) have adopted meditation, periods of silent reflection or journaling, yoga and other centering practices (Kesson, 2002). Other holistic approaches (the Reggio Emilia system of early childhood education comes to mind) place great emphasis on artistic self-expression and engaged creativity. Krishnamurti, on the other hand, advised against methods as such and suggested that a caring, open, non-authoritarian *relationship* between people leads to genuine learning (Forbes, 2002)(Miller,n.d).

#### Methods for Implementing Holistic Approaches

While there is clearly no one method, Miller (2006) after review of a number of different holistic teaching methodologies, describes four key aspects of holistic approach based teaching:

1. Learning is organic, emergent, experimental and based on cooperation. Pre-planned teaching is facilitated only so far as to initiate open ended questioning and inquiry;
2. There is a strong sense of community and engagement between children, parents and educators where those members feel strongly to care for one another
3. There is a great respect for children's interior life, with methods ranging from environmental spaces that facilitate time out of competitive nosier environments, to time to ask deeper questions about the meaning of life and spirituality.



4. There are strong connections to nature, with the care and connection to the environment incorporated throughout the curriculum.

In another interesting article by Ron Miller he describes the aspirations of the holistic educator:

*Holistic education aims to call forth from people an intrinsic reverence for life and a passionate love of learning. This is done, not through an academic "curriculum" that condenses the world into Learning packages, but through direct engagement with the environment. Holistic education nurtures a sense of wonder. Montessori, for example, spoke of "cosmic" education: Help the person feel part of the wholeness of the universe, and learning will naturally be enchanted and inviting. There is no one best way to accomplish this goal, there are many paths of learning and the holistic educator values them all; what is appropriate for some children and adults, in some situations, in some historical and social contexts, may not be best for others. The art of holistic education lies in its responsiveness to the diverse learning styles and needs of evolving human beings (Miller, n.d).*

### **What Do Holistic Approaches Look Like in Practice?**

Taking responsibility for development of a "whole child" however is a significant endeavor for any early childhood educator: guiding students to find identity, meaning, and purpose in life through connections to the community, to the natural world, and to spiritual values such as compassion and peace. Rather than be overwhelmed by the many varied ideals of holistic education, it is recommended

teachers find opportunities (approaches) to implement the various elements of holistic education into their practice.

An helpful example of this could be further exploration and extension of child's interests, taking a small idea and unpacking it into many opportunities for learning: an interest in cars could be expanded into: where cars came from; the first wheel; what types of cars are used around the world; what type of people use cars; understanding if and why their family uses a car; why other people use cars; how over use of cars can affect our health; what cars are doing to our environment; alternatives to cars; new designs to overcome environmental impact etc. This example shows us how an early childhood teacher can expand learning into all aspects of a child's life including family, the environment, history, empathy and understanding.

Another example could be offering art with pastels, exploring different artists in history, colours, how light makes colour, rainbows, how pastels are made, the earliest pastels made by indigenous people, their drawings and what they tell us about them, what other materials to draw on, people who use pastels from architects to street art, using pastels to explore our feelings and express our moods etc.

Finally another very important example is working with families. Engaging families by inviting them to visit, speak, bring in cultural or work artefacts to share and participate in children's programs fosters enormous sense of pride and connectiveness for children.

## 10.8. SUMMARY

Holistic approaches encompass, as the names suggests, a broad range of teaching goals and aspirations for children's learning that extends well beyond academic learning into fields of social and emotional wellbeing. While this can at first seem overwhelming, teachers can find the small opportunities in their day to day practice to incorporate and extend ideas that promote connection, community and wellbeing.

Steiner education, based on the teachings of Rudolf Steiner, is aimed at giving each new generation of children an education entirely free from partisan political, economic, sectarian or racial influences. Steiner schools strive to produce un prejudiced, well-informed and creative young people who are practical contributors to society's renewal and to the future evolution of humanity and the planet. Rudolf Steiner (1861-1925) was a European visionary whose life work enlightened areas such as education, medicine, architecture, agriculture, the arts and spiritual philosophy. His educational philosophy is based on a spiritual understanding of the developing human being - everything else within a Steiner school arises from this understanding. Therefore, Steiner teachers embrace each child as a multi-faceted being, with a three-fold nature comprising body, soul and spirit. Steiner aimed to create a holistic educational experience that enriched the life and development of the child on many levels, not simply through the development of the intellect. His aim wasn't to inculcate in children any particular view point or ideology, but rather to make them so healthy, strong, inwardly free and aware of their humanity that they would become a kind of tonic for society as a whole. The hundreds of lectures and written works by Steiner on education were intended to help

teachers develop an understanding of the universal process of human development and how this manifests in each child. Out of these insights, each teacher is able to visualize what is right for the particular combination of individuals in each class. Steiner saw it is an absolute obligation of each teacher to ensure that the way each subject is treated in every lesson is in accord with the degree of maturation indicated by both the age and observable characteristics of the children in each class.

### 10.9. Check Your Progress

#### Q.1 What is a holistic approach to education?

**Holistic** approaches to teaching and learning recognize the connectedness of mind, body and spirit. When early childhood educators take a **holistic** approach they pay attention to children's physical, personal, social, emotional and spiritual wellbeing as well as cognitive aspects of learning.

#### Q.2 What is holistic development of the child?

A **holistic** approach to child development seeks to simultaneously address the physical, emotional, relational, intellectual, and spiritual aspects of a child's life.

#### Q.3 What is the meaning of holistic approach?

A **holistic** view means that we are interested in engaging and developing the whole person. You can think of this as different levels, physical, emotional, mental and spiritual. It's the concept that the human being is multi-dimensional. We have conscious and unconscious aspects, rational and irrational aspects.

**Q.4 What does it mean to think holistically?**

**Holistic thinking** is the inquiry of a complex whole. In the case of business organizations, **holistic thinking** takes into account its purpose, values, function in its environment, process, and structure. It is the basis for the development of the business design construct , systems **thinking**, and strategy formation .











### 5.12 References / Further Readings

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9. Map of all major contributors in holistic education with influences
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## **BLOCK 3**

# **The Early Years (Birth to Eight Years)**

<b>Unit 1</b>	<b>Prenatal development: Conception, stages and influences on prenatal development</b>	<b>Page 6</b>
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## UNIT 1

# Prenatal development: Conception, stages and influences on prenatal development

### STRUCTURE

- 1.16. Introduction
- 1.17. Conception and Genetics
- 1.18. The Process of Conception
- 1.19. Prenatal development
- 1.20. Stages of prenatal development
  - 1.20.1. The zygote
  - 1.20.2. The embryo
  - 1.20.3. The fetus
- 1.21. Influences on growth and development
- 1.22. Hereditary (genetic) influences
  - 1.22.1. Mechanisms of heredity
  - 1.22.2. Cell division
  - 1.22.3. Sex determination
  - 1.22.4. Inherited characteristics
  - 1.22.5. Mutation
  - 1.22.6. Genetic defects
- 1.23. Prenatal environmental influences △

**1.23.1. Teratogens**

**1.23.2. The mother**

**1.24. Twins and Siblings**

**1.25. Postnatal development**

**1.26. Summary**

**1.27. Check your progress**

**1.28. Assignment/activity**

**1.29. Points for discussion and clarification**

**1.30. References / further readings**

## UNIT 1

# Prenatal Development: Conception, Stages and Influences on Prenatal Development

### 1.1. Introduction

As rates of adverse pregnancy outcomes declined in the twentieth century, the godh bharan has become more celebratory than protective in nature. Likewise, a uniquely American prenatal institution, the baby shower, has also grown in popularity as pregnancy and childbirth have become safer. And as U.S.-based entertainment media have spread across the world, godh bharan ceremonies and others like it have increasingly come to resemble American baby showers. The growing popularity and homogenization of prenatal celebrations suggest that the technological advances that have reduced maternal and fetal mortality rates have transformed the subjective and social experience of pregnancy from one of fear and dread to one of joy and anticipation. These advances have also been accompanied by innovations that have allowed researchers and parents-to-be to gain insight into prenatal developmental processes that were shrouded in mystery just a few decades ago. As you explore this chapter, you will become acquainted with some of these insights and, we hope, gain a greater appreciation for the amazing process of prenatal development.

### 1.2. Objectives

**By the end of this unit you will be able to:**

- To study about Prenatal development and Stages of prenatal development
- To understand theory of Conception and Genetics
- To understand about The Process of Conception as Human Development
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

### **1.3. Conception and Genetics**

The first step in the development of a human being is that moment of conception, when two single cells—one from a male and the other from a female—join together to form a new cell called a zygote. This event sets in motion powerful genetic forces that will influence the individual over the entire lifespan.

#### **1.3.1. The Process of Conception**

Ordinarily, a woman produces one ovum (egg cell) per month from one of her two ovaries. The ovum is released from an ovary roughly midway between two menstrual periods. If it is not fertilized, the ovum travels from the ovary down the fallopian tube toward the uterus, where it gradually disintegrates and is expelled as part of the next menstrual flow. If a couple has intercourse during the crucial few days when the ovum is in the fallopian tube, one of the millions of sperm ejaculated as part of each male orgasm may travel the full distance through the woman's vagina, cervix, and uterus into the fallopian tube and penetrate the ovum. A child is conceived. The zygote then continues on its journey down the fallopian tube and eventually implants itself in the wall of the uterus.

### 1.3.2. The Basic Genetics of Conception

Except in individuals with particular types of genetic abnormality, the nucleus of each cell in the human body contains a set of 46 chromosomes, arranged in 23 pairs. These chromosomes include all the genetic information for that individual, governing not only individual characteristics like hair color, height, body shape, temperament, and aspects of intelligence, but also all those characteristics shared by all members of our species, such as patterns of physical development and inborn biases of various kinds. The only cells that do not contain 46 chromosomes are the sperm and the ovum, collectively called gametes, or germ cells. In the early stages of development, gametes divide as all other cells do (a process called mitosis), with each set of 23 chromosome pairs duplicating itself. In the final step of gamete division, however, called meiosis, each new cell receives only one chromosome from each original pair. Thus, each gamete has only 23 chromosomes instead of 23 pairs. When a child is conceived, the 23 chromosomes in the ovum and the 23 in the sperm combine to form the 23 pairs that will be part of each cell in the newly developing body. The chromosomes are composed of long strings of molecules of a chemical called deoxyribonucleic acid (DNA). In an insight for which they won the Nobel Prize in 1953, James Watson and Francis Crick deduced that DNA is in the shape of a double helix, somewhat like a twisted ladder. The remarkable feature of this ladder is that the rungs are constructed so that the entire helix can “unzip”; then each half can guide the duplication of



the missing part, thus allowing multiplication of cells so that each new cell contains the full set of genetic information.

#### **1.4. Prenatal development**

Within a matter of hours after fertilization or conception (union of an egg and a sperm), a human egg divides, becomes a system of cells, and continues this growth of cells at an astonishing rate. In a mere 9 months, a squalling bundle of energy has its grandmother's nose, its father's eyes, and its mother's abundant hair. The prenatal phase of human life lasts an average of 266 days. During these nine months, the zygote divides into as many as 200 billion cells. The fetus grows within the mother's uterus until it is strong enough to sustain life outside of her womb.

#### **1.5. Stages of prenatal development**

Prenatal development is typically divided into three distinct periods (zygote, embryo, fetus). Although they are distinct in many ways, these periods should be thought of as comprising continuous phases of development, for from the moment the sperm penetrates the ovum, development involves a systematic series of sequential changes by which the organism becomes increasingly complex and differentiated.

### Prenatal Development

- Nature and nurture combine forces in prenatal development.
- Much of development is generated by the fetus itself.

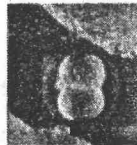
### Conception

- Conception is the union of the mother's and father's sex cells, also known as gametes or germ cells.
  - Mother's sex cells are eggs.
  - Father's sex cells are sperm.
- The union of sperm and egg forms a zygote.



### Developmental Processes

- The zygote is transformed into an embryo and then a fetus through the processes of
  - Cell division - Begins 12 hours after fertilization and continues throughout fetal development.



### Developmental Processes

- The zygote is transformed into an embryo and then a fetus through the processes of
  - Cell division
  - Cell migration - Cells move from point of origin to elsewhere in the embryo

### Developmental Processes

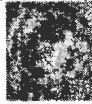
- The zygote is transformed into an embryo and then a fetus through the processes of
  - Cell division
  - Cell migration
  - Cell differentiation - Cells begin to specialize, fulfilling the needs of separate bodily structures and functions.

### Developmental Processes

- The zygote is transformed into an embryo and then a fetus through the processes of
  - Cell division
  - Cell migration
  - Cell differentiation
  - Cell death - The selective death of certain cells as they are no longer needed.

### From Blastocyst to Implantation

- By the 4th day after conception, cells arrange themselves into a hollow sphere, the blastocyst.

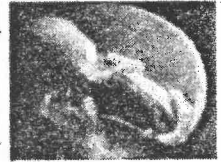


- Implantation occurs in the week after fertilization.



### The Fetal Support System

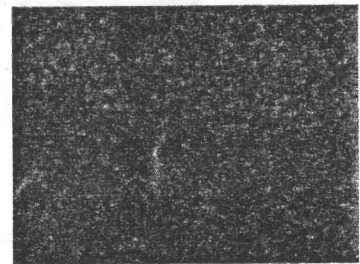
- Placenta: permits the exchange of materials between the bloodstreams of mother and fetus.
- Umbilical cord: structure containing blood vessels connecting fetus and mother.
- Amniotic sac: membrane within which the fetus floats in a clear liquid that acts as a protective buffer.



### Cephalocaudal (Head-to-Body) Development

- Areas near the head develop at a more rapid pace than those farther away.
- The head develops before the body.
- The hands develop before the feet.

### Prenatal Development

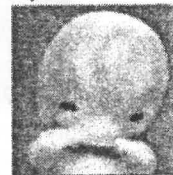


### Embryo at 4 Weeks



- The four folds in the front of the head will become facial features. A heart is visible and is beating and circulating blood.

### Embryo at 5-6 Weeks



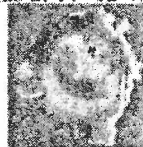
- Rapid brain development
- The beginning of an eye is seen
- spontaneous movement

### Fetus at 9 Weeks



- All internal organs are present
- sexual differentiation has started.

### Fetus at 11–12 Weeks



- External genitalia, legs, arms, and fingers
- chest makes breathing movements
- grasping, swallowing, and sucking

### Fetus at 16 Weeks



- The fetus will kick

### Fetus at 18 Weeks



- May suck its thumb.
- covered with lanugo (fine hair) and vernix ( greasy protective coating)

### Fetus at 20 Weeks



- can move its mouth, raise its eyebrows, and wrinkle its forehead.

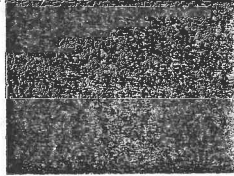
### Fetus at 28 Weeks



- The fetus could now be viable outside the womb.
- Eyes can open and it experiences REM sleep.
- It can hear and react to sound.

### Fetal Behavior

- A fetus can swallow, move its arms and legs, yawn, and suck.
- The fetus gets ready to breathe outside the womb by "fetal breathing"



### Fetal Experience

- **Touch:** The fetus's body parts come in contact with one another. A fetus sucks its thumb.
- **Taste:** The fetus can detect the flavors of the amniotic sac. It likes sweets.
- **Smell:** The fetus can detect the smells of the amniotic fluid, which are influenced by what the mother eats.

### Fetal Experience (continued)

- **Hearing:** Fetus responds to the sounds of the mother's voice, of others talking to the mother, and of the mother's blood pumping and her breathing.
- **Sight:** The fetus may react to a bright light shown against the mother's skin, but its visual experience is very slight.

### Fetal Learning

- **Habituation**—the decrease in response to repeated or continued stimulation—begins at about 32 weeks.
- At this point, learning and memory begin to occur.
- Can recognize familiar smells and the sounds from a Dr. Seuss book.

### Hazards to Prenatal Development: Miscarriage

- About 45% or more pregnancies end in miscarriage, that is, spontaneous abortion.
- Most miscarried fetuses have severe defects, such as missing chromosomes, that make further development impossible.
- Ninety percent of fetuses that survive the danger of miscarriage are born normal.

### Risk Factors

- **Age**
- **Nutrition**
  - Malnourished newborns have smaller brain cells and are more vulnerable to illnesses than well-nourished newborns.
  - Malnutrition in early prenatal development may lead to serious physical defects (e.g. folic acid)
  - Malnutrition in the last few months may lead to low birth weight and small heads.

### Risk Factors

- Age
- Nutrition
- Stress
  - In animals, stress results in smaller offspring prone to behavioral problems.
  - In humans, extreme maternal stress may be related to lower birth weight and children with emotional problems and behavioral disorders.

### Risk Factors

- Age
  - Pregnancy most likely to result in a healthy baby if mother is in her 20's.
  - Older mothers have increased risk of miscarriage and stillbirth and are more liable to give birth to Down syndrome children.
  - Younger mother are at greater risk for inadequate diets and prenatal care and are more likely to have children with behavioral problems.

### Hazards to Prenatal Development: Teratogens

- Teratogens are any agents from the environment that can cause harm to the developing fetus.
- Many harmful agents cause damage only if exposure occurs during a sensitive period of prenatal development.
- Critical factors that influence the degree of harm a teratogen will cause:
  - The amount and length of exposure
  - Individual differences in susceptibility

#### 1.5.1. The zygote

The period of zygote includes approximately the first 2 weeks of life, extending from the time a sperm fertilizes the ovum. A *zygote* is a fertilized egg. It receives one-half of its chromosomes from the mother, the other half from the father. The *zygote* begins as a single cell. The *germinal period* is the first 2 weeks after conception. After 1 week and many cell divisions, the zygote is made up of 100 to 150 cells. At the end of 2 weeks, the mass of cells attaches to the uterine wall.

### **1.5.2. The embryo**

During the embryonic period, 2 to 8 weeks after conception, some remarkable developments unfold. Before most women even know they are pregnant, the rate of cell differentiation intensifies, support systems for the cell form, and organs appear. In the third week, the neural tube that eventually becomes the spinal cord is forming. At about 21 days, eyes begin to appear, and by 24 days, the cells of the heart begin to differentiate. During the fourth week, arm and leg buds emerge. At 5 to 8 weeks, arms and legs become more differentiated, the face starts to form, and the intestinal tract appears. All of this is happening in an organism that, by 8 weeks, weighs only 1/30 ounce and is just over 1.5 inches long.

### **1.5.3. The fetus**

This period begins 2 months after conception and lasts, on the average, for 7 months. Growth and development continue their dramatic course, and organs mature to the point where life can be sustained outside the womb. At 4 months after conception, the fetus is about 6 inches long and weighs 4 to 7 ounces. Prenatal reflexes become more apparent, and the mother feels the fetus move for the first time. At 6 months after conception, the eyes and eyelids are completely formed, a fine layer of hair covers the fetus, the grasping reflex appears, and irregular breathing begins. By 7 to 9 months, the fetus is much longer and weighs



considerably more. In addition, the functioning of various organs steps up.

### 1.6. Influences on growth and development

Every individual is influenced by both genetic and environmental factors even before birth. The individual's genetic potentialities are inherited from his or her parents, but the combination of genes he receives is unique. Scientists have discovered that a person's inheritance is not in the blood, as people used to say, but in every cell of her body. Each cell contains a nucleus, and each nucleus has a set of chromosomes bearing thousands of genes that make up the person's genetic potential. No two people ever born have quite the same combination of genes, except identical twins.

When a baby is born, she has already been subject to environmental influences for nine months. Science has reliably identified some of the characteristics that are primarily the result of her genetic makeup and some that have been decisively influenced by her environment; and there are many more characteristics that cannot be solely attributed to either influence. For example, if the baby is born blind, her blindness is called a *congenital* defect. It may be due to syphilis in the mother, which affects developing baby in her womb, or it may be due to a genetic factor.

A *gene* is the hereditary material that governs one trait. Some traits, such as blood type, seem to be determined almost entirely by one gene. Environment has little effect on these traits. Many other traits, however, are affected not only by the environment of the organism but by the combined influence of several genes. Thus, most genes operate in the environment of all the other genes in the individual's makeup. But taking this genetic pattern as an immensely complex whole, it can be said that heredity endows the person at conception with the potentiality to develop in a certain direction. Without this potentiality no development can take place, not even in the most favourable environment.

The genetic pattern, however, is no more than a potentiality. In a completely adverse environment it will disintegrate because the cells containing it will die, and in an environment that is unfavourable in certain ways it will fall short of its full development in corresponding ways. Thus, both a sound genetic pattern and a favourable environment are necessary for healthy development. Both affect the individual in so many ways that it is impossible except in a few cases to estimate which factor has had the greater influence

### **1.7. Hereditary (genetic) influences**

Half of a person's genetic material comes from his father and half from his mother. These two halves come together to form a unique combination of genetic potentialities when the sperm fertilizes the egg. In the nucleus of the fertilized egg, or zygote, are the materials that bear the pattern for a new person, one who is different from his parents and yet like them.

### 1.7.1. Mechanisms Of Heredity

All life is based on complex organic molecules known as *proteins*. Not only do proteins of one sort or another make up much of the substance of our body tissues--blood, skin, nerves, and muscles--but it is the interaction among proteins of different sorts that carries on the vital processes of living organism. The proteins are made up of simpler compounds called *amino acids*. There are only about 20 amino acids involved in the structure of most proteins; like the letters of the alphabet, the amino acids are few in number but are capable of endless recombination, so the number of proteins they can make is astronomical. The precise placement and combination of amino acids in a protein determine its structure and function in the body

A baby is conceived when a sperm (the male cell) fuses with an egg (the female cell) in the fallopian tube of the mother. There fertilization takes place: the head of the sperm, which contains its nucleus, is engulfed by the egg, and the nuclei of the two germ cells, or gametes, are combined to become the nucleus of the zygote, the first cell of the new organism. The most important material in that nucleus is a substance called deoxyribonucleic acid or DNA. The DNA in the nucleus of fertilized egg constitutes the genetic blueprint for a new unique individual. The DNA is a relatively simple molecule--much simpler, for example, than most proteins. It is made up of a sugar, phosphates, and only four other components. But the arrangement of these four components forms a kind of code that provides the pattern for the development of the fertilized egg

by determining the placement of amino acids in a protein.

The DNA molecules in our bodies are on rod like structures called chromosomes in the nucleus of each cell. Although we have thousands of traits, our cells normally contain only 23 pairs of chromosomes, with one chromosome in each pair coming from the mother and one from the father. Both chromosomes in a pair contain gene factors for the same traits, so there are two factors for each trait. But the two factors may have different effects. The differing forms of any given gene, which give different instructions for the form a characteristic should take, are known as the alleles of the gene. The tremendous number of possible combinations of alleles means that every human being is conceived with a unique genetic endowment.

### **1.7.2. Cell division**

Our body cells constantly divide and produce new cells in order to maintain growth and good health. The process of cell division is known as mitosis. Cell division begins when the chromosomes replicate to form a second set of chromosomes exactly like the original. Then this set separates from the original, is surrounded by a membrane, and becomes the nucleus of a new cell. The new cell produced through mitosis has the same number of chromosome pairs as the parent cell. Human sperm and egg cells are produced by a slightly different process of cell division known as meiosis, or reduction division. Meiosis, like mitosis, begins with the replication of the original chromosomes. But the ensuing cell divisions result in four cells instead of two. Each new cell has only half the number

of chromosomes found in the parent cell. In this way, the sperm cell and the egg cell end up with twenty-three single chromosomes instead of twenty-three pairs of chromosomes. This is important because, if the sperm cell and the egg cell each carried twenty-three chromosome pairs, the zygote resulting from their union would have forty-six chromosome pairs instead of the normal twenty-three, and would die.

### **1.7.3. Sex Determination**

Physical traits such as eye colouring are passed on through genes from parents to children. But what determines whether a child is female or male? It depends on laws of inheritance. The mechanism involved in sex determination is very simple. For human beings, sex is determined by a single pair of sex chromosomes. One of these is called the X chromosome, and the other, which usually found only in males, is a smaller one called the Y chromosome. When a sperm cell carrying an X chromosome unites with an egg cell, the zygote has the combination XX because all eggs carry X chromosome. An XX zygote will normally develop into a female baby. When a sperm cell carrying the Y chromosome unites with an egg, the resulting zygote has the combination XY and will normally develop into a male.

### **1.7.4. Inherited Characteristics**

We know that the characteristics such as colour blindness and blood type

are inherited traits. But it is not really traits that a person inherits, only genes; these genes give him the potential to develop particular traits under certain environmental conditions. Remember that the heredity never acts alone but is always interacting with the environment. However heredity is known to have a decisive effects on the individual's characteristics such as physical features, personality, intelligence, etc.

#### **1.7.5. Mutation**

Under normal circumstances, our genes are exact duplicates of the ones we received from our parents. But it is possible for changes to occur in our genetic material, and these changes may alter our physical structure, our biochemistry, even our behaviour. Such alterations, known as mutations, occur quite often, but the majority cause only invisible and significant changes. Some of them however, have a harmful, even lethal effect. Some mutations occur spontaneously, Others result from radiation from natural sources, such as ultraviolet rays in sunlight.

#### **1.7.6. Genetic Defects**

Sometimes the hereditary process passes along the potential for serious diseases or metabolic defects. Glaucoma, certain forms of muscular dystrophy, and a predisposition to diabetes can all be inherited. In many of these disorders, the action of genes causes a failure in the body's

production of some necessary enzyme. Without the proper amount or form of this enzyme, the metabolic process is disrupted; harmful substances build up in the blood and tissues and interfere with the normal process of growth and development. One hereditary defect is called sickle-cell anemia. The sickle-cell trait is caused by the inheritance of a mutant form of the normal gene.

Some type of mental retardation result from inherited metabolic deficiencies. Usually, in these cases, the body has a genetic inability to manufacture some important enzyme. Without this enzyme, it cannot properly utilize some element in the diet. As a result poisonous byproducts build up in the bloodstream and injure the brain and central nervous system. Phenylketonuria (PKU), an inability to metabolize a common amino acid, is one such disorder. Another is galactosemia, the inability to handle one of the carbohydrates in milk. A better known genetic disorder Down's syndrome (mongolism) characterized by very low mentality. It is not caused by a mutant gene, but by the presence of an extra chromosome, or part of one. This may result from the failure of the paired chromosomes to separate properly when an egg or sperm is formed. A victim of Down's syndrome can be recognized by an unusual skin fold in the corner of the eyes, a broad nose, and a protruding tongue. He is likely to suffer from heart malformations and respiratory disorders. Genetic factors may also contribute to diseases that we classify as mental illnesses. Often the causes of such mental disorders are unclear, and scientific authorities differ as to whether they result for hereditary or environmental factors.

### 1.8. Prenatal Environmental Influences

Environment begins to influence the individual as soon as he or she is conceived. Securely implanted in the wall of the uterus, the embryo is bathed in amniotic fluid, kept at a constant temperature, and protected from physical shock. The uterine environment is remarkably effective in protecting and nourishing the growing child. For many years it was believed that the baby in the uterus was completely insulated from all outside influences, but now we know that is not entirely true. Environmental influences ranging from radioactivity and stress in the outside world to drugs, chemicals, hormones, and viruses in the mother's bloodstream can affect prenatal development. Even though the placenta acts as a filter, keeping the blood of the mother and the fetus from mixing, a number of potentially dangerous substances can pass through it. And, of course, if the mother's blood lacks the nutrients required by the growing fetus, it may not develop fully.

Lack of proper nourishment or the introduction of harmful substances will affect the fetus in different ways at different stages of prenatal development. This is because the body organs and parts develop at different speeds but through definite phases. The effect of environmental influences vary in accordance with the stage of prenatal development in which the environmental factor is encountered. During the first three months of pregnancy, tissues and important body systems are beginning to develop in the embryo. Adverse influences during this period will affect the basic structure and form of the body, and may have particularly serious effects on the nervous system. Physical development can be arrested and



irreparable malformation may occur. For example, women who took the drug Thalidomide during the first three months of pregnancy gave birth to many children with serious defects, but it did not appear to have adverse effects when taken toward the end of pregnancy. Congenital defects due to prenatal environmental factors, like those due to genetic factors, may range from relatively minor problems, such as slightly retarded growth, to such major ones as severe mental retardation or physical deformity.

### **Teratogens**

The scientific study of congenital abnormalities caused by prenatal environmental influences is known as *teratology* and the environmental agents that produce abnormalities in the developing fetus are called *teratogens*. A teratogenic agent may be a chemical such as a drug or hormone, a virus or other organism, or radiation. Some diseases such as smallpox, malaria, measles, chicken pox, mumps, or syphilis may be transmitted from the mother as placenta cannot filter out extremely small disease carriers such as viruses; they are able to migrate through the placenta and infect the fetus. If a pregnant woman contracts rubella (German measles) in the first three months of pregnancy, she is likely to give birth to a child with a congenital abnormality. Heart disease, cataracts, deafness, and mental retardation are among the abnormalities caused by rubella. Disorders not caused by any virus or organism can also have teratogenic effects. Women suffering from diabetes are six to ten times as likely to give birth to infants with congenital malformations. Diabetic mothers are also very prone to stillbirths and have a tendency to deliver unusually large infants. A list of diseases and disorders that have a negative impact on prenatal development is given in Box-1.

BOX-1

**Diseases And Disorders that can have a Negative Impact on Prenatal Development**

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*Diseases and Potential Negative Effects  
Disorders*

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Mumps	Infant may suffer malformation of some kind
Rubella	Infant may be born deaf or mentally retarded or have cardiac disorders or cataract formation
Gonorrhea	Infant may be infected in the birth canal
Syphilis	Miscarriage; if infant survives it may be born blind, mentally retarded, or have other physical abnormalities.
Chlamydia	Miscarriage or stillbirth; surviving infant may acquire disease in birth process, or develop pneumonia or a form of conjunctivitis.
Genital herpes	Infected infant may be blind, mentally retarded, or have motor abnormalities or a wide range of neurological disorders. Half of surviving infants are seriously disabled.

**AIDS** infants infected often suffer neurological impairments, defects in mental and physical development, microcephaly (small head), and other physical abnormalities. Infants survive an average of nine months; three-fourths are dead within two years.

Fetal abnormalities, miscarriage, fetal death.

Preeclampsia or eclampsia, associated with hypertension; possible

stillbirth or death of newborn.

Hypertension    If mother's and infant's blood types are incompatible (mother's  
Diabetes        negative, infant's positive), on second and subsequent pregnancies  
                     antibodies produced by mother's blood can kill the fetus.

Rh        factor  
incompatibilit  
y

**Adopted from Hetherington & Parke, 1999**

Chemicals can cause a wide range of congenital abnormalities. The severity of the abnormality depends on the amount of chemical the mother is exposed to, the developmental stage of the fetus, and the period of time over which the mother's exposure to the chemical takes place. Heavy drinking by pregnant women can also be devastating to offspring. *Fetal alcohol syndrome* (FAS) is a cluster of abnormalities that appear in the offspring of mothers who drink alcohol heavily during pregnancy. The abnormalities include facial deformities and defective limbs, face, and heart. Most of these children are below average in intelligence, and some are mentally retarded. Even moderate drinking during pregnancy is associated with developmental deficits. A list of drugs, medications, and environmental toxins which can affect prenatal development is given in Box-2.

**BOX-2**

**Effects of Drugs, Medications, and Environmental Toxins on Prenatal  
Development**

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*Potential Negative Effects*

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*Drugs*

Nicotine	Prematurity, low birthweight, delayed intellectual and behavioural development, risk of pneumonia, bronchitis, laryngitis, inner ear infections; fathers' smoking may transmit risk of cancer of offspring
Alcohol	Fetal alcohol syndrome (physical defects, short stature, mental retardation, hyperactivity, stereotyped behaviours, congenital addiction leading to withdrawal syndrome); father's abuse of alcohol may cause genetic damage that leads to birth defects. The combination of parental smoking and drinking may cause miscarriages, prematurity, low birthweight, and sudden infant death syndrome.
Heroin, morphine, methadone	In mother, difficulty conceiving; in infant, prematurity, low birthweight, addiction, withdrawal, death.
Marijuana	In mother, difficulty conceiving; in infant, prematurity, low birthweight, high-pitched crying; no long-term effect.
Cocaine	In mother, difficulty conceiving; in infant, prematurity, low birthweight.
LSD	Chromosomal breakage.
Medication/Treatme	

nts

Diethylstilbestrol (DES) In mother, miscarriage; in infant, prematurity, low birthweight; female child may develop cancer of the cervix; male child may have reproductive abnormalities and increased risk of testicular cancer.

Thalidomide Deformations of infant's face, limbs, fingers and toes; malformations of heart and digestive and genitourinary tracts; malformations of absence of limbs.

Deafness in infant.

Quinine Respiratory problems in infant.

Reserpine Defective skeletal growth in infant.

(tranquilizer) Blood disorders in infant.

Tetracycline Cleft lip and palate in infant; failure of blood coagulation

Aspirin Short-term depression of infant's responsiveness, disruptions in feeding, behavioural disorganization, impaired attention and motor abilities.

Some anticonvulsant Anesthetics

*Environmental* Miscarriage, anemia, hemorrhage in mother.

*toxins* Cerebral palsy in infant.

Lead In mother, miscarriage, stillbirth; in infant, microcephaly,

Methyl mercury stunted growth, leukemia, cancer, cataract

Radiation

**Adopted from Hetherington & Parke, 1999**

Chemicals in the environment are being increasingly linked with teratogenic effects on the fetus. Some of these chemicals may damage the genetic material itself; others probably interfere with development after conception. Among these chemicals are some common sulfur compounds such as sulfur dioxide, which is a major component of air pollution, and bisulphite, a food preservative, and a number of substances used in many hair dyes. In some cases the evidence of damage to the fetus is clearer. Mercury, for example, is often used to coat seeds as a protection against fungus growth when they are planted. If a women gets mercury into her system during pregnancy, her child may be mentally retarded.

Some substances that are natural and normal in the body can cause trouble if they occur at the wrong time or in the wrong amount. The sex hormones are a case in point. One of their normal functions is to insure that the fetus develops the proper physical characteristics for its genetic sex. Occasionally, though, a fetus somehow gets an overdose of hormones for the wrong sex, This may result in a pseudo-hermaphrodite--a child whose sexual characteristics are somewhere in between those of both sexes. A women may receive damaging overdoses of hormones (usually female) in perfectly well-meaning medical ways. Oral contraceptives are preparations of female hormones, and sometimes a woman keeps on taking them for a short time before she realizes she is pregnant. Other birth defects have also been tentatively linked to the medical use of female hormones in early pregnancy. These include abnormalities of the heart, spine, limbs, central nervous system, and parts of the digestive tract.

The effects of prenatal exposure to radiation were tragically demonstrated by the babies born after the atomic explosions in Japan. If a woman in her first twenty weeks of pregnancy was within a half mile of the center of the explosion, her

chances of delivering a normal baby were very small. Expectant mothers farther from the center of the explosion gave birth to babies with congenitally dislocated hips, malformed eyes, heart disease, leukemia, and mental retardation. Larger doses of therapeutic radiation, such as those required for the treatment of cancer, may be injurious to the fetus and can sometimes cause spontaneous abortion. Some of the birth defects brought about by radiation are almost certainly due to damage to the genetic material before conception takes place. Even low levels of radiation can cause mutations in single genes; prolonged doses may create chromosome abnormalities similar to the one that causes Down's syndrome.

### 1.8.1. The mother

Since mother's body is the chief element in the unborn baby's environment, her physical condition can significantly affect its development. Among the maternal factors known to influence the fetus are diet, prolonged stress, reactions associated with a certain blood component, and the mother's age. Teenage mothers and those over thirty-five have a higher risk of miscarriage, premature birth, and some birth defects than mothers in the prime childbearing years. Very young mothers have not yet completed their own development, and their reproductive systems may not be quite ready to function. In older women, the reproductive system may be past its most efficient functioning. In both cases, pregnancy puts an extra strain on a body that is not fully able to bear it. Also, there is some reason to think that a woman's ova may deteriorate with age, leading to a greater risk of birth defects. The father's age is less significant.

Mother's nutrition is important to the development of the fetus. Pregnancy puts additional demands on the mother's body. The prenatal development of the fetus



and its growth and development after birth are directly related to maternal diet. Women who follow nutritionally sound diets during pregnancy give birth to babies of normal or above-normal size. Their babies are less likely to contract bronchitis, pneumonia, or colds during early infancy. The teeth and bones are better developed, and their mothers have fewer complications during pregnancy and on the average spend less time in labour. But if the mother's diet is low in certain vitamins and minerals when she is pregnant, the child may suffer from specific weaknesses. Insufficient iron may lead to anemia in the infant, and a low intake of calcium may cause poor bone formation. If there is not enough protein in the mother's diet, the baby may be smaller than average and may suffer from mental retardation. Lack of B vitamins in the mother's diet may impair mental functioning in the child. Shortages of vitamins C and D may lead to physical abnormalities. Overdoses of certain vitamins can also do harm: too much vitamin D can cause mental retardation and physical defects. The Rh-positive factor is a common inherited, genetically dominant trait in the blood that can result in a situation dangerous to the child. Maternal characteristics are listed in Box-3.

**BOX-3**

**Maternal Characteristics That Can Have Negative Impact on Prenatal Development**

*Characteristics of the Mother*      *Potential Negative Effects*

**Age**      Teenage mothers tend to live in risky environments, to have poor health and diets, and to use drugs, thus risking premature and low-birth weight babies; older mothers risk bearing a Down's syndrome child as well as problems posed by illnesses that are more common as people age.

**Emotional state**      Mothers who are stressed may have more-troubled pregnancies, miscarriages, long labour and delivery complications, and more need for childbirth anesthesia; their infants may be

**Diet**      irritable and have feedings and sleep problems

Malnourishment can lead to miscarriage, stillbirths, prematurity, low birth weight, physical and neural defects, smaller size in newborns, and sometimes cognitive difficulties.

**Adopted from Hetherington & Parke, 1999**

If a mother is extremely anxious--about her pregnancy, her abilities as a mother, or any other problem in her life--the unborn child may be affected. Mothers who

are relatively free of emotional stress, on the other hand, tend to give birth more easily, and their babies usually develop normally. Although the baby's nervous system is separate from the mother's strong emotions in the mother such as rage, fear, and anxiety cause a great increase of hormones and other chemicals in her bloodstream. These substances pass through the placenta wall, and it is believed that they can reproduce the mother's physiological state in the fetus.

### **1.9. Twins and Siblings**

In most cases, babies are conceived and born one at a time. However, 3 out of every 100 births in the United States today are multiple births (Martin et al., 2010). This number has risen dramatically in recent decades, in large part because widely prescribed new medications given to infertile women frequently stimulate multiple ovulation. The great majority of multiple births in the United States are twins; triplets or higher multiples occur only about once in every 1,000 births (Martin et al., 2010). Roughly two-thirds of twins are fraternal twins. Fraternal twins develop when two ova have been produced and both have been fertilized, each by a separate sperm. Such twins, also called dizygotic twins, are no more alike genetically than any other pair of siblings and may not even be of the same sex. The remaining one-third of twins are identical twins (also called monozygotic twins). In such cases, a single fertilized ovum apparently initially divides in the normal way, but then for unknown reasons separates into two parts, with each part developing into a separate individual. Because identical twins develop from precisely the same original fertilized ovum, they have identical genetic heritages.

### 1.10. Postnatal development

The first two years of life is a period of rapid physical growth. Within the first two years the most rapid growth occurs during the first six months. The growth rate tapers off slightly in the next six months, progressing toward the steady growth pattern of later childhood during the second year. Surprisingly, growth does not take place consistently during all months of the year. Rather it appears to be cyclical.

### 1.11.SUMMARY

Little was known about prenatal development until fairly recently. Consequently, there was a lot of confusion about the connection between the experiences of the pregnant woman and the intrauterine development and experiences of the child. For example, pregnancy has traditionally been divided into three trimesters of equal length, so doctors as well as expectant couples tended to think of prenatal development as consisting of three analogous stages. Of course, technology has changed all this. Scientists have learned that there are indeed three stages of prenatal development, but the developing child has already reached the third stage before the mother ends her first trimester.

### 1.12.Check Your Progress

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**2.15 References / Further Readings**

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## UNIT 2

# Psychosocial Theory (Erikson)

### STRUCTURE

#### 6.1. Introduction

#### 6.2. Objectives

#### 6.3. How Newborns Are Assessed

#### 6.4. Physical characteristics of the newborn

##### 6.4.1. The Skeleton And Muscle Structure

6.4.1.1. Weight

6.4.1.2. Length

6.4.1.3. Body proportion

##### 6.4.2. Neurological Characteristics

6.4.2.1. Anatomical characteristics

6.4.2.2. Cortical activity

##### 6.4.3. Bodily Functions And Homeostasis

6.4.3.1. Circulatory system

6.4.3.2. The heart

6.4.3.3. Blood

6.4.3.4. Respiratory system

6.4.3.5. Temperature control

#### 6.5. Summary

**6.6. Check Your Progress**

**6.7. Assignment/Activity**

**6.8. Points For Discussion And Clarification**

**6.9. References / Further Readings**

## **UNIT 2**

### **Birth and Neonatal development: Screening the newborn - APGAR Score, Reflexes and responses, neuro-perceptual development**

#### **2.1. Introduction**

Once the fetus has reached full-term, it is time for make that first big appearance into the world. In a normal, uncomplicated birth, the fetal brain first signals the release of hormones that then pass into the mother's bloodstream. These hormones cause the mother's uterine muscles to contract and relax, first in an irregular pattern but gradually becoming more and more regular.

During this first stage of labor, these uterine contractions gradually push the fetus downward, placing pressure on the cervix and causing it to dilate until it opens to about 10 centimeters (about 4 inches) in order to allow the fetus's head to pass through.

The next stage is a brief period known as transition in which the baby's head moves into the birth canal.

Finally, in the second stage of labor, the baby's head crowns at the opening of the vagina. In most cases, less than an hour after crowing the head will finally emerge completely. Since the head is the largest part of the baby, the rest of the infant's body follows quickly.

## 2.2. Objectives

**After going through the unit you will be able to:**

- Understand the meaning of Erikson's Theory of Psychosocial Development
- 9 stages of Erik Erikson's theory of psychosocial development ;

## 2.3. How Newborns Are Assessed

In those first few magical moments after birth, both parents may marvel at the astonishing feat they have just accomplished and admire the new creature they have just brought into the world. Most babies begin to cry almost immediately and the circulatory system begins to function.

As oxygen rushes through the body, the baby's skin will quickly turn from a slightly blue tinge to a rosy pink.

For the medical personal attending to the birth, those first few moments of life are a time of conducting important assessments to ensure that the

infant is healthy. The umbilical cord is cut, any mucus is quickly removed from the mouth and throat, and the infant is wiped clean of any blood or other fluids.

If the delivery occurs in a medical setting or if a trained health worker is present, the child's body functioning will be immediately assessed.

One of the most common ways to assess newborns is known as the APGAR scale, a quick and easy to perform method to evaluate the health of a newborn baby. The score is determined using five basic criteria that are rated on a scale from zero to two. The scores for each criterion are then summed, so an APGAR score can range from zero to 10. You can see an example of the APGAR scale in the table below.

## **2.4. Physical characteristics of the newborn**

The physical structure of the neonate is similar to that of human beings of any age, consisting as it does of muscle, bones, nerve cells, and internal organs.

### **2.4.1. The Skeleton And Muscle Structure**

In comparison to the older child, the muscles of the neonate are soft, small, and poorly controlled. The bones, too, are soft and flexible, consisting mostly of cartilage. The immaturity and flexibility of the neonate's skeleton is of great concern to some parents who feel that unless they overprotect the child they may somehow physically damage or deform his or her body. Of particular concern to some parents are the "soft spots" on the head of the neonate. These six fontanel occur where the bones of the skull have not yet knitted together. The fontanel are covered by a tough membrane and are not as sensitive to stimulation as is often believed.

#### **2.4.1.1. Weight**

The child at birth is smaller than most people imagine. The average weight of the newborn is 7.5 lbs. (3375 g.), with 95 percent of newborns weighing between 4.5 lbs. (2025 g) and 8.5 lbs. (3825 g.). The record books report that the smallest and largest babies born alive weighed 10 oz. (280 g.) and 24.25 lbs. (10900 g.) respectively. Surprisingly, newborns typically lose weight in the first few days after birth. This weight loss is not harmful and

probably occurs because so much of the newborn's energy is directed toward adjusting to life outside the uterus. The initial weight loss is not maintained and by the end of the first month the average weight of a child is 9.25 lbs. (4150 g).

Earlier prematurity was typically defined by the birth weight of a child. Those newborns weighing less than 5.50 lbs. (2500 g) were said to be premature. More recently it has become customary to consider two dimensions in defining maturity of the child at birth: the birth weight and the gestation period. The normal gestation period for the human organism is 40 weeks. Children are referred to *as short-gestation period* or *preterm infants* if they are born less than 40 weeks after conception. It is expected that a preterm infant, for example, one born only 35 weeks after conception, would normally have a lower birth weight than a child born at full term.

Full term newborns who weigh less than 5.50 lbs. (2500 g) are called *low-birth-weight* infants. The impact of low-birth weight for a full term infant is quite different from the low birth weight of the short-gestation infant. The low-birth-weight infants do make rapid catch-up growth gains during their early development. However, even as children and adults, they typically do not achieve the height and weight of individuals who weighed more at birth.

#### 2.4.1.2. Length

The average newborn is 20 inches (51 cm) long, a little under two feet. It is very hard to obtain an accurate measure of length for an infant because their legs tend to flex up under them into a



squattinglike position. Thus, during those first months, physicians are not likely to use length measurements as a diagnostic sign of developmental problems. If one desires to obtain an accurate measurement of body length, it is best to do so when an infant is asleep and relaxed. As anyone will attest who has observed the speed with which newborns outgrow their cloths, the length of the newborn increases rapidly. By the age of one month, the newborn, on the average, will have grown about 1 in. (2-3 cm).

#### **2.4.1.3. Body Proportion**

At birth the human child is top-heavy. The head of the newborn constitutes one-quarter of the total body length, in contrast to an adult, whose head constitutes one one-seventh of the total length. In addition to the disproportionately small body trunk, the hands, arms, and legs of the newborn are small relative to the total body size. This disproportionate body structure accounts, in part, for the poor coordination of the infant, poor coordination that is evident even at age one or two. One can characterize the process of growth as that of developing legs and arms to fit one's body, and developing a body whose size will be compatible with the size of the head.

#### **2.4.2. Neurological Characteristics**

##### **2.4.2.1. Anatomical Characteristics**

The nervous system of the human organism controls all of its activities. Many of the developmental changes we observe throughout life are the result of changes in that neurological system. Thus, an

understanding of the newborn's nervous system is essential for understanding both the child's limitations in functioning and the processes of development that are observed during the first months and years of life.

At birth the weight of the brain is approximately 25 percent of its adult weight; and by the age of six months, it has fully achieved half its mature weight. At birth the most highly developed portions of the central nervous system are the *spinal cord, midbrain, pons, and medulla*. These lower, or *subcortical*, brain structures maintain the vital reflex functions of the infant, for example heartbeat and respiration. These vital structures constitute only about 1.5 percent of the total brain volume throughout life, although some changes are observed with development. The major development of the midbrain, pons, and medulla take place prior to birth. Other vital lower brain structures, the *thalamus* and *hypothalamus*, also differentiate anatomically prior to birth but grow rapidly during the first few postnatal months. During the first month, their growth is the most rapid of any portion of the brain. Among the functions served by these structures are the maintenance of homeostasis--for example temperature control and food intake--and fundamental sensory processes.

The *cortex* of the newborn is thought to be poorly developed at birth. The *neurons* that make up the cortex of the adult are nearly all developed at birth, but their *axons* and *dendrites* have not yet grown to produce the complex network of connections observed in the adult cortex. The development of the cortex involves the growth of those

axons and dendrites as well as the development of a protein covering (myelin) which covers the axons to varying degrees. The *myelin sheath* facilitates neural transmission.

Although the cortex develops rapidly during the first months after birth, that development is not uniform across all cortical systems.

The function of the *cerebellum* is to coordinate cortical activities, which influence balance and muscle tone. Of particular significance is its role in motor coordination. At birth the cerebellum is very immature and does not function. It is one of the last major divisions of the brain to develop, reaching its maximum growth rate at about six months of age. This point of maximum growth rate occurs fully three months after the maximum growth rate of the cortex.

#### 2.4.2.2. Cortical Activity

A distinction can be made between the electroencephalogram (EEG) patterns during the waking and sleeping states as early as the eighth prenatal month. The waking state EEG pattern of the one-month old newborn does not differ significantly from that observed in the eighth prenatal month. It is characterized by activity from all areas of the cortex with a predominance of theta waves and some evidence of delta and alpha waves. The alpha waves designate only a range of wave frequencies, and should not be confused with alpha rhythms. *Alpha rhythms* describe alpha waves occurring in the occipital and parietal

areas of the brain when an individual is relaxed but that are blocked upon the presentation of alerting stimuli. Although alpha waves, the precursor of alpha rhythms, are found in the newborn EEG, the full alpha rhythm is not characteristic of the newborn.

Two patterns of sleep are discernible as early as the eighth prenatal month and continue to be differentiated in the newborn's EEG records. The first sleeping-state EEG pattern, which is present in quiet sleep, is called the *trance alternate*. The contrasting sleep pattern observed in the newborn is referred to as REM sleep (*rapid eye movement*). The REM sleep of the neonate has been of interest to developmental psychologists because it characterizes over 50 percent of the newborn's sleeping time, a proportion that diminishes rapidly as the total amount of sleeping time for the child decreases.

#### **2.4.3. Bodily Functions And Homeostasis**

Until birth the maintenance of the child is totally dependent upon the functioning of the mother. At birth, however, the newborn is thrust into a cold new world in which it must survive independently. It must circulate its own blood, provide its own oxygen, digest its own food, and maintain its own biochemical and thermal balance activities.

##### **2.4.3.1. Circulatory System**

The anatomy of the heart and circulatory system of the newborn is in a state of transition between that of the fetus and that of the older infant. To understand this transition state and its developmental implications, it is

suggestive to understand both the heart anatomy and the circulatory system of the fetus and that of the older child and of the adult.

Prenatal circulation differs from postnatal circulation in one significant way. In the fetus, oxygenation and cleansing of the blood occur at the placenta and not in the lungs. To allow for this functional difference, the fetal circulatory system includes three important structures not included in the mature circulatory system. The *umbilical cord* carries blood from the lower limbs and trunk to the placenta for oxygenation and cleansing. The same cord carries the oxygenated blood back to the fetal circulatory system. That oxygenated blood moves through the inferior vena cava to the heart. The *valve of foramen ovale* allows blood from the inferior vena cava to move directly to the left atrium rather than first flowing to the right side of the heart and through the lungs as occurs in the postnatal system. The *ductus arterioles* reduces the amount of blood flowing from the right ventricle to the immature and nonfunctioning fetal lungs. Instead, much of the blood flowing from the right ventricle of the fetus moves through the ductus arteriosus directly into the aorta and on the umbilical arteries.

Shortly after birth the umbilical cord spontaneously ceases to circulate blood to the placenta, and the respiratory system automatically begins to function. These changes increase the flow of blood to the lungs. The changing pressure patterns within the component parts of the circulatory system resulting from those events cause two significant alterations in the pattern of blood flow observed in the newborn, and also in the anatomy of the newborn's circulatory system. The *valve of foramen ovale* is mechanically closed, thus forcing the blood from the inferior vena cava to flow into the right atrium as it does in the mature circulatory system. The

*ductus arteriosus* consists and forces all blood from the right ventricle to enter the lungs where it can be oxygenated and cleansed. While functional changes in those two structures take place within moments after birth, permanent anatomical closure of those fetal channels is quite slow and progresses through the period of early postnatal development.

#### **2.4.3.2. The Heart**

At birth the heart constitutes a greater portion of total body weight than it does at any other time in the life of the child or the adult. The need for a large heart at birth may be dictated by the large size of the arteries in the neonate relative to their size later in life. Even with the neonate's relatively large heart, the newborn's blood pressure is significantly lower than the blood pressure recorded for older children and adults. A fast heartbeat is also needed by the neonate to maintain adequate blood pressure in light of the large size of its arteries. In the first month of life, the heartrate of the alert neonate averages 150 pulses per minute. The speed of heart rate declines with age, but it does not reach the slower adult levels until after adolescence.

#### **2.4.3.3. Blood**

The blood of the newborn is lacking in vitamin K, an element that encourages blood clotting. A consequence of this deficiency is that injuries sustained during the first few weeks of life can cause severe hemorrhaging. It is speculated that normally there is an excess of red blood cells in fetal blood, which must be destroyed at birth. In many newborns, bilirubin, a byproduct of red blood cell destruction, cannot adequately be metabolized by the immature liver. This metabolic

deficiency results in excesses of a yellowing of the skin and of the whites of the eyes.

#### **2.4.3.4. Respiratory System**

The respiratory system of the newborn is not functional until birth. During prenatal development, the oxygenation of blood occurs at the placenta. At present the stimulants that activate the functioning of the respiratory system at birth are not fully understood. One major stimulant thought to activate respiration is the reduced levels of oxygen and increased levels of CO<sub>2</sub> in the blood that result from the spontaneous elimination of the umbilical cord from the circulatory system. The muscles of the newborn's respiratory system are still immature, and breathing is characteristically shallow, irregular, and noisy. With increased development of the muscles that control breathing, this respiration pattern is eliminated. The respiration rate of the newborn is 40 to 45 breaths per minute. By the end of the first week the newborn's respiration rate drops to approximately 35 breaths per minute, but it still is twice that of the adult.

#### **2.4.3.5. Temperature Control**

For warm blooded animals, humans among them, the maintenance of a constant internal temperature is crucial for survival. The neonates have limited ability to maintain a constant body temperature in the wake of fluctuating air temperatures. The newborn's poorly functioning temperature control system is not a product of an immature nervous system or poorly developed metabolic system. Instead, the problem faced by the newborn stems from two factors: its large body surface area relative to its body volume, and its poor body insulation.

## 2.5. Behavioural Activities

The newborn sleeps approximately 67 percent of the time. During nonsleeping hours, four states of activity have been described. They are: (1) *drowsiness*, in which the eyes open and close intermittently and the newborn appears dull and unresponsive to its environment; (2) *alert activity*, in which the newborn is relaxed, relatively inactive, with open eyes that can, and do, follow objects as they move about; (3) *waking activity* in which the newborn's eyes are open, but he or she is only semialert and frequently engages in diffuse motor activity involving the whole body; (4) *crying*, in which the crying vocalizations are often accompanied by mass motor activity.

Motor activities engaged in by the neonate during its periods of wakefulness can be divided into two categories: (1) *Reflexes*, which constitute the newborn's predetermined systematic responses to particular sources of stimulation. (2) *Nonreflex movements*, which ultimately will evolve into the child's instrumental responses to the movement. Reflexes are important for two reasons. The first is that observation of some reflexes provides information concerning the neurological integrity of the newborn. Second, some reflexes provide the newborn its first systematic encounter with objects in the environment. Modification of these reflexes are the newborn's first attempt to accommodate to the environment. In addition to reflex activity, one observes gross motor activity in the newborn. In response to many sources of both internal and external stimulation, the arms and legs of the newborn are seen to move spontaneously and the head moves from side to side. This gross motor



activity is characterized by *mass action*. The movement of one limb seems to spontaneously activate motion in the other limbs of the body.

## 2.6. Summary

- Development begins at the moment of conception, when the sperm from the father merges with the egg from the mother.
- Within a span of 9 months, development progresses from a single cell into a zygote and then into an embryo and fetus.
- The fetus is connected to the mother through the umbilical cord and the placenta, which allow the fetus and mother to exchange nutrients and waste. The fetus is protected by the amniotic sac.
- The embryo and fetus are vulnerable and may be harmed by the presence of teratogens.
- Smoking, alcohol use, and drug use are all likely to be harmful to the developing embryo or fetus, and the mother should entirely refrain from these behaviors during pregnancy or if she expects to become pregnant.
- Environmental factors, especially homelessness and poverty, have a substantial negative effect on healthy child development.
- Development differs from growth in that developmental changes are qualitative while growth changes are quantitative.
- The rate of development in childhood is predictable with periods of rapid development followed by slow development. Each child follows a predictable pattern of development at his own rate and in his own way.

- Early development is more important than later development because the foundations laid in the early years determine what the child's adjustments to life will be.
- Development is a product of maturation (the unfolding of hereditary potentials) and of learning (development that results from effort and exercise).
- Knowing the normal pattern of development is essential to understanding children, to setting up measuring rods to determine their level of adjustment, and to knowing how to guide their development.
- Genetic information is contained in a complex molecule called deoxyribonucleic acid (DNA). Most bodily cells produce tissue by simple division of their genes, chromosomes, and other cellular parts by means of a process called mitosis.
- Reproductive cells, or gametes, divide by a process called meiosis, and recombine into a zygote at conception. The process of meiosis gives each gamete half of its normal number of chromosomes; conception brings the number of chromosomes up to normal again and gives the new zygote equal number of chromosomes from each parent.
- Prenatal development begins with conception, in which a zygote is created by the union of a sperm cell from the father and an egg cell, or ovum, from the mother.
- Prenatal development divides into discrete periods, or stages. The germinal stage occurs during the first two weeks following conception; the zygote forms a blastocyst, which differentiates into three different cells layers and then implants itself in the uterus wall to form the embryo.

- During the embryonic stage, which lasts from the third through the eighth weeks of pregnancy, the placenta and umbilical cord form and the basic organs and biological systems begin to develop.
- During the fetal stage, which spans from the ninth week until the end of pregnancy, all physical features complete their development. Embryonic and fetal development follow a cephalocaudal (head to tail) and a proximodistal (near to far) pattern of development.
- Every individual is influenced by both genetic and environmental factors even before he is born. The individual's genetic potentialities are inherited from his parents, but the combination of genes he receives is unique. A gene is a part of a chromosome that directs the formation of a single trait. Chromosomes are found in the nucleus of every living cell.
- Some physical features, such as eye and skin colour, as well as certain rare diseases, are inherited. Mental illness, intelligence, and personality may be affected by inheritance, but it is hard to say exactly how much.
- Certain biological risks to prenatal development are associated with the physical and biological characteristics of the mother, including her age, physical size, and state of health. Illnesses such as rubella, syphilis, genital herpes, and AIDS can irreversibly harm the embryo or fetus, particularly during its critical period of development.
- Environmental agents that adversely affect an individual's development before birth are called teratogens. Teratogens, which include alcohol, smoking, and drugs such as thalidomide, DES, cocaine, and heroin, can cause physical malformations, developmental retardation, or death. Some teratogens are diseases that infect the mother and injure the child.

- Inadequate diet and nutrition and stress can adversely influence prenatal development. Environmental hazards such as radiation or industrial pollution can harm the developing embryo or fetus.

The neonate makes several physiological adjustments to become an independent organism. The respiratory center in the brain reacts to a chemical imbalance in the blood, and this triggers breathing. Circulation through the lungs increases, the umbilical cord is cut, and the heart gradually develops its mature form.

#### **4.8. Check Your Progress**

- Q.1** What behaviors must a woman avoid engaging in when she decides to try to become pregnant, or when she finds out she is pregnant?
- Q.2** Do you think the ability of a mother to engage in healthy behaviors should influence her choice to have a child?
- Q.3** Given the negative effects of poverty on human development, what steps do you think that societies should take to try to reduce poverty?
- Q.4** What are the concepts of growth and development?
- Q.5** What are the principles of development? List them.
- Q.6** Explain that “development follows a definite sequence.”
- Q.7** Are there different periods of development in the unborn child?
- Q.8** What are the distinctive characteristics of the three periods of prenatal development?
- Q.9** Women are often very cautious about what they do and what they eat while they are pregnant. Why?

- Q.10 A young woman was advised to avoid having X-rays taken of her back while she was pregnant. Why would this advice be given?
- Q.11 What are the teratogenes?
- Q.12 Which centers of the brain are most highly developed at birth?
- Q.13 What are the characteristics of newborn's sleep?

**4.9. Assignment/Activity**

Try to contact pregnant women in your neighborhood or OPD of a nearby hospital or nursing home. Make a list of the advices she is given by her doctor. Give explanation for these advices.

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**6.8. Points For Discussion And Clarification**

After going through this Unit you might like to have further discussion on some points and clarification on others

**6.8.1. Points for discussion**

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## UNIT 3

# Milestones and variations in Development

### STRUCTURE

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## UNIT 3

# Milestones and Variations in Development

### 3.1. Introduction

The study of children's behaviour is largely a twentieth-century phenomena. The longer each of us has worked in the field of developmental and educational psychology, the more we have wanted to share our knowledge of child and adolescent development with others. This desire became even stronger after each of us because parents and as we watched our children grow up. Both our professional and personal experiences impressed on us not only the tremendous complexity of human development, but also the practical importance of studying development to all of society. As infants grow into children, and children grow into teenagers, they experience a great many changes. Some of these changes are small and fleeting; many, however, are relatively permanent and long-lasting. The study of the development of children and adolescents offers much insight into human nature; however, describing development is a complex task. Human development can take many forms some of which have been described in this unit.

### **3.2. Objectives**

**After going through this unit you will be able to:**

- Understand the aspects of development of preschool children;
- understand the developmental characteristics of adolescents;
- have an idea of disorders of children and adolescents;
- Understand the nature, types and causes, and treatment of developmental deviance.

### **3.3. Development During Preschool Years**

Children grow more slowly during preschool years--from two to six--than they do during infancy, but growth nonetheless has a major impact on their lives as a whole. Not only does physical growth make new motor skill possible; it affects children's social, emotional, and cognitive development. This section looks closely at how physical growth and motor skills influence each other and psychological processes during early childhood.

#### **3.3.1. Physical Development**

**The child's rate of physical growth begins to taper off after toddlerhood, the period when physical development is at its greatest. Yet body proportions continue to change, and motor skills continue to be refined at a relatively fast rate, enabling children become more adept at dealing with their own needs and coping with their physical**



surroundings. By the age of 5, the average child stands 43 inches tall (about 3.5 feet), which is just over double the birth length, and weight 42.8 lbs., approximately five times the weight at birth. Differences in height between the sexes are very slight, although boys weigh more than girls and tend to have more muscle and less fatty tissue. Also during preschool years, the head and brain approach their adult size. At birth, the head measures between 12 to 14 inches in circumference. By the first year it has increased 33 percent, and at the fourth year the head has increased approximately 48 percent. And by the end of the sixth year, the head has attained almost 90 percent of its adult size.

The brain, growing in relation to cranial growth, has attained 75 percent of its adult weight by the fifth year, as the billions of nerve fibers become increasingly myelinated and the dendrites in all layers of the cortex increase in both size and number. These maturation processes will enhance the connectivity and transmission of nerve impulses, which is critical to more complicated brain functions.

### **3.3.2. Physical Changes During Preschool Years**

By the time children enroll in nursery school or kindergarten, there have been noticeable physical changes in their bodies. The toddler's baby-like contours, especially the round and chubby appearance, have given way to a more slender appearance. This is largely due to a growth spurt that affects height, as well as to the preschooler's participation in numerous and diverse physical activities, which affect muscular growth and body build. Changes in postural patterns also become quite evident during the early years. And changes in body dynamics contribute to the child's

physical and emotional well-being, as inefficient use of the body can lead to lack of muscle tone, a lower threshold of fatigue, and less available mechanical energy. A number of physical factors change the child's postural patterns:

#### **3.3.2.1. Force of Gravity**

The force of gravity affects the body (the center being the trunk), whether sitting, standing, or running. Although, the battle against the pull of gravity is more obvious for some children than others, each child must maintain equilibrium in order to produce good posture and balance. With age, body proportions change, and the center of gravity drops lower in the trunk. This makes it easier for the child to maintain equilibrium in the standing position.

#### **3.3.2.2. Type of Body Build**

Posture is also affected by the child's body build. The posture of the heavier child will differ from that of the lighter or smaller one. Correct posture is also influenced by the strength of the bones, the firmness of the muscles, and the kinesthetic sense.

#### **3.3.2.3. Course of Development**

The stages of the child's development are another factor to consider. The early phases of locomotion, for example, influence certain parts of the body, such as the neck muscles or the lumber curve in the lower part of the

back. When walking, the weight of the body falls on the inner part of the foot, resulting in the foot's sagging in the area of the ankle

#### **3.3.2.4. Interactions with the Environment**

Environmental factors, such as nutrition, rest, and activity, also are important to posture. The child now has incentives to excel in certain areas, such as sports, to be physically attractive, or to perfect certain motor skills. All of these may encourage a child to learn proper body balance and posture.

#### **3.3.3. Motor Skill Development**

As a young child grows, she becomes more skilled at basic physical actions. Often a two-year-old can walk only with considerable effort, hence the name toddler is given. But a five-year-old can walk comfortably in a variety of ways: forward and backward, quickly and slowly, skipping and galloping. A five-year-old can do other vigorous things, too, that were impossible a few years earlier. She can run and jump and climb, all with increasing smoothness and variety. She can carry out certain actions that require accuracy, such as balancing on one foot, or catching a ball reliably, or drawing a picture.

**Motor skill development rapidly accelerates in the physical play world through such activities as jumping, climbing, running, and tricycle riding. Knowing what preschoolers are physically capable of undertaking and their degree of efficiency is important not only to parents but also to day-care and nursery-school teachers, people who**

**will be structuring their physical activities. Adults need to structure children's motor skill activities so that they will alleviate any frustration. Such frustration is usually the result of a task's being too difficult. But boredom may result if a task is too ease.**

Both gross (large) and fine (small) motor skills advance during early childhood. Gross-motor skills, requiring the coordination of large body parts, include such activities as tumbling, skipping rope, or playing on a seesaw. Fine motor skills require the coordination of small body parts, mainly the hands. Fine-motor skills include such activities as turning the pages of a book, using scissors, or fitting together a jigsaw puzzle. Learning to write, which for many begins at this time with simple exercises, also gives preschoolers the opportunity to refine their fine-motor skills.

A number of factors account for the preschooler's ability to engage in more diversified motor-skill activities. Before the preschool years, muscular development was proportionate to overall body growth. Now approximately 75 percent of the child's weight gains are due to muscle development. Other developments evident at this time are increases in reaction time and refinements in eye-hand coordination, manual dexterity, and general body awareness.

### **3.3.3.1. Stages of Motor-skill Development**

*Skill development.* Similar to other spheres of growth, the coordination of motor skills follows a sequential pattern. Although individual variations

are apparent within the time frame required to perfect coordination, virtually all motor skills develop in stages, including both gross and fine motor skills. There are three stages of motor skill development. In the *cognitive phase*, the child seeks to understand the motor skill and what it requires. At this point, mental awareness is critical to developing certain strategies or to remembering how similar tasks were handled in the past. The *associative phase* is characterized by trial-and-error learning, in which errors in performance are recognized and corrected in the future. In this stage, the strategy changes from the previous phase's "what to do," to "how to do it." The *autonomous phase* is the last stage, in which performance is characterized by efficient responses and fewer errors. children appear now to respond more automatically.

This stage theory suggests that motor skills advance in a series of stages as do the locomotion and prehension sequences of infancy and toddlerhood. Indeed, virtually every aspect of physical development seems to follow an overall order in which visible changes regularly follow one another. Thus, early efforts are often prone to mistakes, whereas later attempts are characterized by skillful execution of the required task. This latter accomplishment represents mastery of the mechanics underlying motor skills: accuracy of movement, precision, and economy of performance.

### **3.3.3.2. Fundamental Motor Skills**

Preschool children have obviously moved well beyond the confines of reflex action, which constituted the first motor skills of infancy. From age two to about age five, they experiment with the simple voluntary actions

that adults use extensively for their normal activities--actions such as walking running and jumping. For older individuals, these actions are usually the means to other ends. for very young children, however, they lie very much in the foreground and are frequently goals in themselves. Preschoolers acquire and refine many fundamental motor skills, including walking, jumping, hopping, climbing, throwing, and catching. Milestones in preschool motor development are given below. Milestones in motor skill development are listed in Table 1.

**Table 3.1. Milestones in Preschool Motor Developments.**

Age	Gross Motor Skills	Fine Motor Skills
2.5-3.5 years	Walks well; runs in straight line; jumps in air with both feet	Copies a circle; scribbles; can use eating utensils; stacks a few small blocks
3.5-4.5 years	Walking stride 80 percent of adult; runs at one-third adult speed; throws and catches large ball, but stiff-armed	Buttons with large buttons; copies simple shapes; makes simple representational drawings
4.5-5.5 years	Balances on one foot; runs far without falling; can swim in water for short distance	Uses scissors; draws people; copies simple letters and numbers; builds complex structures with blocks

### 3.3.3.3. Rehearsal of Motor Skills

Practice is the continuous repetition of a motor skill so as to find the correct response. However, whether practice increases certain motor-skill efficiency is open to question. Whether practice is beneficial depends on the child's maturational state. Unless there has been sufficient neurological maturation, certain kinds of motor-skill activity are impossible, and practice will not help. Extended practice sessions or accelerated training are not necessarily linked to motor-skill performance. Rather, motor skill efficiency is the product of maturation and experience. Also, learning opportunities and adult encouragement are important to the development of motor skills.

### 3.3.3.4. Can Fundamental Motor Skills be taught?

*Can fundamental motor skills be taught?* Adults can teach some motor skills, but many seem to develop simply through natural daily experiences of young children. Such skills as jumping, throwing, and catching seem to improve as children practice them, which implies that motor skills can be taught just as other skills are. Among physically normal children, specialized motor skills are much more teachable than are fundamental skills. *Fundamental* skills are ones that nearly every child learns eventually simply by participating in

human society such as walking, reaching and grasping. *Specialized* motor skills are ones that not everyone learns and that require special training, such as ballet dancing, swimming, and ice-skating.

### 3.3.3.5. Guidance for Early Motor Skill Development

*Guidance for early motor skill development.* Years of early childhood are physically active ones. Preschoolers can now engage in playtime activities that were virtually impossible for them during infancy and toddlerhood. However, their ability to participate successfully in more demanding activities hinges not only on their overall muscular growth and coordination but also on their ability to develop a sense of self confidence and assurance. Adults can help nurture motor skill development by means of the following.

1. *Provide materials and an environment in which motor skills can be exercised.* Appropriate indoor and outdoor equipment, as well as space in which to run and play, helps children develop both healthy minds and bodies. When selecting toys, adults should choose those that exercise both the small and the large muscles.
2. *Avoid comparisons.* No two children develop at the same rate or exhibit the same degrees of proficiency in motor skill. Some youngsters develop rapidly, whereas others mature slowly; Likewise, some become highly skilled in an activity, and others



have only little success. In this respect, comparisons accomplish little, except to produce anxious feelings about one's competencies.

3. *Realize that success in one motor skill doesn't ensure success in another.* Motor skills are usually acquired individually, each requiring special training and practice. It is wrong to assume that because one skill has developed, all others will too. Proficiency will also vary from skill to skill.

Be patient with the child. Motor skills require time and effort to develop. Although encouragement is helpful, adults should avoid pushing children past their limits. Furthermore, children should be allowed to set their own pace when developing a skill, as they know best what they are capable of doing at any give time.

#### 3.3.4. Menal Development

The progression of higher-order facilities is influenced heavily by preschool children's continuing mastery of spoken language. Using words and being able to understand what they represent give their surroundings new meaning and significance. Spoken language is the essential link in communication between meaning and sound and the means by which one person's thoughts can become another's, Because of this, language and thought are closely related developmental processes and reflect the youngster's general cognitive activities. Cognitive advancements during early childhood enable the advancement of language acquisition. Language acquisition reflects three important cognitive functions. First, it allows youngsters to have verbal exchanges with others, thus beginning the socialization of their

actions. Second, language acquisition stimulates the internalization of words, or thought. Third, language aids in the internalization of action. Now rather than being purely perceptual and motor, as it was previously, action can be represented intuitively through pictures and mental experiments; Cognitive development also enables preschoolers to think in qualitatively different ways than infants or toddlers do. Preschooler's thinking is more advanced, especially in regard to the refinement and elaboration of concepts. Their thinking becomes more methodical and deliberate, and they do not become discouraged as easily with cognitive challenges, so they become motivated to do the tasks at hand, moreover, preschoolers' curiosity climbs to new heights. All of this suggests that a number of developmental forces interact and affect the course of cognition. However, there are a number of cognitive limitations at this age. For example, preschoolers' mental processes are largely dominated by perceptual processes of what seems to be, rather than what logically must be. Preschoolers have not yet mastered the logical operations that influence the thinking of older youngsters.

#### **3.3.4.1. Thinking in Preschoolers**

Jean Piaget referred to the second stage of cognitive development as *preconceptual thought*. This stage occurs between the ages of 2 and 4 and is a part of the much longer *preoperational thought* stage, which encompasses ages 2 through 7. Much like the sensory-motor-stage, preconceptual thought provides a foundation for later cognitive functions.

The preoperational stage of thinking, defined by Piaget, is characterized by increased *symbolic* thinking and by new knowledge of identities and of functional relationships. Children's new reliance on symbolic thought helps them to recall experiences, to solve problems more effectively, and to communicate with others about their experiences. In spite of advances in thinking, preschoolers also reveal *egocentrism*, or an inability to distinguish between their own viewpoint and those of others. Egocentrism seems to result partly from perceptual dominance (or centration), which is a tendency to focus attention exclusively on a single obvious feature of a problem or situation. In spite of frequent egocentrism, preschoolers can take the perspective of others in certain conditions and can also communicate relatively effectively with others in solving problems.

Two other limitations of preschoolers' thinking are *animism* (believing that everything is alive) and *artificialism* (believing that objects are all made in the same way, usually by human beings). Preschool children can classify objects accurately as long as the system or criteria for classifying are relatively simple. They often cannot perform a class-inclusion task unless special efforts are made to clarify the nature of this task. Preschoolers often cannot solve problems that require reversible thinking, such as the classic Piagetian task of conservation. As with other classic Piagetian tasks, changes in the procedures often improve children's performance.

### 3.3.5. Concept Development

**Children's developing perceptual abilities greatly influence their concept development during the preschool years. Perception is the cognitive activity that allows individuals to detect and interpret**

relevant environmental information. Although this process varies from person to person, developing perceptual awareness generally contributes to more complex and refined levels of mental operations. For instance, a youngster's growing ability to detect differences in shape, size, or space contributes to a broader understanding of a physical world. Consequently, the objects and events in their surroundings gradually acquire greater meaning and relevance.

There are several factors that inhibit the accurate perception of environmental information during the preschool years. Paramount among these are limited attention and attending skills. Children need to learn how to tune into sensory information and seek useful information. Often, children do not pay attention to the aspects of a situation that attract adults. Their span of attention also needs to be lengthened. Because of their limited mental abilities, children often do not pay attention to information that they cannot discriminate. As a result, adults need to teach children what characteristics of situations are important.

### 3.3.6. Perceptual Development

Sometimes preschool children can perceive visual and auditory stimuli as well as adults, but other time they cannot. The differences in performance reflect their growing, but still incomplete, capacities for information processing. As a rule, preschoolers can make simple perceptual judgments (like the difference in the size of two circles) just as competently as adults can, as long as the judgments involve relatively little memory or cognitive reorganization. But the judgments that require more complex thinking (like comparing the area of a rectangle with one seen the day before) often lead to many

errors in what preschoolers see and hear, apparently because their attention is diverted away from actual stimuli, and toward the processing of those stimuli. During the preschool years, children come to rely increasingly on vision for sensing their environment. They show improvements in visual discrimination as well as in integration of visual perceptions among themselves and with motor skills. Young children also show improvements in visual recall and recognition. Auditory perception improves significantly during the preschool years, which smoothes the way for language acquisition.

### 3.3.7. Language Development

For the most children, language expands rapidly after infancy. Dramatic development occurs in syntax, or the way the child organizes utterances. But significant changes also happen in semantics and in communicative competence. Semantics refers to what the child means by his utterance. Communicative competence is how the child adjusts his utterances to the needs and expectations of different situations and speakers. During the preschool years, children make major strides in acquiring the syntax, or grammar, of their native language. young children's first efforts to combine words often omit function words and ignore other rules of syntax common in adult speech. Syntactic errors of preschool children include both undergeneralizations and overgeneralizations. Even though preschoolers learn a great deal of language by the process of inference, they also learn language rote. Infants and preschoolers

probably do not learn syntax by being actively reinforced for correct grammatical usage. Children probably do acquire some syntax by imitation and practice of language models. The ease of language acquisition has made some linguists argue that all children possess an innate language acquisition device, or LAD. Parents probably assist children's language acquisition by recasting the children's own utterances and by providing a scaffolding that supports children's language efforts. Language varies among children according to their gender and their socioeconomic class, and these differences have a variety of causes.

*Improving preschooler's language development.* By responding to an encouraging young children's speech, adults can do a great deal to help facilitate overall language development. Grown-ups can become active stimulants when they offer novel verbal learning situations to the child by playing jingle and rhyming games, reading aloud, or expanding upon their youngster's remarks. In addition adults should consider the following suggestions: (1) Establish a satisfactory speech model. (2) Encourage verbal and nonverbal communication. (3) Provide experiences that will make words meaningful. (4) Encourage listening and attention skills. (5) Encourage speech as a substitute for action. (6) Use exact terminology and talk with children at their level.

### **3.3.8. Psychosocial Development**

**During the preschool years, children expand their social horizons and become quite independent and autonomous. Once socially restricted**

and dependent, preschoolers become more involved with their environment and venture into new and challenging social situations with peers and adults. Experiences in the neighborhood, school, or other socializing situations are integrated into the child's sense of being and help develop his or her personality and social awareness.

#### **3.3.8.1. Sex-role Development**

*Sex-role development.* Sex-role development is the process of socialization through which appropriate male and female behaviours are learned. Such behaviour includes both personality characteristics and attitudes and beliefs. Sex role development begins early in life from a variety of sources. Different theories have been proposed to explain how sex roles develop throughout life. Social learning theory examines how boys and girls imitate sex-typed behaviour displayed by parents and others in their surroundings. Cognitive-developmental theory postulates that sex role development emerges through the child's growing cognitive awareness of his/her sexual identity. Psychoanalytic theory proposes that sex-role development is the result of close interaction and emulation of one's parents. A number of factors influence sex role development such as parents, play behaviour, peers, teachers and schools and the media.

#### **3.3.8.2. Emotional Development**

*Emotional development.* Emotional reactions and expressions and expressions become highly differentiated during early childhood. This in contrast with the rather generalized responses that characterized the early years. Several factors

account for this change in emotional expression. First, their increasing cognitive awareness enables children to perceive their surroundings in new and different ways. The preschoolers' imaginations, for example, are largely responsible for the imaginary fears occurring at this age. Cognitive advancements also make youngsters more alert to situations capable of eliciting emotions and allow children to express a wider range of feeling. Additional factors influencing emotional expression during early childhood are expanding social horizons and new developmental challenges.

### **3.3.8.3. Socialization Through Play**

*Socialization through play.* Play is the major waking activity of the preschoolers. It involves intrinsic motivation, process rather than product, pretense, and implicit and flexible rules. Psychoanalytic theory emphasizes the mastery and wish fulfillment functions of play, whereas learning theory stresses the acquisition of social skills through imitation and observation. Cognitive theory emphasizes that play develops in a sequence that generally parallels the major stages of cognitive development.

### **3.4. Development During Adolescence**

Adolescence is the stage of transition from the life of the child to the life of the adult. It is marked by significant physical changes that culminate in sexual maturity. The physical changes, puberty, are often used as an index of entry into adolescence. But adolescence is more than a period of physical change; it is a period of cognitive change as well. The major



changes in adolescents are given in Box-1. The adolescent moves from thinking about the concrete here and now to thinking about abstractions and possibilities for the future. Adolescence is also a social phenomenon, the length of which varies from culture to culture.

### **3.4.1. Physical Development**

The most dramatic changes in adolescents are physical. A spurt in height, the growth of breasts in girls, deepening voices in boys, the development of body hair, and intense sexual feelings are source of curiosity, interest and sometimes embarrassment for individuals entering adolescence. The physical changes that occur at the start of adolescence are largely a result of the secretion of various hormones and they affect virtually every aspect of the adolescent's life. Since infancy the development has not been so dramatic. Weight and height increases rapidly due to a growth spurt that begins at around age 10 for girls and age 12 for boys. Adolescents may grow as much as 5 inches in one year.

The period at which maturation of the sexual organs occurs, begins at about age 11 or 12 for girls and 13 or 14 for boys. However there are wide variations. The age at which puberty begins has important implications for the way adolescents feel about themselves as well as how others treat them. The individual differences in adolescent development have far-reaching effects on personality and social adjustment. Growth during adolescence is not uniform. An adolescent's legs grow first and are followed by growth in the trunk.

**This pattern of growth results in the long-legged, clumsy appearance that is used in popular descriptions of the adolescent. By the time the adolescent's growth is completed, the trunk comprises approximately 37.5 percent of the total body height, the head 12.5 percent, and the legs 50 percent. This compares with corresponding percentages for preadolescence of 40 percent, 14 percent, and 46 percent respectively.**

**Early maturing boys have a distinct advantage over later maturing boys. They do better athletics, are generally more popular with peers, and have more positive self concepts. On the other hand, they are more likely to have difficulties at school, to commit minor acts of delinquency, and to become involved with alcohol abuse. One reason for such behaviour seems to be that early maturing boys are more likely to become friends with older, and therefore more influential, boys, who may lead them into age-inappropriate activities. Though the compared with later maturers, are typically somewhat more responsible and cooperative in later life.**

The picture is different for girls. Although early maturing girls are more sought after as dates and have better self-esteem than later-maturing girls, some of the consequences of their early physical maturation may be less positive. For example, the development of such obvious characteristics as breasts may set them apart from their peers and be a source of ridicule. Late maturation also produces certain psychological difficulties. Boys who are smaller and less coordinated than their more mature peers tend to be ridiculed and seen as less attractive. In time, they may come to view themselves in the same way. The consequences of late maturation may extend well into a male's thirties. Similarly, late-maturing girls are at a

disadvantage in junior high and high schools. They hold a relatively low social status, and they may be overlooked in male-female activities. Most adolescents are preoccupied with their physical appearance; a teenager's body image is influenced by conventional standards of attractiveness. An adolescent's feelings of attractiveness depends upon the evaluation of peers, parents, and self and affect self esteem.

#### **3.4.2. Social Changes in Adolescence**

**A child cares very little for the society. But the adolescent develops a strong social sense. He wants to mould his behaviour according to the norms of the society. In this regard following changes can be observed. Sociologists and social psychologists have agreed that the man is dependent upon his fellows in a large measure for his thoughts, emotions and modes of behaviour. On the basis of his own experiences and conviction of the society he adopts his behaviour. During childhood the child has little interest in the opposite sex. He enjoys the company of his playmates preferably of his own sex. But during adolescence he gets an attraction for the opposite sex. An adolescent dresses and behaves like an adult and takes part in the management of the house. He starts taking care of his belongings. Adolescent boys and girls form their groups and discuss their problems freely. They remain faithful to their groups. Here they learn the qualities of leadership, sympathy, competition and cooperation. Adolescent wants to be recognized in the family as an individual and behaves in a similar manner. So changes in the family relationship can also be seen.**

### 3.4.3. Psychological and Behavioral Changes

During childhood the child was free from emotions. He had no significance for these emotions but now he feels them and as such following changes can be seen. Adolescence is the period when he acquires the reasoning ability. His behaviour shows the reflections of his reasoning ability. Since the child sees the increasing store of energy and feels himself capable of doing certain things, so he becomes more imaginative. Due to improving health and energy he gets more zeal and needs some outlet. The moment he finds any thing contrary to his convictions he becomes rash in his behaviour. Anger is also common. He develops a sympathetic attitude towards those who are weak in any respect.

**During adolescence the child undergoes their physiological, social and psychological changes. These changes affect the behaviour of the adolescent. Sometimes adolescent feels afraid and ashamed of his rapid bodily changes and hoarse voice and this feeling taxes his mind so he feels bored and fatigued. The adolescent full of fear, shame and boredom finds that society does not grant him the privileges of an adult, so he desires to retire to isolation where he may satisfy his needs in dreams and imagination. Also, an adolescent wants recognition but actually he finds that he neither is recognized as a child nor as an adult by the society. So he develops an attitude of indifference towards the family and society. The adolescent finds himself incapable to adjust himself with the bodily changes so his mind feels restlessness**

**and his behaviour becomes rash. Adolescence is the period of physical, emotional and mental development and during his period the adolescent sets high ideals but finds unable to achieve those ideals. So he loses self confidence and this leads to feel personal inadequacy.**

BOX-1

Changes During Adolescence

*Physical changes*

Increase in height and weight

Change in voice

Sex-differences become apparent

Growth of primary and secondary sex characteristics

Physiological changes

Sexual maturation

*Social changes*

Social consciousness

Attraction for the opposite sex

Adult behaviour

Peer groups

Change in outlook

*Psychological changes*

Development of memory and reasoning

Imagination

Rashness in behaviour

Sympathetic attitude

*Other behavioural changes*

Fear and shame

Desire for isolation

Indifference

Restlessness

Lack of self confidence

#### 3.4.4. Needs of the Adolescence

As we know that adolescence brings certain problems to be very cautiously dealt with by the parents, teachers and society. The problems of adolescents arise out of basic need. Important basic needs of the adolescents are given in Box-2.

##### **BOX-2**

Needs of the Adolescents

Need for freedom from independence

Need for association with opposite sex

Need for self support

Need for a theory of life

Need for guidance

Need for sex instruction

Need for Vocational choice

#### 3.5. Childhood Disorders

Emotional and behavioural disorders are common in childhood and adolescence. According to DSM-II-R there are several types of childhood disorders. One major category is that of developmental disorders, which include mental retardation of varying degrees of severity, more specific learning disorders (e.g., developmental arithmetic disorder), and autism (a

condition characterized by extreme lack of social responsiveness). Another major category is that of disruptive behaviour disorders. This category includes sub-categories referring to hyperactivity, solitary aggressive behaviour, and defiant behaviour. Among the other major categories are anxiety disorders, eating disorders (e.g., anorexia nervosa), gender identity disorders, in which a child wants to be a member of the opposite sex, and elimination disorders (e.g., bed-wetting). Major types of childhood disorders are given in Box-3.

**BOX-3**

**Major Types of Childhood Disorder**

**Disorder of Pre-school children**

Temper tantrums

Breath holding

Sleep problems

Feeding problems

*Disorders of older children*

Emotional disorders

Disorders of sleeping and elimination

Conduct disorders

Hyperkinetic syndrome

*Disorders of development*

Childhood autism

Specific developmental disorders

Gender identity disorders



### **3.6. Developmental Disorders**

**According to DSM-III-R, there are three major categories of developmental disorder. These are pervasive developmental disorders, mental retardation, and specific developmental disorders. A relatively little is known about specific developmental disorders.**

#### **3.6.1. Pervasive Developmental Disorders**

The major form of pervasive developmental disorder is known as *autism*. It is a very disturbing condition in which the young child almost totally fails to form the normal relationships with other people. Autism is the least rare of the group of pervasive developmental disorders. It is a severe disorder of behaviour starting in early childhood after a brief period of normal development. It is rare, occurring in about 20-40 to per 100000 children and is four times more common in boys than in girls.

##### **3.6.1.1. Clinical Picture**

*Clinical picture.* There are five major characteristics of autistic children (Box-4). These are (1)*Inability to relate.* Autistic children do not respond to their parents' affectionate behaviour by smiling or cuddling. Indeed, they are no more responsive to their parents than to strangers, and often there is no clear difference between their behaviour to people and to inanimate objects. A characteristic sign

is *gaze avoidance*, that is the avoidance of eye contact. (2) *Speech and language disorder*. This is another important feature. Speech may develop normally and then decline, or develop late, or never develop. This lack of speech, together with specific linguistic deficits, is a manifestation of a more general cognitive defect which also affect *non-verbal communication*. (3) *Resistance to change*. Autistic children show distress when there is a change in their environment. For example, they may repeatedly prefer the same food, insist on wearing the same clothes, or engage in the same repetitive games. Also among autistic *children odd behaviour and mannerisms* are common. (4) *Other features*. Autistic children may be *emotionally labile*, suddenly showing anger or fear without apparent reason: they may be *overactive* and *distractible*, they may *sleep badly*, or they may *wet or soil* themselves. About a quarter of autistic children develop *seizures*, usually about the time of adolescence.

**BOX-4**

Childhood Autism

Inability to relate

Speech and language disorder

Impaired non-verbal communication

Resistance to change

Odd behaviour and mannerisms

Emotional lability, overactivity

Seizures

### **3.6.1.2. Etiology**

*Etiology.* The cause of childhood autism is unknown, though studies of twins suggest a genetic etiology. It is likely that the basic abnormality is cognitive, affecting particularly symbolic thinking and language, and that the behavioural abnormalities are in some way secondary to this cognitive abnormality, Abnormal parenting has not been shown to be a cause.

### **3.6.1.3. Prognosis**

*Prognosis.* As autistic children grow up, about half acquire some useful speech, although usually they still have serious impairments. Those who improve may continue to show emotional coldness and odd behaviour. A substantial minority develop epilepsy in adolescence. Between 10 and 20 percent of children with childhood autism are eventually able to attend an ordinary school and later obtain work. A further 10 to 20 percent can live at home but cannot work and need to attend a special school or training centre. The rest (60-80 percent) are unable to lead an independent life.

### **3.6.1.4. Differential Diagnosis**

*Differential diagnosis.* This can be difficult and requires the advice of a specialist. Childhood autism has to be distinguished

from a number of other disorders including *deafness*, which can be excluded by appropriate tests of hearing, *developmental language disorder*, in which the child usually responds normally to people, and *mental retardation*, in which there is general intellectual retardation and a more normal response to other people. Also, compared with a mentally handicapped child of the same age, the autistic child has more impairment of language relative to other skills.

#### 3.6.1.5. Treatment

*Treatment.* Because autism is a condition involving very severe abnormalities, it has proved difficult to treat successfully. The advice of a specialist should be obtained. There is no specific treatment. Management has three aspects: (1) the management of abnormal behaviour; (2) the provision of educational and social resources; and (3) support for the family. Abnormal behaviour is managed by *behavioural methods*. These begin by identifying any factors that appear to be reinforcing the behaviour (for example parents attending more to the child when behaviour is most abnormal). The parents are then shown, usually by a clinical psychologist, how to modify these factors in the home. Such methods lead to a degree of short-term improvement in some cases but have not been shown to produce lasting benefit.

Most autistic children require *special schooling*, and some need residential schooling. Day care in the school holidays is helpful to

some families. The aim of schooling is to help the child to achieve his remaining potential for development. The *family* of an autistic child needs much help. Although he can do little to treat the child, the general practitioner can encourage the family in their efforts to establish as normal a life as possible for the child. Many parents find it helpful to join a voluntary organization in which they can meet other parents of autistic children and discuss common problems.

### **3.6.2. Specific Developmental Disorder**

**This term refers to circumscribed developmental delays not due to mental retardation or to a psychiatric disorder, and not accompanied by the wide impairments occurring in mental retardation or childhood autism. There are four types of specific developmental disorders: reading disorder, arithmetic disorder, motor disorder, language disorder.**

#### **3.6.2.1. Specific Reading Disorder**

*Specific reading disorder.* This is also called developmental reading disorder (or sometimes called dyslexia). It is characterized by a reading age well below the level expected from the child's age and IQ, and is not due to inadequate education (usually two standard deviations are taken as the cut-off level). Writing and spelling are impaired, but

other aspects of development are not. Compared with children with general backwardness at school, those with specific reading retardation are more often boys, are more likely to have minor neurological abnormalities, and are less likely to come from disadvantaged families. The condition is associated with conduct disorder, which possibly occurs as a reaction to frustrating experiences at school.

**The cause is unknown but it is likely that several kinds of delay in psychological development can interfere with the complex progress of reading. The prognosis varies with severity. When the disorder is mild, about a quarter of the children read normally by adolescence: when the disorder is severe, most children still have problems in adolescence and later. Special education in reading is required; the important first step is to reawaken the interest of the child after a long experience of failure.**

#### **3.6.2.2. Specific Arithmetic Disorder**

*Specific arithmetic disorder.* This condition parallels specific reading disorder in its clinical picture, unknown etiology, and treatment by special education.

#### **3.6.2.3. Specific Motor Disorder**

*Specific motor disorder.* Children with this disorder have delayed motor development and poor coordination. They are late in developing the skills of feeding, walking, and dressing.

They are clumsy, tending to break things, and are not good at games. Some have difficulty in writing and drawing. Usually there is some improvement with them. The cause is unknown. There is no specific treatment, although special teaching may improve the child's confidence.

#### **3.6.2.4. Specific Developmental Language Disorder**

*Specific developmental language disorder.* One percent of children starting school are seriously retarded in speech. Five percent of children have difficulty in making themselves understood by strangers. Serious delays in the production or understanding of speech have obvious consequences for education and social development and are often accompanied by other problems of development. Most cases of this disorder are secondary to mental retardation, deafness, or cerebral palsy, and a small minority to infantile autism. The remaining cases of unknown cause are designated specific developmental language disorders. Prognosis of the idiopathic cases is improvement in mild cases, and a varied outcome in severe ones. Management is with speech therapy and remedial teaching.

#### **3.6.2.5. Other Disorders Affecting Speech**

*Other disorders affecting speech.* These disorders include *elective mutism* and *stammering*. In the elective mutism, which is a rare condition, a child refuses to speak in certain circumstances but speaks

normally in others. Usually speech is lacking at school and normal at home. There is no defect of speech or language, only a refusal to speak in certain situations. Often there is other negative behaviour such as refusing to sit down or to play when asked to do so. The condition usually begins in children between 3 and 5 years of age, after normal speech has been acquired. The cause is unknown. About half improve after 5 years; the course after that is uncertain. Treatment is directed to any problems at school or elsewhere that seem likely to be stressful and to contribute to the child's refusal to speak.

Stammering is a disturbance of the rhythm and fluency of speech. It may take the form of repetitions of syllables or words, or of pauses in the production of speech. Stammering is four times more frequent in boys than girls. It is usually a brief disorder in the early stages of language development, but 1 percent of children suffer from stammering after starting school. Stammering is not usually associated with a psychiatric disorder, though it can cause distress and embarrassment. The etiology of stammering is not known. Most children improve without treatment. Treatment is by speech therapy.

### **3.6.3. Mental Retardation**

**Children suffering from mental retardation exhibit a level of intellectual functioning which is consistently well below that of most children of their age. In ICD-10 and DSM-VI the term mental retardation denotes intellectual impairment starting early in life. Other terms of this condition include mental deficiency, mental subnormality, mental handicap, and, most recently,**



learning difficulties. Although the central feature is intellectual impairment, the definition of mental retardation should include social criteria for the practical purpose of distinguishing between people who can and those who cannot lead a near-normal life. Thus in DSM the definition of mental retardation includes not only intellectual impairment but also the phrase 'with concurrent deficits and impairments in adaptive behaviour, taking into account the person's age'. Subgroups of mental retardation are recognized according to the degree of impairment (Box-5): mild (IQ 50-55), moderate (IQ 35-49), severe (IQ 24-34), and profound (IQ below 20). Educationalists use a different classification based on the person's ability to benefit from education and training. The terms are educable mentally retarded (EMR), trainable mentally retarded (TMR), and severely mentally retarded (SMR). Children suffering from mental retardation exhibit a level of intellectual functioning which is consistently well below that of most children of their age. Two-thirds of mentally retarded children are boys. Approximately 75% of retarded children fall into the mild category, and 20% into the moderate category.

**BOX-5**

**Types of Retardation**

**Mild**

IQ 50-70: 80 percent of all retarded

Specific causes uncommon

Many need practical help and education

Few need special psychiatric or social services

**Moderate**

IQ 35-49: 12 percent of all retarded

Most can manage some independent activities

Require special education, occupation, and supervision

**Severe**

IQ 20-34: 7 percent of all retarded

Specific causes usual

Social skills severely limited

Require close supervision and much practical help

**Profound**

IQ below 20: 1 percent of all retarded

Specific causes usual

Very severely disabled

Physical problems usual

Very poor self-care

There are various causes of mental retardation. Approximately 70% of mentally retarded children have had no known injury or disease that could account for their condition. As genetic factors seem to play an important role in the determination of intelligence, it is reasonable to assume that mental retardation in these children depends at least in part on heredity. Environmental factors are also of importance in producing mental retardation in these children. The incidence of mental retardation is considerably greater in families of low socioeconomic class. Part of this relationship between retardation and socioeconomic class between retardation and socioeconomic class reflects genetic factors, but most of it is probably due to the limited stimulation and educational facilities available to many children from poor families. The remaining 30% of mentally retarded children have suffered some identifiable organic etiology. Approximately 5% of mentally retarded children suffer from Down's syndrome or mongolism. Down's syndrome children have 47 chromosomes rather than the usual 46 in their cells. This causes them to have moderate or severe mental retardation, plus physical weaknesses. Many children with Down's syndrome die at an early age. Some cases of mental retardation are caused by disrupted metabolic processes.

The more severe the mental retardation from which a child is suffering, the more difficult it tends to be to provide adequate treatment. Children at the severe and profound levels of retardation often benefit from treatment based on operant conditioning. In such treatment, they are rewarded for making responses that are approximately correct. As training proceeds, so the response must become increasingly accurate in order for a reward to be given. Children at the mild level of mental retardation frequently

develop reasonably good social skills at an early age, and often derive much benefit from attending ordinary schools.

### **3.7. Disruptive Behavior Disorder**

**There are three types of disruptive behaviour disorder: (a) Attention-deficit hyperactivity disorder. A child suffering from this disorder typically behaves in an impulsive fashion with a very high level of activity and an inability to concentrate. (b) Conduct disorders. These involve aggressive and other kinds of anti-social behaviour. Many children with conduct disorders become criminals in adolescence or adulthood. (c) Oppositional defiant disorder. This disorder is characterized by hostile, negative, and defiant behaviour. There is some overlap between this last type and conduct disorders, but the behaviour of children with conduct disorders is generally more disruptive than that of children with oppositional defiant disorder. Because oppositional defiant disorder resembles conduct disorders, it will not be discussed separately.**

#### **3.7.1. Attention-Deficit Hyperactivity Disorder**

There are some children whose high level of activity and low level of attention in all situations is such that they are classified as suffering from attention-deficit hyperactivity disorder. This disorder is considerably more common in boys than in girls. There are over five times as many boys as girls suffering from the disorder. Children with attention-deficit

hyperactivity disorder tend to show continuing symptoms into adolescence. They also tend to have conduct disorders and are more likely than other children to become involved in drug abuse. Behavioural characteristics of attention deficit hyperactive children are presented in Box-6

Several theories have proposed that there is malfunctioning of the physiological systems controlling the level of arousal in children with attention-deficit hyperactivity disorder. However, opinions differ as to the specific nature of the physiological problem. It has been argued that children with the disorder are chronically over-aroused, and certainly their behaviour suggests an excited internal state. Alternative view is that hyperactive children are chronically under-aroused, and seek to increase their level of arousal by a high level of activity. This theory is supported by the fact that stimulant drugs generally have a calming effect on hyperactive children. It is possible that there is an hereditary predisposition to attention-deficit hyperactivity disorder, and that this predisposition may play a part in producing abnormalities of physiological arousal. It has been found, for example, the 20% of hyperactive children have at least one parent with a history of hyperactivity.

**BOX-6**

**Behavioural Characteristics of Attention Deficit Hyperactive Children.**

- Extreme restlessness
- Sustained motor activity
- Poor attention
- Impulsiveness
- Recklessness
- Learning difficulty
- Tempers and aggression

One common form of therapy involves the administration of stimulant drugs such as an amphetamine called methylphenidate. Although such drugs in fairly high doses are effective in reducing hyperactive children's level of activity, the same high doses impair their rate of learning at school. If low doses are given, then there is generally an improvement in attention span. However, low doses have little or no effect on the child's hyperactivity. Another important problem with drug therapy for attention-deficit hyperactivity disorder is that it merely controls some of the symptoms without producing any real cure. When the drugs are no longer administered, the attentional problems and the hyperactivity tend to re-occur. A final problem with the use of stimulant drugs is that they sometimes produce unfortunate side-effects such as high blood pressure or insomnia.

The other major form of treatment for attention-deficit hyperactivity disorder involves the use of operant conditioning. In essence, the child is reinforced or rewarded for behaving in the desired fashion (e.g., sitting still; attending in class). This approach is often very successful in producing an almost immediate improvement in the behaviour of hyperactive children. However, very little is known of the long-term effectiveness of the operant conditioning approach in treating hyperactivity, and it is obviously the long-term effects that are of greatest practical relevance.

### **3.7.2. Conduct Disorder**

An overwhelming majority of children commit minor offenses such as stealing small sums of money, telling lies, or fighting with their fists. However, there are some children (mostly boys) who persistently behave in an under-controlled way which causes offense to other people, and whose behaviour leads to the diagnosis of conduct disorders. The term *conduct disorders* covers a great variety of behaviour patterns, including aggression, defiance, and disobedience, verbal hostility, lying, destructiveness, vandalism, theft, promiscuity, and early drug and alcohol use.

**What factors are responsible for the development of conduct disorders? It seems that heredity and environment both play a part. The background of children with conduct disorders also tends to be more deprived than that of other children in other ways. They often come from large families lacking in**

**affection and proper discipline. In addition, children with conduct disorders often live in areas characterized by poor housing and schooling.**

Unfortunately, it has proved rather difficult to develop forms of therapy that eliminate conduct disorders and prevent the children concerned from turning to a life of crime. However, there are indications that rather expensive and time-consuming therapy based on the principles of operant conditioning can be successful.

### **3.8. Summary**

- Physical growth and development during the preschool years are quite rapid. By the fifth year, preschoolers have doubled their original birth length and increased their birth weight by five times.
- Because of rapid muscular growth and the development of coordination abilities, preschoolers show marked gains in small-and large-motor skills. Youngsters are becoming more physically adept at dealing with their surroundings. Rates of physical growth are slower than in previous years, but motor skills advance rapidly.
- The three motor skill development phases are the cognitive, associative, and autonomous. Both the child's maturation and environmental stimulation contribute to motor skill efficiency.
- Piaget's stage of preconceptual thought is characterized primarily by egocentrism, a self-centeredness that prevents children from understanding any point of view but their own. Egocentrism is evident not only in early socialization patterns, but also in thought processes.
- Several factors contribute to preschoolers' overall language acquisition, including socioeconomic influences, intelligence, sex etc.



- Adolescence, which begins around the age of twelve and lasts until about age twenty, is a developmental period of transition between childhood and adulthood.
- While the amount of increase in height and weight are significant, the unevenness of adolescent growth spurt is even more striking. Increase in height can be predicted fairly accurately, but predicting weight increases is more difficult. in part because they are influenced by differences in living conditions and life-styles.
- In addition to height and weight, a larger patter of changes occurs, which leads to full physical and sexual maturity, or puberty. Although girls and boys are equally muscular prior to adolescence, during puberty boys experience significantly greater increases in muscle tissue than girls do. girls experience a somewhat greater increase in body fat than boys do.
- Two of the main categories of childhood disorders are developmental disorders and disruptive behaviour disorders. There are three major categories of developmental disorder: pervasive developmental disorders, mental retardation, and specific developmental disorders.
- Autism is the most common form of pervasive developmental disorder. Autistic children are almost completely unable to establish normal relationships with other people, and often never learn to speak.
- There are several different causes of mental retardation, ranging from Down's syndrome, through diseases involving disrupted metabolism and head injury, to the negative effects of low socioeconomic class.

- Disruptive behaviour disorders fall into three categories: attention-deficit hyperactivity disorder, conduct disorders, and oppositional defiant disorder. Genetic factors are involved in attention-deficit hyperactivity disorder. Environmental factors are also involved, but have not been identified with precision.
- Conduct disorders have some genetic basis. However, family conflicts, living in poor areas, and a lack of affection within the family all contribute to the development of conduct disorders.

**3.9. Check your progress**

- Q.1 How do the weight and height of a six-year-old compares to that of a newborn?
- Q.2 What are the stages of motor development in preschool children?
- Q.3 What are the major physical changes among adolescents?
- Q.4 What are the needs of adolescents?
- Q.5 What are the developmental disorders of children?
- Q.6 What are the developmental disorders?
- Q.7 What are the causes of developmental disorders?
- Q.8 What are the treatment methods available for autism and mental retardation?

**3.10. Assignment/activity**

- A. Describe any two important psychological tendencies of preschool children. Explain how these may be utilized for the education of the child.
- B. Describe two most important needs of the adolescents and explain the significance of these needs in their future life.
- C. Prepare a list of the behavioural characteristics of children with attention-deficit hyperactivity disorder. Suggest techniques of managing their behaviour in classroom.

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## 8.12 References / Further Readings

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## UNIT 4

# Environmental Factors Influencing Early Childhood Development

### STRUCTURE

- 14.1. Introduction
- 14.2. Objectives
- 14.3. Factors that influence children's social and emotional development
- 14.4. How Environmental Factors Affect Social and Emotional Development
- 14.5. Families: Environmental Influences
- 14.6. A child's early home environment has long-term effects on development
- 14.7. The home environment can even affect a child's brain development
- 14.8. What is a risk factor?
- 14.9. Family income and economic well-being are important predictors of children's well-being
- 14.10. Better-educated parents tend provide more positive home environments
- 14.11. Maternal depression is a grave threat to children's healthy development

- 14.12. Why increase efforts to improve the physical environment at schools?**
- 14.13. Healthy Environments for Children Alliance (HECA)**
- 14.14. Summary**
- 14.15. Check your progress**
- 14.16. Assignment/activity**
- 14.17. Points for discussion and clarification**
- 14.18. References / further readings**

## UNIT 4

# Environmental Factors Influencing Early Childhood Development

### 14.1. INTRODUCTION

Like all living things, people need an environment in which they can lead a healthy life, and which provides for physical, mental, emotional and social wellbeing. In other words, we need clean air, safe drinking water, healthy food, natural climatic conditions, a healthy environment in which we feel at home, clean lakes, rivers and oceans, and an intact natural environment where we can rest and recuperate. People interact with their environment in a variety of different ways. Natural influences such as the heat of summer and ultraviolet radiation, as well as anthropogenic influences such as pollutants in the air and in manufactured products, toxic household chemicals and noise put pressure on the environment, on our wellbeing and indeed on our health. It is then important to understand how to deal with pressures of this sort, to avoid them as far as possible and to behave appropriately. Because the environment is changing in many ways, a lot of people in Germany are concerned about the impacts this might have on human health. Three quarters of all Germans believe that environmental problems will affect the health of our children and grandchildren in the decades to come. Many people already feel that noise and air pollution are having adverse effects on them, and feel the impact of climate change at an individual level.

## 14.2. OBJECTIVES

- To understand factors that influence children's social and emotional development
- To study about a child's early home environment has long-term effects on development
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

## 14.3. Factors that Influence Children's Social and Emotional Development



Many factors may affect the way children express their social skills or emotional competencies or the rate at which children acquire social skills or emotional competencies. These factors include 1) environmental risk factors such as living in an unsafe community, receiving care within a low-quality child care setting, lack of resources available in the community or

lack of policies supporting children and families, etc, 2) family risk factors such as maternal depression or mental illness in the family, parental substance abuse, family violence, poverty, etc. and 3) within-child risk factors such as a fussy temperament, developmental delay, and serious health issues. All of these factors need to be taken into careful consideration when gathering information to fully understand and support children's social and emotional health through a comprehensive, ecological approach. This particular tutorial will focus on the *individual child* aspects of social and emotional development to include milestones, risk factors and strategies to support children. For more information on supporting the social and emotional aspects of early care and education environments, some helpful resources include:

- The Center for the Social and Emotional Foundations for Early Learning Infant and Toddler Module 2: Responsive Routines, Environments, and Strategies to Support Social and Emotional Development in Infants and Toddlers
- The Center for the Social and Emotional Foundations for Early Learning Preschool Module 1: Promoting Children's Success: Building Relationships and Creating Supportive Environments.
- The Teaching Pyramid Observation Tool for preschool classrooms (TPOT) (Hemmeter, Fox & Snyder), and the Teaching Pyramid Infant Toddler Observation Scale (TPITOS) (Hemmeter, Carta, Hunter, & Strain, 2009) are observational tools designed to support early childhood mental health consultants in learning more about how the behavior of caregivers and the setup of the classroom

environment support the social and emotional development of infants, toddlers and young children ages.

#### **14.4. How Environmental Factors Affect Social and Emotional Development**

Social-emotional problems in children 5 years of age and younger are not uncommon. According to the National Center for Children in Poverty, between 9.5 percent and 14.2 percent of children in this age group have social-emotional problems that affect their development and functioning enough to interfere with readiness to start school. The World Health Organization points to the vital role environment plays in social and emotional development, particularly during early childhood, which it describes as the most significant developmental phase of life.

##### **14.4.1. Loud, Overcrowded Living**

According to studies conducted by environmental and developmental psychologist Gary Evans, a Cornell University professor, loud, overcrowded living conditions can negatively affect a child's social and emotional development. Research found these environments often resulted in parents speaking less to children, and using shorter words when they did. For infants and toddlers, reduced interaction can affect their ability to connect with other people. According to the National Center For Children in Poverty, attachment quality is a

barometer of social and emotional development and health. Children often cope with noise and crowding by withdrawing, tuning out sounds, including language, which can interfere with cognitive, social and emotional development. Parents unable to reduce noise and crowding can promote development by taking a child somewhere quiet daily, such as a park or library, for quality interaction time, and by regularly engaging a child in calm, pleasant, focused interaction, reducing child withdrawal incidents.

#### **14.4.2. Economic Struggle**

According to the World Health Organization, the most fundamental way economic struggle affects child social and emotional development is through poor nutrition. Adequate nutrition is essential to fueling early childhood's rapid brain growth. Without it, brain growth can slow, delaying cognitive, social and emotional development. A University of California at Davis Center for Poverty Research study indicated that how a mother responds to economic stress affects her child's social and emotional health. Mothers responding with depressive symptoms were likelier to have negative child interactions. Researchers found over the long term, "a mother's depressive symptoms are a better predictor of social competence than both income and education." How parents manage financial pressure can have a stronger effect on children's social and emotional development than the material strain, with the exception of the biological effects of poor nutrition. Being nurturing and affectionate



to children during difficult times can help mitigate potential developmental problems.

#### **14.4.3. Intellectual Stimulation**

An active mind is a growing, developing mind. According to the World Health Organization, an intellectually stimulating environment helps social and emotional development by promoting cognitive development. That sort of environment doesn't require a lot of money to create. For babies and toddlers, a safe clean area to explore, a handful of interesting toys, and some baby-safe household items offer noise and adventure. For bigger children, art supplies and imagination fueled toys are fine choices. Both playing with a child and letting a child explore how things work on his own are important. Make up games around identifying emotions, using cues like facial expressions and tone of voice, to encourage emotional development. Promote social development by using the same manners and respect you'd offer an adult when you child talks to you, listening closely and showing interest with topical questions.

#### **14.4.4. Parental Attention and Affection**

The importance of early childhood can make parents anxious, fearful of a parenting mistake with long-term developmental effects. Don't worry. It's the quality of the parent-child relationship that matters most. According to the California Department of Education, during the first years, a stable, loving relationship is "the key to healthy growth, development and learning." An environment of affection and attention is a powerful force for healthy child emotional and social development. Loving, responsive, consistent care with plenty of attention and positive interaction easily covers the occasional parental

imperfections. So, relax. Don't worry about being perfect, loving and enjoying your child is the best way to promote healthy development.

**Fig.4.1 Environment Factors Affecting Child Development**

Factor or condition	Child-level determinants	Family-level determinants	Community-level determinants	Society-level determinants
Housing	Does the child have space to play and explore?	Is there overcrowding?	Is there green space such as parks where children can play?	Is there evidence of community building when planning new developments?
	Is the child safe from injury or contaminants such as lead?	Are there any housing conditions contributing to ill health such as moisture and molds?	Is the community safe from crime and environmental pollution?	Is there housing support for low income families?
Income	Does the child have adequate clothing -e.g. snowsuit and boots in winter weather?	Is the family experiencing financial stress or a high debt load?	Are there low cost community programs for children and families?	Are social assistance programs and subsidies available and accessible to those in need?
	Does the child receive adequate nutrition? Fresh fruits and vegetables are more costly in Northern communities.	Is the family a single parent family or do they have to rely on one income?	Does the community provide secure access to food such as food banks?	Do programs exist that provide specific subsidies for food?

<p><b>14.5.</b> Employment</p>	<p>Does the child have quality child care, when parents are working?</p>	<p>Do families, especially single parents, have child care stress?</p>	<p>Does the community have high rates of employment?</p>	<p>Is there equality in income?</p>
		<p>Do families have meaningful and adequate employment?</p>	<p>Do families have to commute to access meaningful employment?</p>	
<p>Education</p>	<p>Does someone read and play with the child?</p>	<p>What level of education do family members have?</p>	<p>Is parental engagement in early education encouraged in the community?</p>	<p>Are programs in place to keep adolescents in school and improve their education?</p>
	<p>Does the child have access to books and toys that stimulate literacy development?</p>	<p>Do families have practices and beliefs that encourage literacy development?</p>	<p>Are there options for adult and family education, including ESL classes?</p>	
	<p>Does the child attend quality early childhood education programs?</p>	<p>Do families have access to early childhood education programs?</p>		<p>Is early childhood education valued, and supported through policies and practice?</p>

### **Families: Environmental Influences**

For families, environmental influences are also important. General family functioning and parenting are both affected by the nature of the family's personal support networks, the degree of social capital in their local communities, and the quality of the social infrastructure.

- Personal support networks refer to the people in our lives, usually our family and friends, who are the most immediate sources of emotional and practical support. Social support has been found to be linked to a number of child and family outcomes, including low birth weight, child abuse, child neglect, maternal adjustment, and both mental and physical health.
- Social capital refers to the degree of social connectedness within communities. This has also been linked to positive outcomes (OECD, 2001), but it is harder to operationalise and measure, and its effects are more indirect.
- Social infrastructure refers to the facilities and services available to families, and the nature of the built environment in which they live. What matters is exactly what child and family facilities and services are available and how accessible they are. All families need to have available a range of quality services and facilities (including child care, preschool and kindergarten), and these need to be easily accessible (financially, geographically, and culturally).

All three of these factors are known to have direct or indirect effects on the functioning of families and on their care and management for their children. In addition, family functioning is affected by the provision of family friendly workplace arrangements that enable parents to strike a positive balance between work and family commitments.

**Children and Families** For children and families alike, development is shaped by the ongoing interplay among sources of risk or vulnerability on the one hand, and sources of resilience or protection on the other. Single risk factors on their own are not usually sufficient to explain adverse developmental outcomes; outcomes are determined by more than one risk or protective factors.

Risk factors are cumulative, and their impact on individual children and families vary depending on the child's age and length of exposure: the younger the child the more vulnerable he/she is to environmental risk; the longer children are exposed to environmental effects and risk factors, the greater the likelihood of later sub-optimal outcomes; and the more severe the adverse experiences, the more damaging they are. The cumulative impact of risk factors leads to the emergence of a range of social, emotional, cognitive and health problems. The most usual way of responding to such problems, – which, is to wait until they have become established and then try to remediate them, – are expensive and relatively ineffective. The evidence indicates that intervening early in the life course to prevent or reduce later problems gets

better results. For example, for children with cerebral palsy it has been argued that 'simple, low-cost, universal measures implemented early in the pathway may be more effective, but less visible, means of prevention than relatively expensive medical interventions selectively implemented late in the causal path'. Studies of good quality early intervention programs have shown that:

- They lead to improve psychosocial and health outcomes in the long-term;
- They are particularly effective with children from disadvantaged backgrounds;
- The earlier the intervention begins (and the longer it lasts), the more effective it is likely to be;
- interventions need to address multiple environmental risk factors simultaneously rather than focusing on single issues - intervention programs that address a single aspect of child and family functioning are likely to fail by ignoring other factors that can undermine family functioning and child development;
- Sustained intervention over time (rather than intervention at a single time point) is most likely to be effective;
- The nature and intensity of the intervention may vary over time because of changing circumstances and developmental needs, and needs to be flexible.

**14.6. A child's early home environment has long-term effects on development**

A child's early home environment has a profound effect on his well-being. Beginning in infancy, a problematic home environment can disrupt the brain's stress response system, reduce the quality of care giving a child receives, and interfere with healthy development.

Research has linked negative home environments during children's first three years with a host of developmental problems, including:

- Poorer language development by age three.
- Later behavior problems.
- Deficits in school readiness.
- Aggression, anxiety and depression.
- Impaired cognitive development at age three.

Longer-term effects have also been documented: A child's early home environment and the skills he learns in the first three years have been linked to

- High school graduation.
- Teen parenthood.
- Adult employment and earnings.
-

**14.7. The home environment can even affect a child's brain development**

Brain imaging research suggests that growing up in a disadvantaged environment causes the brain to develop differently. For example, living in an environment affected by chaos and poverty can lead to changes in the brain's stress system that increase a child's vulnerability to chronic diseases later in life.

Studies of very young children have identified distinctive patterns of brain activity associated with family income and socioeconomic status, especially in brain areas related to social and emotional development, language ability, and learning and memory.

**14.8. What is a risk factor?**

A risk factor is a condition that is statistically associated with a given outcome. For example, children who grow up poor are more likely than other children to drop out of high school. Poverty, then, is a risk factor for high school dropout. Not all poor children will drop out of high school, of course. They are said to be at risk because as a group they have a higher incidence of dropout. Research has identified specific aspects of a child's environment that are associated with later outcomes. Commonly studied risk factors include poverty/income, maternal depression, and low maternal education. They are strong predictors of later outcomes including academic performance, cognitive development, and social and



emotional well-being. Risk factors like these can affect children even in the first years of life. Early risk is associated with later behavioral and academic outcomes. For example, risk exposure during infancy appears to be more detrimental for children's school readiness than later exposure.

#### **14.9. Family income and economic well-being are important predictors of children's well-being**

Family income and economic circumstances have a powerful effect on children's development. Like other risk factors, low family income affects children mainly by affecting their home environments and the parenting they receive in ways that hinder optimal development. Income-related differences in parenting appear early. For instance, lower-income mothers are, on average, less affectionate, less responsive to their infants' distress signals, and more likely to have harsh parenting styles. In poor and low-income families, the home environment is more likely to be chaotic, and parents are more likely to be stressed and unresponsive. They show less sensitivity and provide less cognitive stimulation. Research shows that lower-income mothers talk less and spend less time in shared activities with their children than do middle-income mothers, and are less engaged when their children talk to them. Poor children have fewer stimulating experiences and learning materials than higher-income children. The effects are apparent in the first years and often last into adulthood. Low-income children, even in the first three years of life, are more likely to have lower cognitive scores and increased behavioral problems.

**14.10. Better-educated parents tend provide more positive home environments**

Like family income, parental education is a strong influence on children's home environments. In some research on child outcomes, maternal education is a better predictor than family income. In a brain imaging study of young children, there were measurable effects of maternal education on brain regions involved in attention skills. In another study, parental educational level was related to children's educational and occupational success at age Among mothers of infants and toddlers, increases in education have been shown to promote improvements in young children's home environments and language development. Parents' education appears to be especially beneficial for children of poor, young, or single-mothers.

**14.11. Maternal depression is a grave threat to children's healthy development**

Maternal postpartum depression is the most common medical complication of childbearing. Although most women experience some brief depression-like symptoms in the first week or two after giving birth, national research shows that 10 to 15 percent of new mothers are afflicted by major depression—often lasting six months or longer. Common symptoms of postnatal depression include sleep disturbances, feelings of guilt, and loss of interest in daily activities. Not surprisingly, then, new

mothers who suffer from untreated depression are unlikely to be able to provide the positive experiences their infants need. On average, depressed mothers spend less time touching and talking to their babies, and their interactions tend to be more negative. Studies repeatedly show that depression is associated with parenting styles that are either under stimulating or over stimulating. If left untreated, maternal depression in a child's first years can have negative effects on cognitive development, behavior, and school readiness. There appear to be biological effects as well: recent research has discovered distinct patterns of brain activity and stress hormone levels in children of depressed mothers. Mothers in the CANDLE study complete a brief assessment to screen for possible depression at 4 weeks after birth and again at 12 months. While not an actual diagnosis, an At Risk score indicates that a mother is likely to be suffering from postpartum depression and that further assessment is recommended.

**14.12. Why increase efforts to improve the physical environment at schools?**

The physical school environment has a strong influence on children's health for several reasons. First, the environment is one of the primary determinants of children's health: contaminated water supplies can result in diarrhoeal disease; air pollution can worsen acute respiratory infections and trigger asthma attacks; and exposure to lead, arsenic, solvents, and pesticides can cause a variety of health effects and even death. Second, children may be more susceptible to the adverse health effects of chemical, physical, and biological hazards than adults. Reduced

immunity, immaturity of organs and functions, and rapid growth and development can make children more vulnerable to the toxic effects of environmental hazards than adults. Relative to their body weight, they breathe more air, consume more food and drink more water than adults. Their exposure to any contaminant in air, water, or food will therefore be higher than experienced by adults. Children spend much of their day within school environments during critical developmental stages. Third, children's behavioural patterns are distinctively different from adults and place them at risk from exposure to environmental threats that adults may not face. These behaviours include placing fingers and other objects in the mouth and not washing hands before eating. Children lack the experience to judge risks associated with their behaviours. Adolescents, in particular, are more likely to take risks, such as climbing and jumping from unstable structures.

#### **14.13. Healthy Environments for Children Alliance (HECA)**

“The children of today are the adults of tomorrow. They deserve to inherit a safer and healthier world. There is no task more important than safeguarding their environment.” This message is emphasized by the Healthy Environments for Children Alliance (HECA), which focuses attention on the school environment as one of the key settings for promoting children's environmental health. HECA was launched at the 2002 World Summit on Sustainable Development. This publication is intended as a tool to help schools shape healthy environments for children. *The Physical School Environment: An Essential Component of*

a Health-Promoting School focuses on the physical environment of the school and is complemented by the document Creating an Environment for Social and Emotional Well-being: An Important Responsibility of a Health-Promoting and Child-Friendly School. Together, these two resources can help schools provide an environment that is supportive of the World Health Organization's definition of health, "... a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

**The Physical School Environment:** An Essential Component of a Health-Promoting School includes information to create a healthy school environment, and to identify and modify aspects of the physical environment that jeopardize safety and health. However, physical interventions alone will not suffice. The study also contains guidance to ensure that positive changes in a school's physical environment are supported, reinforced and sustained by school health policy, skills-based health education and school health services, the core components of an effective school health programme as called for in the international initiative to Focus Resources on Effective School Health (FRESH). The extent to which each nation's schools provide a safe and healthy physical environment plays a significant role in determining whether the next generation is educated and healthy. Effective school health programmes, including a safe and healthy school environment, are viable means to simultaneously address the inseparable goals of Health for All and Education for All.

## 14.14. SUMMARY

Young children can be affected by many social, economic and environmental factors both in positive and negative ways. Because children are so vulnerable, they can be easily affected by things many parents and adults take for granted. There are four main factors affecting a child's development, according to EffectivePhilanthropy.com: individual child behavior and health, family life, learning environment and socioeconomic environment.

### **Environmental Influences on Child Development**

#### ✓ **The prenatal environment:**

- The chemical balance of the mother's body and the presence of conditions or potentially toxic substances that can alter development processes.
- Examples are the mother's use of drugs or alcohol, viral or bacterial diseases, and direct traumatic injury to the fetus.

#### ✓ **The physical environment**

- The air the child breathes, the nutritional value of food the child eats.
- Exposure to conditions that can lead to disease, accident, or injury, including child abuse and neglect.

#### ✓ **The social/cultural environment**

- Consists of the norms, values, belief systems and morals.

- Standards of behavior that regulate life in the cultural group in which the child is raised.

✓ **The learning environment**

- The degree and type of stimulation available in the child's immediate environment.
- Sensory input promotes and shapes cognitive development.
- Stimulation, in adequate quantity and intensity, promotes establishment of, and "shapes," neural pathways in the brain.

✓ **The emotional environment**

- The nature of the child's interpersonal relationships.

The degree of nurturance available to the child.

- The emotional environment shapes personality and affects the development of self-esteem, identity, trust, the ability to enter into intimate relationships, and personal resilience.

**14.15. Check Your Progress**

**6. Why increase efforts to improve the physical environment at schools?**

**7. How Environmental Factors Affect Social and Emotional Development?**















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## UNIT 5

# Role of Play in Enhancing Development

### STRUCTURE

- 15.1. Introduction**
- 15.2. Objectives**
- 15.3. The Importance of Play in Early Childhood Development**
  - 15.3.1. Play is a child's work. Play is important**
  - 15.3.2. Types of play**
  - 15.3.3. Playing with your child**
  - 15.3.4. Benefits of play**
- 15.4. Factors That Reduce Play for Children in Poverty and the Potential Implications**
  - 15.4.1. Reduced Access to Play in Schools**
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  - 15.4.3. Family Considerations**
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- 15.6. Check your progress**
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## UNIT 5

# Role of Play in Enhancing Development

### 15.1. INTRODUCTION

Play is so important to optimal child development that it has been recognized by the United Nations High Commission for Human Rights as a right of every child. This birthright is challenged by forces including child labor and exploitation practices, war and neighborhood violence, and the limited resources available to children living in poverty. However, even those children who are fortunate enough to have abundant available resources and who live in relative peace may not be receiving the full benefits of play. Many of these children are being raised in an increasingly hurried and pressured style that may limit the protective benefits they would gain from child-driven play. Because every child deserves the opportunity to develop to their unique potential, child advocates must consider all factors that interfere with optimal development and press for circumstances that allow each child to fully reap the advantages associated with play.

No single set of guidelines could do justice to the many factors that impact on children's play, even if it was to focus only on children living in the United States. These guidelines will focus on how American children with adequate resources may be limited from enjoying the full

developmental assets associated with play because of a family's hurried lifestyle as well as an increased focus on the fundamentals of academic preparation in lieu of a broader view of education. Those forces that prevent children in poverty and the working class from benefiting fully from play deserve full, even urgent, attention, and will be addressed in a future document. Those issues that impact on play for children with limited resources will be mentioned briefly here to reinforce that play contributes to optimal child development for all children and that we must advocate for the changes specific to the need of each child's social and environmental context that would enhance the opportunities for play.

## **15.2. . OBJECTIVES**

- To study of impact of play in early childhood
- Study about Play is a child's work, Play is important
- Different Types of play and Benefits of play
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

## **15.4. The Importance of Play in Early Childhood Development**

### **15.4.1. Play is a child's work, Play is important**

For children's development and for children to bond. It offers a chance to connect with your child. You are your child's first teacher and much of that teaching happens through play. Play helps your child learn the rules of your family and what is expected of him or her. As children grow, play helps them learn how to act in society. Parents need to make time to play with their children. You start to play when your child is an infant. When your baby starts to smile and you smile back, you are engaging in play. Play is directed by the child and the rewards come from within the child. Play is enjoyable and spontaneous. Play helps your child learn social and motor skills and cognitive thinking. Children also learn by playing with others. You provide the setting for your child to play with others. As your children grow, you provide toys, materials, and sports equipment so that they can play with others. It is important that children learn that play is important throughout life. Play is needed for healthy development for your child. Research shows that 75 percent of brain development occurs after birth. Play helps with that development by stimulating the brain through the formation of connections between nerve cells. This process helps with the development of fine and gross motor skills. Fine motor skills are actions such as being able to hold a crayon or pencil. Gross motor skills are actions such as jumping or running. Play also helps your child to develop language

and socialization skills. Play allows children to learn to communicate emotions, to think, be creative and solve problems.

#### **15.4.2. Types of play**

As child grows and develops, his or her play evolves. Certain types of play are associated with, but not restricted to, specific age groups.

**Unoccupied play:** In the early months of infancy, from birth to about three months, your child is busy in unoccupied play. Children seem to be making random movements with no clear purpose, but this is the initial form of playing.

**Solitary play:** From three to 18 months, babies will spend much of their time playing on their own. During solitary play, children are very busy with play and they may not seem to notice other children sitting or playing nearby. They are exploring their world by watching, grabbing and rattling objects. Solitary play begins in infancy and is common in toddlers. This is because of toddlers' limited social, cognitive, and physical skills. However, it is important for all age groups to have some time to play by themselves.

**Onlooker play:** Onlooker play happens most often during the toddler years. This is where the child watches other children play. Children are learning how to relate to others and learning language. Although children may ask questions of other children, there is no effort to join the play. This type of play usually starts during toddler years but can take place at any age.



**Parallel play:** From the age of 18 months to two years, children begin to play alongside other children without any interaction. This is called parallel play. Parallel play provides your toddler with opportunities for role-playing such as dressing up and pretending. It also helps children gain the understanding of the idea of property right such as “mine.” They begin to show their need of being with other children their own age. Parallel play is usually found with toddlers, although it happens in any age group.

**Associative play:** When your children are around three to four years of age, they become more interested in other children than the toys. Your child has started to socialize with other children. This play is sometimes referred to as “loosely organized play.” Associative play helps your preschooler learn the do's and don'ts of getting along with others. Associative play teaches the art of sharing, encourages language development, problem-solving skills and cooperation. In associative play, groups of children have similar goals. They do not set rules, although they all want to be playing with the same types of toys and may even trade toys. There is no formal organization.

**Social play:** Children around the age of three are beginning to socialize with other children. By interacting with other children in play settings, your child learns social rules such as give and take and cooperation. Children are able to share toys and ideas. They are beginning to learn to use moral reasoning to develop a sense of values. To be prepared to function in the adult world, children need to experience a variety of social situations.

**Motor - Physical Play:** When children run, jump, and play games such as hide and seek and tag they engage in physical play. Physical play offers a chance for children to exercise and develop muscle strength. Physically playing with your child teaches social skills while enjoying good exercise. Your child will learn to take turns and accept winning or losing.

**Constructive Play:** In this type of play, children create things. Constructive play starts in infancy and becomes more complex as your child grows. This type of play starts with your baby putting things in his/her mouth to see how they feel and taste. As a toddler, children begin building with blocks, playing in sand, and drawing. Constructive play allows children to explore objects and discover patterns to find what works and what does not work. Children gain pride when accomplishing a task during constructive play. Children who gain confidence manipulating objects become good at creating ideas and working with numbers and concepts.

**Expressive Play:** Some types of play help children learn to express feelings. Here parents can use many different materials. Materials may include paints, crayons, colored pencils and markers for drawing pictures or writing. It can also include such items as clay, water, and sponges to experience different textures. Beanbags, pounding benches, and rhythm instruments are other sources of toys for expressive play. You can take an active role in expressive play by using the materials alongside your child.

**Fantasy Play:** Children learn to try new roles and situations, experiment with languages and emotions with fantasy play. Children

learn to think and create beyond their world. They assume adult roles and learn to think in abstract methods. Children stretch their imaginations and use new words and numbers to express concepts, dreams and history.

**Cooperative play:** Cooperative play begins in the late preschool period. The play is organized by group goals. There is at least one leader, and children are definitely in or out of the group. When children move from a self-centered world to an understanding of the importance of social contracts and rules, they begin to play games with rules. Part of this development occurs when they learn games such as Follow the Leader, Simon Says, and team sports. Games with rules teach children the concept that life has rules that everyone must follow

Unstructured play may lead to more physical movement and healthier children. Play is important when your child enters school. Play can assist children in adjusting to a school setting. It enhances children's learning readiness and their cognitive development by allowing them to move from subject and area without of the fear of failure. Playtime in school such as recess time, allows learning and practicing of basic social skills. Children develop a sense of self, learn to interact with other children, how to make friends, and the importance of role-playing. Exploratory play in school allows children time to discover and manipulate their surroundings.

### 15.4.3. Playing with your child

In today's world of balancing work and home schedules, parents find it hard to have quality time with their children. It is essential for parents to make the best use of time they have with their children. Your child needs time with you to relax and play. Playing with children builds lasting bonds. Playing allows parents to appreciate the uniqueness of each child. Playing with children can also be a stress reducer for overworked parents. Laughing and relaxing are important to your own well-being. Try to spend individual time with each of your children. When a parent or sibling plays a board game with a child, shares a bike ride, plays baseball, or reads a story, the child learns self-importance. Your child's self-esteem gets a boost. You are sending positive messages to your child when you spend quality playtime with him. From these early interactions, children develop a vision of the world and gain a sense of their place in it. Family activities are important for the whole family. They help develop strong family bonds, which can last a lifetime. Families who play together are more cooperative, supportive and have better communication. Have movie nights and game nights, or go for walks together. A game night allows parents to teach children to take turns, how to win, how to lose and methods of sequencing events. Listening to music together by singing along, or playing rhythm instruments will help children to listen for and recognize patterns in music, which will assist with math skills in school. If you are a single parent or have only one child, invite family and friends over to play

Today, children of all ages are exposed to technology such as computers and videos. Children who spend most of their time using technology often are not physically active or using their imagination. You can help your child by reducing screen time. Limit screen time to no more than two hours per day. Make sure your child gets a minimum of one hour of physical exercise everyday. You have important roles in play. You can encourage play by providing interesting materials that promote exploration and learning. Playing with your child helps him learn how to manipulate toys and other play materials by modeling your actions.

#### **15.4.4. Benefits of play**

There are many benefits to play. Children gain knowledge through their play. They learn to think, remember, and solve problems. Play gives children the opportunity to test their beliefs about the world. Children increase their problem-solving abilities through games and puzzles. Children involved in make-believe play can stimulate several types of learning. Children can strengthen their language skills by modeling other children and adults. Playing house helps children create stories about their roles, such as "I am the Mom." They also imitate their own family experiences. This helps children learn about the different roles of family members. Children gain an understanding of size, shape, and texture through play. It helps them learn relationships as they try to put a square object in a round opening or a large object in a small space. Books, games, and toys that show pictures and matching words add to a child's vocabulary. It

also helps a child's understanding of the world. Play allows children to be creative while developing their own imaginations. It is important to healthy brain development. Play is the first opportunity for your child to discover the world in which he lives. Play offers a child the ability to master skills that will help develop self-confidence and the ability to recover quickly from setbacks. For example, a child may feel pride in stacking blocks and disappointment when the last block makes the stack fall. Play allows children to express their views, experiences and at times, frustrations. Play with other children helps a child learn how to be part of a group. Play allows a child to learn the skills of negotiation, problem solving, sharing, and working within groups. Children practice decision-making skills, move at their own pace and discover their own interests during play.

Unstructured play may lead to more physical movement and healthier children. Play is important when your child enters school. Play can assist children in adjusting to a school setting. It enhances children's learning readiness and their cognitive development by allowing them to move from subject and area without of the fear of failure. Playtime in school such as recess time, allows learning and practicing of basic social skills. Children develop a sense of self, learn to interact with other children, how to make friends, and the importance of role-playing. Exploratory play in school allows children time to discover and manipulate their surroundings.

## **15.5. Factors That Reduce Play for Children in Poverty and the Potential Implications**

### **15.5.1. Reduced Access to Play in Schools**

There has been a national trend over the past decade of reducing playtime as an integral part of the school day. This trend is most easily observed in the reduction and, in some cases, elimination of recess; however, there are more subtle changes throughout the school day that reduce children's opportunity to play. First, the approach to early education that naturally incorporated play into the school day is shifting toward a more academically oriented Learning approach as new standards for reading readiness have changed for even kindergarten students. Second, in many districts, there is less school time allocated to the creative arts and physical education. These subjects contribute to a well-rounded education for a variety of reasons but share some of the benefits of play. They allow for a break from the standard academic subjects, foster creative and physical expression, and teach relaxation and stress-reduction skills that will last a lifetime. Finally, even after-school activities have shifted away from play and physical activity and toward being an extension of academics and a space for homework completion. This report focuses on reduced recess for illustrative purposes.

Many of these trends are disproportionately affecting under resourced school districts because of targeted efforts to reduce significant academic

disparities. It is a national imperative that all children are given the opportunity to reach their academic potential, and efforts to reduce disparities between children with varying levels of resources are urgently needed. It remains important, however, that what is known about child development, including social and emotional learning, remains at the forefront of consideration as policies to raise academic standards and performance for children are created and implemented. Play, in all its forms, needs to be considered as the ideal educational and developmental milieu for children is created. Because poorer children are most dramatically affected by these policies, stakeholders must remain vigilant in ensuring that children do not inadvertently suffer from the diminution of play in their lives while exploring potential solutions to benefit them academically.

A report by the National Center for Education Statistics revealed that children who attend schools with high minority and high poverty rates in urban settings are more likely to have reduced recess time as compared with their peers in more affluent suburban areas. Twenty-eight percent of schools with students who have the highest poverty rates had no recess at all.

The No Child Left Behind Act of 2001, designed to decrease the achievement gap of disadvantaged students, allocated additional educational resources and enrichment programs while decreasing recess time to allow more formal educational encounters. At its inception, child development experts, including educators and pediatricians, voiced caution about the demise of playtime for young children with the proposed



increased curriculum time of the program. The experts supported the Alliance for Childhood recommendations that children from low-income families be afforded time to learn how to play and time to play. Perhaps in recognition of the importance of the social and emotional development, as well as academic success of children who live at or below the poverty line, the US Department of Education in 2009 announced the Race to the Top Program, an education initiative that financially rewards school districts that support improving social, cognitive, physical, and emotional school readiness of disadvantaged students. In bids to receive the rewards, school districts must demonstrate focused programs that prepare students in the core academic subjects and other subjects that contribute to the development of well-rounded students, such as physical education and the arts. Thus, children who might otherwise not be afforded opportunities for physical activity and enrichment programs outside of the school day have designated time to enhance their total development.

The disparity between access to recess between middle-income and lower-income districts may be explained by factors other than recess time being transferred to reading and math instruction. It has been suggested that reduced recess in poorer areas is reflective of adult concerns that it is not safe for poorer children to have unstructured time; yet, it has not been proven that recess is unsafe. A time to play is different from the environment in which play occurs. When children have toys and equipment with which to play and attention is paid to helping the children transition back to class, the benefits of recess in terms of expressivity, exercise, and socialization suggest its vital role in the child's school day

and overall well-being. Some experts believe the real danger is that the misunderstanding has led to the removal of playtime. The reduction of recess and other in-school opportunities to play affect all children but may have a particularly detrimental effect on poorer children, because they are likely to have fewer opportunities to play outside of school. In addition, because school is often the first true socialization environment for vulnerable children, the opportunity for social and emotional learning must not be compromised.

Poor children enter the educational system at a lower level of readiness, averaging 2 years behind their middle- and upper-class peers.<sup>50</sup> This may be explained in part by their increased exposure to social stressors (higher rates of single mothers who lack social supports and financial resources, absent fathers, limited access to early childhood education, unsafe neighborhoods, lack of preventive health care). They mainly enter schools in poor communities that lack financial resources to enhance the educational process.<sup>51</sup> Schools, under pressure to increase academic performance and to decrease the achievement gap of students, have increased direct educational time, including after-school enrichment and tutorial programs. Although it is important to decrease academic disparities, enhanced nonacademic interactions are also essential to prepare children for future success. If the overall goal is to decrease school failure, which could ultimately lead to depression, entry into the juvenile justice system, and continued economic deprivation, a response to the problem has to include efforts to promote school engagement.

As previously discussed, opportunities for play and social and emotional learning enhance school engagement. Quite simply, school engagement

occurs when children succeed academically, have other nonacademic opportunities for success (creative arts, physical education), and consider school a place in which they feel safe and enjoy spending time.

Play in the school day offers benefits to academic as well as social and emotional learning. A recent report by Barros and others stated that a break during the school day of  $\geq 15$  minutes was associated with better teachers' ratings of classroom behavior scores. Good behavior in the classroom is associated with a more productive learning environment secondary to increased attentiveness. In addition, children's ability to store new information is increased, because their cognitive capacity is enhanced by a drastic change in activity.<sup>51-53</sup> A change in academic subject and even physical education class may not offer the same benefit as free-play recess. A reduction of time for physical activity may have even greater implications for boys. Schools that use only sedentary styles of learning may be a more difficult environment for boys to navigate successfully and contribute to the discordant academic abilities between boys and girls.

These findings suggest that decreasing and eliminating recess for students at risk for school failure may be counterproductive.

Finally, it is recognized among educators that recess represents the most powerful strategy to get the most children to participate in physical activity.<sup>56</sup> In its "Physical Activity Guidelines for Americans," the US Department of Health and Human Services recommends 1 hour or more of physical activity per day, with a

major part of the hour dedicated to moderate to vigorous physical activity at least 3 times per week for children and adolescents.<sup>57</sup> Physical education curricula should enhance attitudes, habits, and behavioral skills that result in continued physical activity throughout life. Overall, recess offers the most available opportunity for children to play and to engage in physical activity, followed by physical education classes and after-school activities.

#### **15.5.2. Reduced Out-of-School Opportunities for Play**

Children cannot play safely outside of the home in many poor communities—urban, suburban, and rural—unless they are under close adult supervision and protection. This is particularly true in areas that are unsafe because of increased violence or where other environmental dangers exist. In the past, when neighbors knew each other and often supervised each other's children, there was an extra layer of protection for neighborhood children when they played outside. In today's society, it is not unusual for neighbors not to know one another. Therefore, parents are alone in protecting and supervising their children, which can severely limit outside playtime.

Children who are not engaged in play and physical activity outside of school hours spend time engaged in sedentary activities, such as viewing

hours of television, playing video games, or listening to music. This time is often spent in isolation without social interaction and without adult supervision. In sharp contrast to the benefits of active, creative play, there is substantial evidence that excessive screen time has adverse effects. The AAP policy statement on media education presented research that associates media exposure with negative physical and behavioral health problems in children, including obesity, violent and aggressive behavior, depression, anxiety, earlier sexual behaviors, poor academic performance and self-image, nightmares, and tobacco and substance abuse.

The sedentary lifestyle is associated with obesity, for which children from low income and minority families are already disproportionately at risk.<sup>65</sup>The AAP and others have reported that children who are obese in early childhood are more likely to be obese adults and to be at risk for the comorbidities associated with obesity, including type 2 diabetes mellitus, hypertension, coronary artery disease, hypercholesterolemia, hyperlipidemia, asthma, and sleep apnea. In addition to the long-term health effects, obesity may be associated with immediate social and emotional consequences, including low self-esteem, negative body image, depression, teasing and bullying, social marginalization, and discrimination. Obesity can have socioemotional effects on academic achievement and opportunities and can, therefore, thwart educational trajectories associated with long-term success.

### 15.5.3. Family Considerations

Although lower-income parents have the same desires for their children to succeed and reach their full potential as do parents with greater economic and social assets, they must focus primarily on the family's day-to-day survival. When food and shelter are at risk, ensuring time for the children to have free and creative playtime may not be a priority. Economic hardship is a major obstacle for these families, in which the parents are more likely to have a lower educational level or be single heads of households. Minority households (black and Hispanic) and immigrant parents are at increased risk of having children who live in poverty. There is more likely to be a history of substance abuse in poorer families. The neighborhoods in which they live lack community resources, such as community centers, parks, and fully equipped supervised playgrounds that offer safe places for children to play and to gather. Children have fewer opportunities to participate in organized sports. Because of fear of violence, families do not venture outside with their children for fun physical activities, such as walking, bike riding, swinging, swimming, playing tennis, or jogging. In a safe environment with community resources, these activities would not be an additional financial burden to already challenged families.

Poor families may also be at a disadvantage in a material-driven culture in which marketing messages, often claims without proof, abound about what children need to prosper. They may absorb the messages that the best toys are those that are the most expensive or that children are only academically prepared for preschool if exposed to a variety of enrichment

tools and activities that claim to produce high-achieving children. Parents who cannot afford these market-driven materials may feel disempowered to actively play with and enrich their children using the most effective known tools—themselves. Children’s creativity is enhanced with the most basic (and least expensive) toys, blocks, dolls, and art supplies. Children’s academic preparedness may be most developed with low-cost time spent reading with parents. They will learn to love books when they associate quality time with their parents with reading.

Lower-income parents may have fewer resources, including time, to invest in playing with their children. Because play holds so many benefits, including fostering connection between parents and children, less play may be an added, although rarely mentioned, risk of poverty. No one is certain what skills will be needed for our children to be best prepared to lead us into the future, but we do have insight into which character traits will produce children capable of navigating an increasingly complex world. These include confidence, the ability to master the environment, and a connection to others. In addition, to be resilient—to retain hope and to be able to overcome adversity—young people need the added character traits of honesty, generosity, decency, tenacity, and compassion. Children gain these essential traits within a home, when parents and children interact in a supportive manner and share unconditional love. Play is a time-tested way for families to have these types of interactions.

## 15.6. Summary

Play is essential to the social, emotional, cognitive, and physical well-being of children beginning in early childhood. It is a natural tool for children to develop resiliency as they learn to cooperate, overcome challenges, and negotiate with others. Play also allows children to be creative. It provides time for parents to be fully engaged with their children, to bond with their children, and to see the world from the perspective of their child. However children who live in poverty often face socioeconomic obstacles that impede their rights to have playtime, thus affecting their healthy social-emotional development. For children who are under resourced to reach their highest potential, it is essential that parents, educators, and pediatricians recognize the importance of lifelong benefits that children gain from play.

Play is an essential and critical part of all children's development. Play starts in the child's infancy and ideally, continues throughout his or her life. Play is how children learn to socialize, to think, to solve problems, to mature and most importantly, to have fun. Play connects children with their imagination, their environment, their parents and family and the world. Parental involvement in a child's world of play is not only beneficial for the child but is extremely beneficial to the parent. Playing with children establishes and strengthens bonds that will last forever. Parent-child play opens doors for the sharing of values, increases communication, allows for teachable moments and assists in problem solving. Playtime provides opportunities for the parent and child to confront and resolve individual differences, as well as family related



concerns and issues. Finally, it allows the parent to view the world through the eyes of a child once again.

*Let's Play and Have Fun!*



**15.6. Check Your Progress**

**15.7. Assignment/Activity**

**Q.1 How Do You Play With Your Child(ren)?**

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After reading this unit, list three types of play that you observe when your child is playing. What type of play do you enjoy with your child?

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List three ways that you would like to change when playing with your child. As you look to the future, what are you looking forward to playing with your child?

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**BLOCK 4**

**Early Adolescence**

**(From Nine Years to Eighteen Years)**

## UNIT 1

# Emerging Capabilities across Domains of Physical and Social Emotional

### STRUCTURE

**1.31. Introduction**

**1.32. Objectives**

**1.33. DEVELOPMENTAL CHARACTERISTICS OF YOUNG  
ADOLESCENTS**

**1.33.1. Physical Developmental Characteristics**

**1.33.2. Intellectual Development**

**1.33.3. Moral Development**

**1.33.4. Spiritual development**

**1.33.5. Psychological Development**

**1.33.6. Social-emotional development**

**1.34. DEVELOPMENT DURING ADOLESCENCE**

**1.34.1. Physical Development**

**1.34.2. Social Changes in Adolescents**

**1.34.3. Psychological and Behavioral Changes**

**1.34.4. Needs of the Adolescent**

**1.35. Childhood Disorders**

**1.36. Summary**

**1.37. Check your progress**

**1.38. Assignment/activity**

**1.39. Points for discussion and clarification**

**1.40. References / further readings**

## UNIT 1

# Prenatal Development: Conception, Stages and Influences on Prenatal Development

### 1.13. Introduction

Early adolescence is a distinct period of human growth and development situated between childhood and adolescence. During this remarkable stage of the life cycle, young adolescents, 10- to 15-year olds, experience rapid and significant developmental change. Understanding and responding to the unique developmental characteristics of young adolescents is central among the tenets of middle level education.

During the 20th century, early adolescence gained acceptance as a distinctive period of development. Notably, G. Stanley Hall (1904), American psychologist, identified early adolescence (i.e., preadolescence) as a unique growth stage. Hall's study of adolescence captured not only the interest of scholars, but also the public (Arnett, 2010). Other notable psychologists and theorists (Flavell, 1963; Havighurst, 1968; Piaget, 1952, 1960) advanced the credibility of early adolescence and developmental stage theory. Researchers and academics (Kagan & Coles, 1972; Tanner, 1973; Thornburg, 1983) increased awareness through the dissemination of articles and books. Donald Eichhorn (1966), a founder of the middle school, highlighted the importance of considering young adolescents' developmental characteristics when planning curriculum, instruction, and



assessment and organizing the environment of the school. Professional organizations (Association for Supervision and Curriculum Development, 1975; National Association of Secondary School Principals, 1989; National Middle School Association, 1982, 1995, 2003, 2010) authored position statements and offered recommendations about the educational programs and practices that would address young adolescents' development. Joan Lipsitz (1984), a distinguished middle grades researcher, emphasized that schools for young adolescents "must be responsive to their developmental needs".

#### **1.14. Objectives**

**After going through this unit you will be able to:**

- Understand the aspects of development of preschool children;
- understand the developmental characteristics of adolescents;
- have an idea of disorders of children and adolescents;
- Understand the nature, types and causes, and treatment of developmental deviance.

#### **1.15. DEVELOPMENT DURING ADOLESCENCE**

Unit suggests distinctive characteristics of young adolescents with regard to their physical, cognitive, moral, psychological, and social-emotional development, as well as spiritual development. While examining these developmental characteristics of young adolescents, two cautions warrant consideration. First, developmental characteristics are overlapping and

interrelated; each affects another characteristic. These categorizations vary and are relatively arbitrary. Second, developmental characteristics may be oversimplified or described in generalities. Many factors—race, ethnicity, gender, culture, family, community, environment and the like— influence development. Cognizant of these cautions, a summary of developmental characteristics follows.

### **1.15.1. Physical Developmental Characteristics**

Physical development refers to bodily changes including growth, improved gross and fine motor skills, and biological maturity. In early adolescence, the young adolescent body undergoes more developmental change than at any other time except from birth to two years old. Young adolescents' growth is accelerated and uneven. Developmental growth includes significant increases in height, weight, and internal organ size as well as changes in skeletal and muscular systems with growth spurts occurring about two years earlier in girls than boys. Because bones are growing faster than muscles, young adolescents often experience coordination issues. Actual growing pains result when muscles and tendons do not adequately protect bones. Fluctuations in basal metabolism cause these youth to experience periods of restlessness and lassitude. Young adolescents, particularly European-American youth, are often physically vulnerable due to improper nutrition, poor physical fitness, and health habits as well as high-risk behaviors such as alcohol or drug use and sexual activity.

Puberty, a phase of physiological change triggered by the release of hormones, begins in early adolescence. The onset of puberty is an intense developmental period with hormones signaling the development of primary sex characteristics (genitalia) and secondary sex characteristics (e.g., breast development in girls; facial hair in boys). Girls tend to mature one to two years earlier than boys. The increased adrenal hormone production affects skeletal growth, hair production, and skin changes. These highly visible changes and disparate rates of maturity cause many young adolescents to feel uncomfortable about differences in their physical development.

The young adolescent brain undergoes remarkable physical development. While brain size remains relatively unchanged, researchers report significant changes within the brain. During early adolescence, synaptic pruning is actively restructuring the brain's neural circuitry. The prefrontal cortex—an area of the brain that handles executive functions such as planning, reasoning, anticipating consequences, sustaining attention, and making decisions—continues to develop. Additionally, gender-specific differences are evident in young adolescent brains.

Physical development often affects young adolescents' emotional/psychological and social development. Practitioners (e.g., teachers or guidance counselors) and parents can alleviate young adolescents' concerns about physical development by explaining that these changes are natural and common. Adults can provide accurate information, respond to questions, and encourage young adolescents to consult credible resources.

Schools can support physical development by offering responsive educational opportunities for young adolescents. Among these opportunities are health and science curricula that describe and explain physical changes. Schools also need to provide (a) programs that encourage adequate exercise and healthy lifestyles, (b) access to plenty of water and nutritious food during the school day, (c) appropriate instruction concerning the risks of alcohol and drug use, teenage pregnancy, and sexually transmitted diseases. Young adolescents must be afforded opportunities for physical movement and periods of rest. When young adolescents avoid physical activity due to concerns about body image, teachers can incorporate movement in classroom activities, minimize peer competition, and interrupt comparisons between early and late maturing youth.

### **1.15.2. Intellectual Development**

Intellectual development refers to the increased ability of people to understand and reason. In young adolescents, intellectual development is not as visible as physical development, but it is just as intense. During early adolescence, youth exhibit a wide range of individual intellectual development, including metacognition and independent thought. They tend to be curious and display wide-ranging interests. Typically, young adolescents are eager to learn about topics they find interesting and useful—ones that are personally relevant. They also favor active over passive learning experiences and prefer interactions with peers during educational activities.

During early adolescence, youth develop the capacity for abstract thought processes though the transition to higher levels of cognitive function varies considerably across individuals. Young adolescents typically progress from concrete logical operations to acquiring the ability to develop and test hypotheses, analyze and synthesize data, grapple with complex concepts, and think reflectively. As they mature, young adolescents start to understand the nuances of metaphors, derive meaning from traditional wisdom, and experience metacognition . Similarly, they are increasingly able to think through ideological topics, argue a position, and challenge adult directives. They form impressions of themselves through introspection and "possess keen powers of perception". Additionally, they appreciate more sophisticated levels of humor.

To make sense of the world around them, young adolescents, as learners, build upon their individual experiences and prior knowledge. Experience plays a central role in developing the brain and induces learners to construct meaning based upon what they already believe and understand. During early adolescence, youth are more interested in real life experiences and authentic learning opportunities; they are less interested in traditional academic subjects. Intellectually, young adolescents seek opportunities to explore the varied facets of their environment. They also tend to be inquisitive about adults and are often keen observers of adult behavior. Moreover, they have an enhanced ability to think about the future, anticipate their own needs, and develop personal goals.

*Implications for Practice*

Teachers need to consider the intellectual developmental differences of young adolescents when planning learning experiences. To address this diversity, teachers need to provide an assortment of educational approaches and materials that are appropriate for their students' wide-ranging cognitive abilities. For example, the concrete thinkers require more structured learning experiences, while the abstract thinkers need more challenging activities. In addition, young adolescents need teachers who understand and know how they think. Teachers need to plan curricula around real life concepts and supply authentic educative activities (e.g., experimentation, analysis and synthesis of data) that are meaningful for young adolescents. Because young adolescents' interests are evolving, they require opportunities for exploration throughout their educational program. To foster intellectual development, these youth need to interact directly with their world—through discourse and hands-on experience with peers and adults. Similarly, young adolescents need to learn and engage in democratic principles. Teachers can also provide forums for them to examine the reasons for school, home, and societal rules. As adult role models, teachers can guide young adolescents to connect intellectual thought and moral reasoning.

### 1.15.3. Moral Development

Moral development is defined as an individuals' ability to make principled choices and how to treat one another. During early adolescence, many of the attitudes, beliefs, and values that young adolescents develop remain with them for life. They move away from blanket acceptance of adult moral judgment to the development of their own personal values; however, they usually embrace the values of parents or key adults. As noted, the increased capacity of young adolescents for analytical thought, reflection, and introspection characterizes the connection between their intellectual and moral development. Young adolescents also tend to be idealistic and possess a strong sense of fairness. As they progress into the interpersonal conformity stage of moral development, young adolescents begin to reconcile their understanding of people who care about them with their own egocentricity. They transition from a self-centered perspective to considering the rights and feelings of others. Gender affects how adolescents approach moral dilemmas—males view moral issues through a justice lens and females use an interpersonal care lens.

Young adolescents often pose broad, unanswerable questions about life and refuse to accept trivial responses from adults. They also begin to view moral issues in shades of gray rather than only in black and white. While young adolescents start to consider complex moral and ethical questions, they tend to be unprepared to cope with them. Consequently, young adolescents struggle with making sound moral and ethical choices.

*Implications for Practice*

Teachers need to be aware of the relationship between young adolescents' intellectual development and their moral reasoning. They can organize instructional experiences that foster critical thinking skills and higher levels of moral reasoning. For example, teachers plan assignments that help students to incorporate their thoughts and feelings in writing. Teachers can engage young adolescents with activities that require consensus building and application of democratic principles; teacher advisory programs and service learning can foster teamwork and build community. In addition, teachers can design experiences for students to examine moral dilemmas and contemplate responses. Such experiences can help young adolescents to develop values, resolve problems, and set their own behavior standards. Young adolescents can also be afforded opportunities to examine their own choices and the consequences of these choices. Further, teachers can develop scenarios that prompt young adolescents to examine concepts of fairness, justice, and equity. School programs or curricula can include a focus on societal issues such as the environment, poverty, or racial discrimination.



#### **1.15.4. Spiritual development**

Spiritual development is defined as a developmental process for making meaning of one's life. Acknowledged as a legitimate domain of human development, spiritual development is rarely referenced in education. Understandably, concerns about the separation of church and state and First Amendment rights prompts educators to avoid this aspect of human development . Nevertheless, the exclusion of spiritual domain limits the prospect of developmentally responsive education. Increasingly, scholars are studying the spiritual development of children and adolescents, which may lead to broader recognition of this developmental domain. Acceptance of the spiritual domain in middle level education is important. Young adolescents often want to explore spiritual matters, develop connections between self and others, and gain a sense of themselves and the world. Implications for practice will depend on commitments to educating the whole child.

#### **1.15.5. Psychological Development**

During early adolescence, psychological development is characterized by identity formation and the quest for independence. Young adolescents experience two stages of identity formation: (a) industry versus inferiority when 10- to 11-year-olds identifies themselves by the tasks and skills they perform well, and (b) identity

versus identity when 12- to 15-year-olds explore and experiment with various roles and experiences. Identity development depends on the degree of exploration and commitment to an identity. During these years, young adolescents seek their own sense of individuality and uniqueness. They may experience an increased awareness of their ethnic identity as well. As young adolescents search for an adult identity and adult acceptance, they strive to maintain peer approval. As young adolescents expand their affiliations to include family and peers, feelings of conflict may arise due to competing allegiances. The search for identity and self-discovery may intensify feelings of vulnerability, as they become attuned to the differences between self and others.

Typically, early adolescence is intense and unpredictable. Young adolescents have a tendency to be moody, restless, and may exhibit erratic and inconsistent behavior including anxiety, bravado, and fluctuations between superiority and inferiority. They are often self-conscious and highly sensitive to criticism of their perceived personal shortcomings. Young adolescents' self-esteem levels are generally adequate and improve over time, while self-competence in academic subjects, sports, and creative activities decline. Emotionally-charged situations may trigger young adolescents to resort to childish behaviors, exaggerate simple events, and vocalize naive opinions or one-sided arguments. Their emotional variability makes young adolescents at risk of making decisions with negative consequences and believing that their experiences, feelings, and problems are unique.

*Implications for Practice*

Teachers need to support young adolescents' quest for identity formation through curricular experiences, instructional approaches, and opportunities for exploration. Young adolescents need frequent opportunities to explore and experiment with various roles and experiences within the classroom context. Teachers can provide educative experiences such as role-playing, drama, and reading that foster identity formation. These experiences can help young adolescents realize that their challenges are not unique. In addition, teachers can incorporate opportunities for student choice and self-assessment. Teachers can also describe how self-esteem affects many aspects of their development and design experiences that build young adolescents' self-esteem. Likewise, teachers can acknowledge the importance of friendships and explain that shifting peer allegiances are normal.

To foster successful experiences for every young adolescent, schools need to provide organizational structures such as teaming and advisory programs. These structures help to ensure that every young adolescent is known well by at least one adult and has regular occasions to experience positive relationships with peers. Young adolescents need opportunities to form relationships with adults who understand them and who are willing to support their development. Educational programs and practices can be used to promote an atmosphere of friendliness, concern, and group

cohesiveness. Young adolescents deserve school environments that are free from harsh criticism, humiliation, and sarcasm.

#### **1.15.6. Social-emotional development**

Social-emotional development concerns a person's capacity for mature interactions with individuals and groups. In early adolescence, social-emotional maturity often lags behind physical and intellectual development. Young adolescents have a strong need to belong to a group—with peer approval becoming more important and adult approval decreasing in importance. As young adolescents mature socially and emotionally, they may experience conflicting loyalties to peer group and family . Because young adolescents are fiercely loyal to their peer group , they search for social stature within the peer group. Young adolescents often experiment with new behaviors as they seek social position and personal identity. They are also torn between their desire to conform to the peer group norms and their aspiration to be distinctive and independent. Young adolescents experience a variety of peer associations—positive and negative. During early adolescence, youth typically widen their circle of friends and may experience feelings of romantic or sexual attraction. Issues of sexual orientation and identity can also arise at this time. Negative peer associations, particularly bullying, also become more

prevalent in the middle school years. Young adolescents are also socially and emotionally vulnerable due to influences of media.

Young adolescents tend to emulate their esteemed peers and non-parent adults. While they prefer to make their own choices, the family remains a critical factor in final decision-making. Young adolescents may be rebellious toward their parents and adults, yet tend to depend on them. Young adolescents also frequently test the limits of acceptable behavior and challenge adult authority. They may overreact to social situations, ridicule others, and feel embarrassment. When experiencing adult rejection, young adolescents may seek the seemingly secure social environment of their peer group. Importantly, teachers report that addressing young adolescents' social and emotional needs may improve their learning and academic achievement.

### *Implications for Practice*

Because of young adolescents' need for affiliation and belonging, they must have opportunities to form affirming and healthy relationships with peers. Teachers must recognize the importance of peer relationships and friendship and provide occasions for positive peer interactions. Teachers can design cooperative learning activities and collaborative experiences for young adolescents to interact productively with peers'. Teachers can also plan activities that engage students in argumentation or debate in academic settings as well as those that simulate social situations through role-plays or simulations.

Schools play a key role in providing young adolescents with educative programs that promote freedom and independence within a safe space. Organizational structures such as teaming and service learning advance positive places for young adolescent's growth. School districts need to support programs that interrupt negative peer interactions, particularly bullying, that impedes the healthy development of youth. Schools can also ensure young adolescents' access to student government, service clubs, or other leadership groups that allow them to develop their own projects and guidelines for behavior.

#### **1.16. DEVELOPMENT DURING PRESCHOOL YEARS**

Adolescence is the stage of transition from the life of the child to the life of the adult. It is marked by significant physical changes that culminate in sexual maturity. The physical changes, puberty, are often used as an index of entry into adolescence. But adolescence is more than a period of physical change; it is a period of cognitive change as well. The major changes in adolescents are given in Box-1. The adolescent moves from thinking about the concrete here and now to thinking about abstractions and possibilities for the future. Adolescence is also a social phenomenon, the length of which varies from culture to culture.

##### **1.16.1. Physical Development**

The most dramatic changes in adolescents are physical. A spurt in height,

the growth of breasts in girls, deepening voices in boys, the development of body hair, and intense sexual feelings are source of curiosity, interest and sometimes embarrassment for individuals entering adolescence. The physical changes that occur at the start of adolescence are largely a result of the secretion of various hormones and they affect virtually every aspect of the adolescent's life. Since infancy the development has not been so dramatic. Weight and height increases rapidly due to a growth spurt that begins at around age 10 for girls and age 12 for boys. Adolescents may grow as much as 5 inches in one year.

The period at which maturation of the sexual organs occurs, begins at about age 11 or 12 for girls and 13 or 14 for boys. However there are wide variations. The age at which puberty begins has important implications for the way adolescents feel about themselves as well as how others treat them. The individual differences in adolescent development have far-reaching effects on personality and social adjustment. Growth during adolescence is not uniform. An adolescent's legs grow first and are followed by growth in the trunk. This pattern of growth results in the long-legged, clumsy appearance that is used in popular descriptions of the adolescent. By the time the adolescent's growth is completed, the trunk comprises approximately 37.5 percent of the total body height, the head 12.5 percent, and the legs 50 percent. This compares with corresponding percentages for preadolescence of 40 percent, 14 percent, and 46 percent respectively.

Early maturing boys have a distinct advantage over later maturing boys.

They do better athletics, are generally more popular with peers, and have more positive self concepts. On the other hand, they are more likely to have difficulties at school, to commit minor acts of delinquency, and to become involved with alcohol abuse. One reason for such behaviour seems to be that early maturing boys are more likely to become friends with older, and therefore more influential, boys, who may lead them into age-inappropriate activities. Though the compared with later maturers, are typically somewhat more responsible and cooperative in later life.

The picture is different for girls. Although early maturing girls are more sought after as dates and have better self-esteem than later-maturing girls, some of the consequences of their early physical maturation may be less positive. For example, the development of such obvious characteristics as breasts may set them apart from their peers and be a source of ridicule. Late maturation also produces certain psychological difficulties. Boys who are smaller and less coordinated than their more mature peers tend to be ridiculed and seen as less attractive. In time, they may come to view themselves in the same way. The consequences of late maturation may extend well into a male's thirties. Similarly, late-maturing girls are at a disadvantage in junior high and high schools. They hold a relatively low social status, and they may be overlooked in male-female activities. Most adolescents are preoccupied with their physical appearance; a teenager's body image is influenced by conventional standards of attractiveness. An adolescent's feelings of attractiveness depends upon the evaluation of peers, parents, and self and affect self esteem.



### **1.16.2. Social Changes in Adolescents**

A child cares very little for the society. But the adolescent develops a strong social sense. He wants to mould his behaviour according to the norms of the society. In this regard following changes can be observed. Sociologists and social psychologists have agreed that the man is dependent upon his fellows in a large measure for his thoughts, emotions and modes of behaviour. On the basis of his own experiences and conviction of the society he adopts his behaviour. During childhood the child has little interest in the opposite sex. He enjoys the company of his playmates preferably of his own sex. But during adolescence he gets an attraction for the opposite sex. An adolescent dresses and behaves like an adult and takes part in the management of the house. He starts taking care of his belongings. Adolescent boys and girls form their groups and discuss their problems freely. They remain faithful to their groups. Here they learn the qualities of leadership, sympathy, competition and cooperation. Adolescent wants to be recognized in the family as an individual and behaves in a similar manner. So changes in the family relationship can also be seen.

### **1.16.3. Psychological and Behavioural Changes**

During childhood the child was free from emotions. He had no significance for these emotions but now he feels them and as such following changes can be seen. Adolescence is the period when he acquires the reasoning ability. His behaviour shows the reflections of his reasoning ability. Since the child sees the increasing store of energy and feels himself capable of doing certain things, so he becomes more

imaginative. Due to improving health and energy he gets more zeal and needs some outlet. The moment he finds anything contrary to his convictions he becomes rash in his behaviour. Anger is also common. He develops a sympathetic attitude towards those who are weak in any respect.

During adolescence the child undergoes their physiological, social and psychological changes. These changes affect the behaviour of the adolescent. Sometimes adolescent feels afraid and ashamed of his rapid bodily changes and hoarse voice and this feeling taxes his mind so he feels bored and fatigued. The adolescent full of fear, shame and boredom finds that society does not grant him the privileges of an adult, so he desires to retire to isolation where he may satisfy his needs in dreams and imagination. Also, an adolescent wants recognition but actually he finds that he neither is recognized as a child nor as an adult by the society. So he develops an attitude of indifference towards the family and society. The adolescent finds himself incapable to adjust himself with the bodily changes so his mind feels restlessness and his behaviour becomes rash. Adolescence is the period of physical, emotional and mental development and during his period the adolescent sets high ideals but finds unable to achieve those ideals. So he loses self confidence and this leads to feel personal inadequacy.

BOX-1

Changes During Adolescence

*Physical changes*

Increase in height and weight

Change in voice

Sex-differences become apparent

Growth of primary and secondary sex characteristics

Physiological changes

Sexual maturation

*Social changes*

Social consciousness

Attraction for the opposite sex

Adult behaviour

Peer groups

Change in outlook

*Psychological changes*

Development of memory and reasoning

Imagination

Rashness in behaviour

Sympathetic attitude

*Other behavioural changes*

Fear and shame

Desire for isolation

Indifference

Restlessness

Lack of self confidence

#### 1.16.4. Needs of the Adolescent

As we know that adolescence brings certain problems to be very cautiously dealt with by the parents, teachers and society. The problems of adolescents arise out of basic need. Important basic needs of the adolescents are given in Box-2.

##### **BOX-2**

##### **Needs of the Adolescents**

- Need for freedom from independence
- Need for association with opposite sex
- Need for self support
- Need for a theory of life
- Need for guidance
- Need for sex instruction
- Need for Vocational choice

### **1.17.CHILDHOOD DISORDERS**

Emotional and behavioural disorders are common in childhood and adolescence. According to DSM-II-R there are several types of childhood disorders. One major category is that of developmental disorders, which include mental retardation of varying degrees of severity, more specific learning disorders (e.g., developmental arithmetic disorder), and autism (a condition characterized by extreme lack of social responsiveness). Another major category is that of disruptive behaviour disorders. This category includes sub-categories referring to hyperactivity, solitary aggressive behaviour, and defiant behaviour. Among the other major categories are anxiety disorders, eating disorders (e.g., anorexia nervosa), gender identity disorders, in which a child wants to be a member of the opposite sex, and elimination disorders (e.g., bed-wetting). Major types of childhood disorders are given in Box-3.

**BOX-3**

**Major Types of Childhood Disorder**

**Disorder of Pre-school children**

Temper tantrums

Breath holding

Sleep problems

Feeding problems

*Disorders of older children*

Emotional disorders

Disorders of sleeping and elimination

Conduct disorders

Hyperkinetic syndrome

*Disorders of development*

Childhood autism

Specific developmental disorders

Gender identity disorders

### 1.18.SUMMARY

Young adolescents warrant educational experiences and schools that are organized to address their physical, intellectual, emotional/psychological, moral/ethical, spiritual, and social developmental characteristics. Practitioners, parents, and others who work with young adolescents need to be aware of both subtle and obvious changes in developmental characteristics. Such changes can give adults insights into the challenges facing young adolescents and illuminate possible reasons for shifts in their abilities and behaviors.

The middle school founders emphasized the need to consider young adolescents when developing education environmental and organizational structures. The desire for developmental responsiveness was what set the middle school apart from its predecessor, the junior high. Today's educators and policymakers need to continue their support of initiatives that afford young adolescents with developmentally appropriate learning experiences and environments.

Adolescence, which begins around the age of twelve and lasts until about age twenty, is a developmental period of transition between childhood and adulthood.

While the amount of increase in height and weight are significant, the unevenness of adolescent growth spurt is even more striking. Increase in height can be predicted fairly accurately, but predicting weight increases is more difficult. in part because they are influenced by differences in living conditions and life-styles.

In addition to height and weight, a larger patter of changes occurs, which leads to full physical and sexual maturity, or puberty. Although girls and boys are equally muscular prior to adolescence, during puberty boys experience significantly greater increases in muscle tissue than girls do. girls experience a somewhat greater increase in body fat than boys do.













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## **Chapter 2**

### **UNIT 2**

## **Emerging Capabilities across Domains Related to Cognition - Metacognition, Creativity, Ethics**

### **STRUCTURE**

#### **8.1.Introduction**

#### **8.2.Objectives**

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## Chapter 3 UNIT 2

### Emerging Capabilities across Domains Related to Cognition - Metacognition, Creativity, Ethics

#### 4.1. INTRODUCTION

Adolescence is an amazing period of growth spanning the ages of 09-18 years old. Youth enter this developmental stage with the body and mind of a child, and then exit 10-12 years later, with the body and mind of an adult. This article examined the physical, cognitive, emotional, social, moral, and sexual dimensions of adolescent development. While these individual areas of development were discussed separately by necessity, it was emphasized there is a strong inter-relationship among these various aspects of development. Furthermore, it was emphasized that there is a great deal of individual variation within the normal developmental process. Individual youth may reach developmental milestones at ages that are different from averages presented in this article, and yet these youth would still be considered "normal." Caregivers were advised to consult a health care professional if they have concerns about their child's developmental progress in any of these areas.

Physically, adolescents grow to reach their adult height, and their bodies begin to resemble adult bodies in size, shape, and body composition. Moreover, they become capable of sexual reproduction.

## 4.2. Objectives

**After going through the unit you will be able to:**

- Be able to identify and describe the main areas of cognitive development.
- Be able to describe major theories of cognitive development and what distinguishes them.
- Understand how nature and nurture work together to produce cognitive development.
- Understand why cognitive development is sometimes viewed as discontinuous and sometimes as continuous.
- Know some ways in which research on cognitive development is being used to improve education.

### 4.3. Cognitive Development in Childhood

Cognitively, adolescent thinking skills rapidly advance as they enter Piaget's stage of formal operations. Youth are now able to think in abstract terms so that they can conceptualize theoretical ideas, moving beyond the limitations of concrete information. Youth begin analyze problems in a more logical and scientific manner. This ability to think abstractly and analytically simultaneously promotes their social, emotional, and moral development. As their brain continues to develop, youths' capacity for memorization expands as the brain develops more sophisticated methods of organizing information, allowing for more rapid and accurate information storage and subsequent retrieval. However, the brain's frontal lobe is not fully developed until the very end of adolescence. The frontal lobe of the brain enables humans to inhibit primitive sexual or emotional impulses by using rationale thought to override these impulses. The incomplete development of the frontal lobe means that adolescents will continue to struggle to make wise and thoughtful decisions in the presence of powerful emotional, social, or sexual pressures.

By the time you reach adulthood you have learned a few things about how the world works. You know, for instance, that you can't walk through walls or leap into the tops of trees. You know you that although you cannot see your car keys they've got to be around here someplace. What's more, you know that if you want to communicate complex ideas like ordering a triple-shot soy vanilla latte with chocolate sprinkles it's better to use words with meanings attached to them rather than simply gesturing and grunting. People accumulate all this useful knowledge through the process of cognitive development, which involves a multitude of factors, both inherent and learned.



**Fig. 2.1:** Cognitive development in childhood is about change. From

birth to adolescence a young person's mind changes dramatically in many important ways. [Photo: Kayusa]

Cognitive development refers to the development of thinking across the lifespan. Defining thinking can be problematic, because no clear boundaries separate thinking from other mental activities. Thinking obviously involves the higher mental processes: problem solving, reasoning, creating, conceptualizing, categorizing, remembering, planning, and so on. However, thinking also involves other mental processes that seem more basic and at which even toddlers are skilled—such as perceiving objects and events in the environment, acting skillfully on objects to obtain goals, and understanding and producing language. Yet other areas of human development that involve thinking are not usually associated with cognitive development, because thinking isn't a prominent feature of them—such as personality and temperament.

As the name suggests, cognitive development is about change. Children's thinking changes in dramatic and surprising ways. Consider DeVries's (1969) study of whether young children understand the difference between appearance and reality. To find out, she brought an unusually even-tempered cat named Maynard to a psychology laboratory and allowed the 3- to 6-year-old participants in the study to pet and play with him. DeVries then put a mask of a fierce

dog on Maynard's head, and asked the children what Maynard was. Despite all of the children having identified Maynard previously as a cat, now most 3-year-olds said that he was a dog and claimed that he had a dog's bones and a dog's stomach. In contrast, the 6-year-olds weren't fooled; they had no doubt that Maynard remained a cat. Understanding how children's thinking changes so dramatically in just a few years is one of the fascinating challenges in studying cognitive development.

There are several main types of theories of child development. Stage theories, such as **Piaget's stage theory**, focus on whether children progress through qualitatively different stages of development. **Sociocultural theories**, such as that of Lev Vygotsky, emphasize how other people and the attitudes, values, and beliefs of the surrounding culture, influence children's development. **Information processing theories**, such as that of David Klahr, examine the mental processes that produce thinking at any one time and the transition processes that lead to growth in that thinking.

At the heart of all of these theories, and indeed of all research on cognitive development, are two main questions: (1) How do nature and nurture interact to produce cognitive development? (2) Does cognitive development progress through qualitatively distinct stages?



In the remainder of this module, we examine the answers that are emerging regarding these questions, as well as ways in which cognitive developmental research is being used to improve education.

#### 4.3.1. Nature and Nurture

The most basic question about child development is how nature and nurture together shape development. **Nature** refers to our biological endowment, the genes we receive from our parents. **Nurture** refers to the environments, social as well as physical, that influence our development, everything from the womb in which we develop before birth to the homes in which we grow up, the schools we attend, and the many people with whom we interact.

The nature-nurture issue is often presented as an either-or question: Is our intelligence (for example) due to our genes or to the environments in which we live? In fact, however, every aspect of development is produced by the interaction of genes and environment. At the most basic level, without genes, there would be no child, and without an environment to provide nurture, there also would be no child.

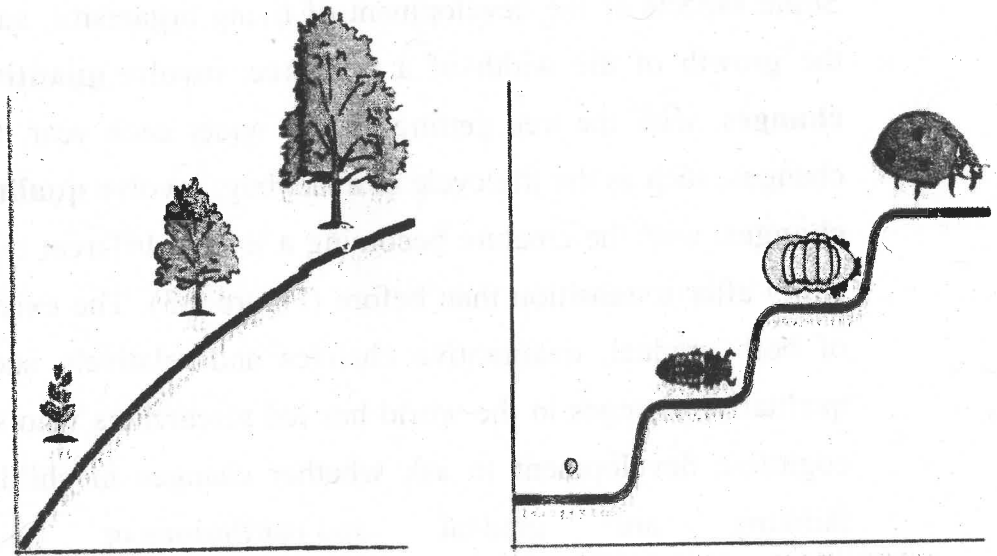
The way in which nature and nurture work together can be seen in findings on visual development. Many people view vision as something that people either are born with or that is purely a matter of biological maturation, but it also depends on the right kind of experience at the right time. For example, development of **depth perception**, the ability to actively perceive the distance from oneself of objects in the environment, depends on seeing patterned light and having normal brain activity in response to the patterned light, in infancy (Held, 1993). If no patterned light is received, for example when a baby has severe cataracts or blindness that is not surgically corrected until later in development, depth perception remains abnormal even after the surgery.



**Fig; 2.2:** A child that is perceived to be attractive and calm may receive a different sort of care and attention from adults and as a result enjoy a developmental advantage. [Photo: tarotastic]

#### 4.3.2. Does Cognitive Development Progress Through Distinct Stages?

Some aspects of the development of living organisms, such as the growth of the width of a pine tree, involve **quantitative changes**, with the tree getting a little wider each year. Other changes, such as the life cycle of a ladybug, involve **qualitative changes**, with the creature becoming a totally different type of entity after a transition than before (Figure 2.3). The existence of both gradual, quantitative changes and relatively sudden, qualitative changes in the world has led researchers who study cognitive development to ask whether changes in children's thinking are gradual and **continuous** or sudden and **discontinuous**.



**Figure 2.3:** Continuous and discontinuous development. Some researchers see development as a continuous gradual process, much like a maple tree growing steadily in height and cross-sectional area. Other researchers see development as a progression of discontinuous stages, involving rapid discontinuous changes, such as those in the life cycle of a ladybug, separated by longer periods of slow, gradual change.

The great Swiss psychologist Jean Piaget proposed that children's thinking progresses through a series of four discrete stages. By "stages," he meant periods during which children reasoned similarly about many superficially different problems, with the stages occurring in a fixed order and the thinking within different stages differing in fundamental ways. The four stages that Piaget hypothesized were the **sensorimotor stage** (birth to 2 years), the **preoperational reasoning stage** (2 to 6 or 7 years), the **concrete operational reasoning stage** (6 or 7 to 11 or 12 years), and the **formal operational reasoning stage** (11 or 12 years and throughout the rest of life).

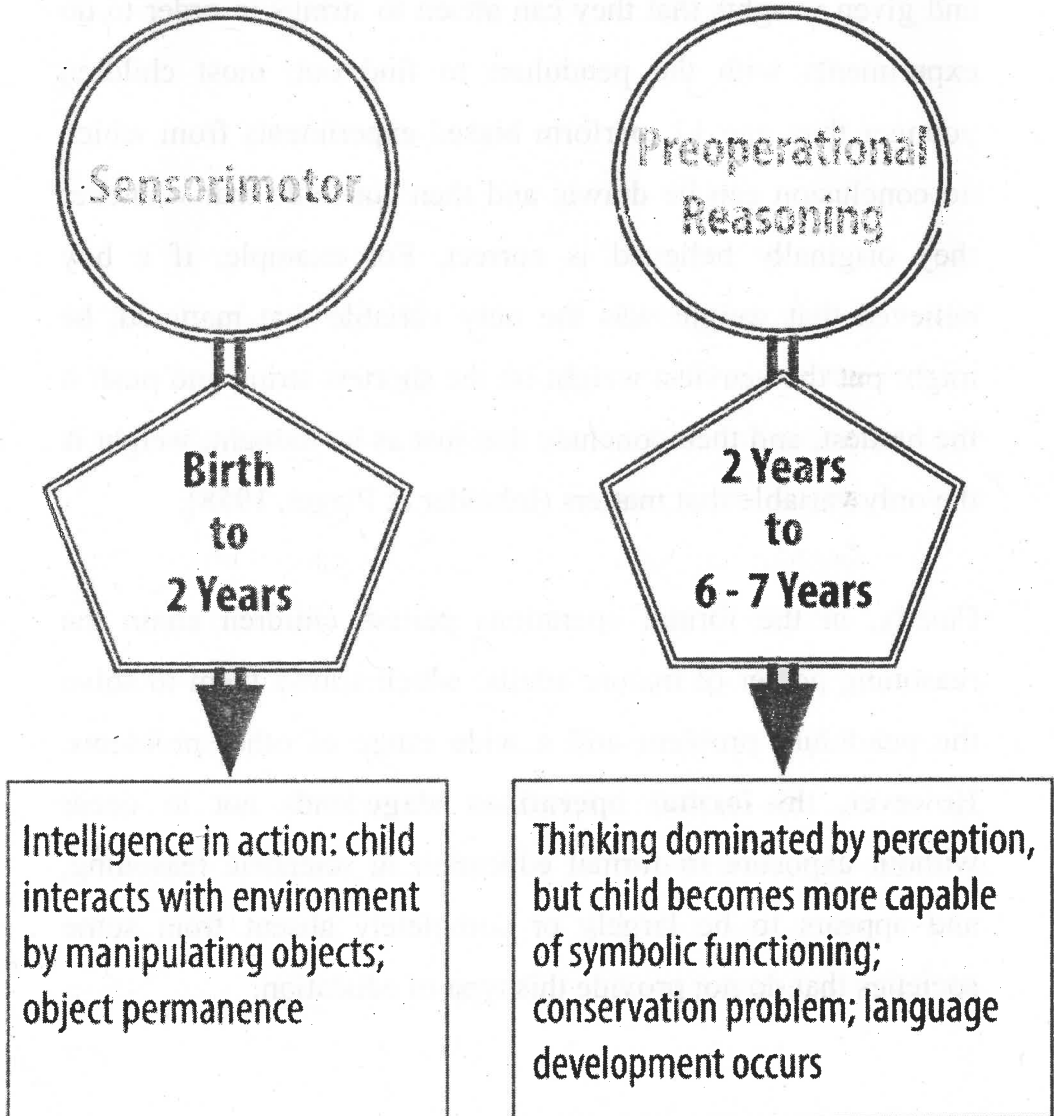
During the sensorimotor stage, children's thinking is largely realized through their perceptions of the world and their physical interactions with it. Their mental representations are very limited. Consider Piaget's **object permanence task**, which is one of his most famous problems. If an infant younger than 9 months of age is playing with a favorite toy, and another person removes the toy from view, for example by putting it under an opaque cover and not letting the infant immediately reach for it, the infant is very likely to make no effort to retrieve it and to show no emotional distress (Piaget, 1954). This is not due to

their being uninterested in the toy or unable to reach for it; if the same toy is put under a clear cover, infants below 9 months readily retrieve it (Munakata, McClelland, Johnson, & Siegler, 1997). Instead, Piaget claimed that infants less than 9 months do not understand that objects continue to exist even when out of sight.

During the preoperational stage, according to Piaget, children can solve not only this simple problem (which they actually can solve after 9 months) but show a wide variety of other symbolic-representation capabilities, such as those involved in drawing and using language. However, such 2- to 7-year-olds tend to focus on a single dimension, even when solving problems would require them to consider multiple dimensions. This is evident in Piaget's (1952) **conservation problems**. For example, if a glass of water is poured into a taller, thinner glass, children below age 7 generally say that there now is more water than before. Similarly, if a clay ball is reshaped into a long, thin sausage, they claim that there is now more clay, and if a row of coins is spread out, they claim that there are now more coins. In all cases, the children are focusing on one dimension, while ignoring the changes in other dimensions (for example, the greater width of the glass and the clay ball).

**Fig; 2.4** Piaget's Sensorimotor and Pre-operational Reasoning stages

Children overcome this tendency to focus on a single dimension during the **concrete operations stage**, and think logically in



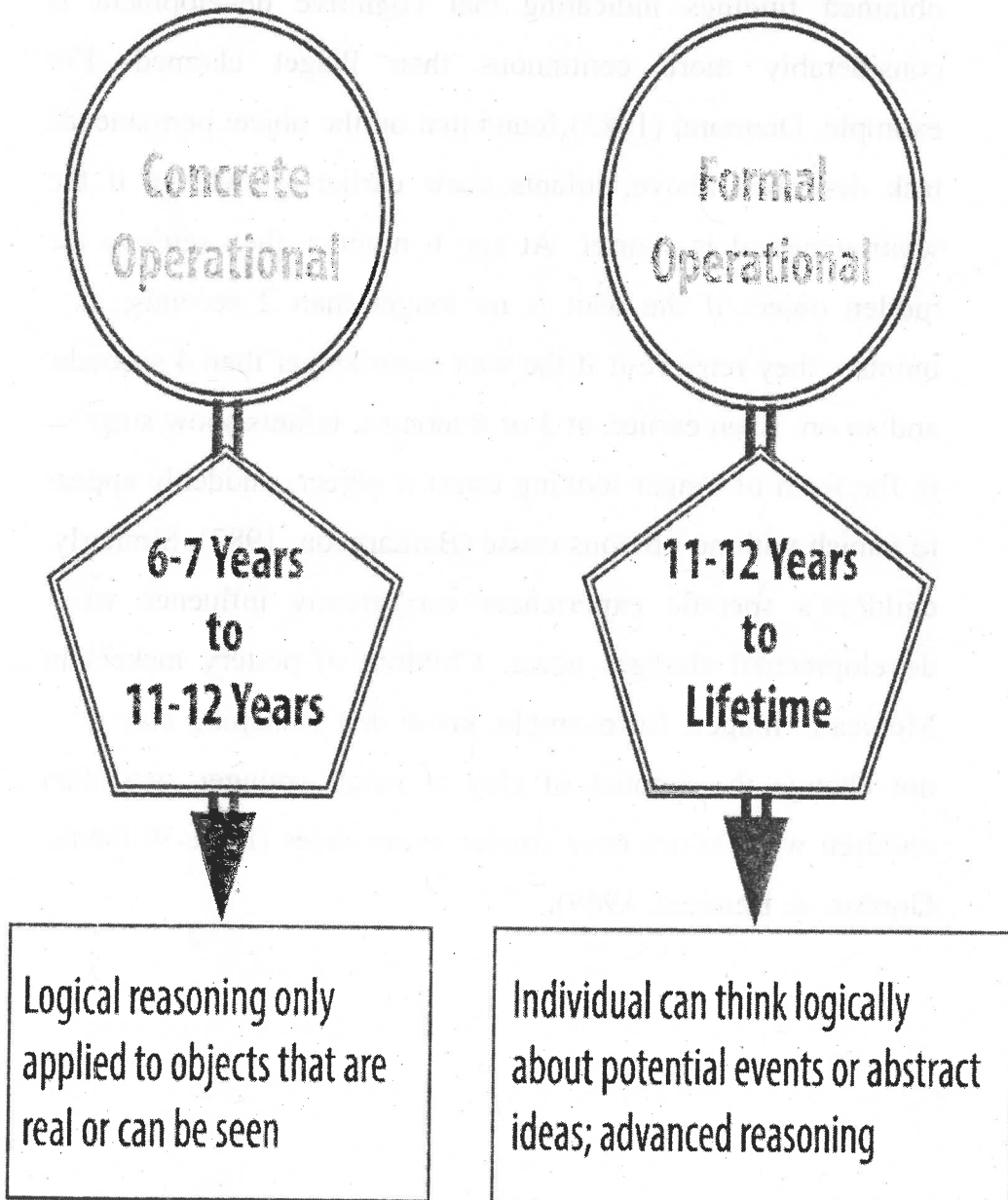


most situations. However, according to Piaget, they still cannot think in systematic scientific ways, even when such thinking would be useful. Thus, if asked to find out which variables influence the period that a pendulum takes to complete its arc, and given weights that they can attach to strings in order to do experiments with the pendulum to find out, most children younger than age 12, perform biased experiments from which no conclusion can be drawn, and then conclude that whatever they originally believed is correct. For example, if a boy believed that weight was the only variable that mattered, he might put the heaviest weight on the shortest string and push it the hardest, and then conclude that just as he thought, weight is the only variable that matters (Inhelder & Piaget, 1958).

Finally, in the formal operations period, children attain the reasoning power of mature adults, which allows them to solve the pendulum problem and a wide range of other problems. However, this **formal operations stage** tends not to occur without exposure to formal education in scientific reasoning, and appears to be largely or completely absent from some societies that do not provide this type of education.

Although Piaget's theory has been very influential, it has not gone unchallenged. Many more recent researchers have obtained findings indicating that cognitive development is considerably more continuous than Piaget claimed. For example, Diamond (1985) found that on the object permanence task described above, infants show earlier knowledge if the waiting period is shorter. At age 6 months, they retrieve the hidden object if the wait is no longer than 2 seconds; at 8 months, they retrieve it if the wait is no longer than 4 seconds; and so on. Even earlier, at 3 or 4 months, infants show surprise in the form of longer looking times if objects suddenly appear to vanish with no obvious cause (Baillargeon, 1987). Similarly, children's specific experiences can greatly influence when developmental changes occur. Children of pottery makers in Mexican villages, for example, know that reshaping clay does not change the amount of clay at much younger ages than children who do not have similar experiences (Price-Williams, Gordon, & Ramirez, 1969).

**Fig; 2.5: Piaget's Concrete and Formal Operations stages**



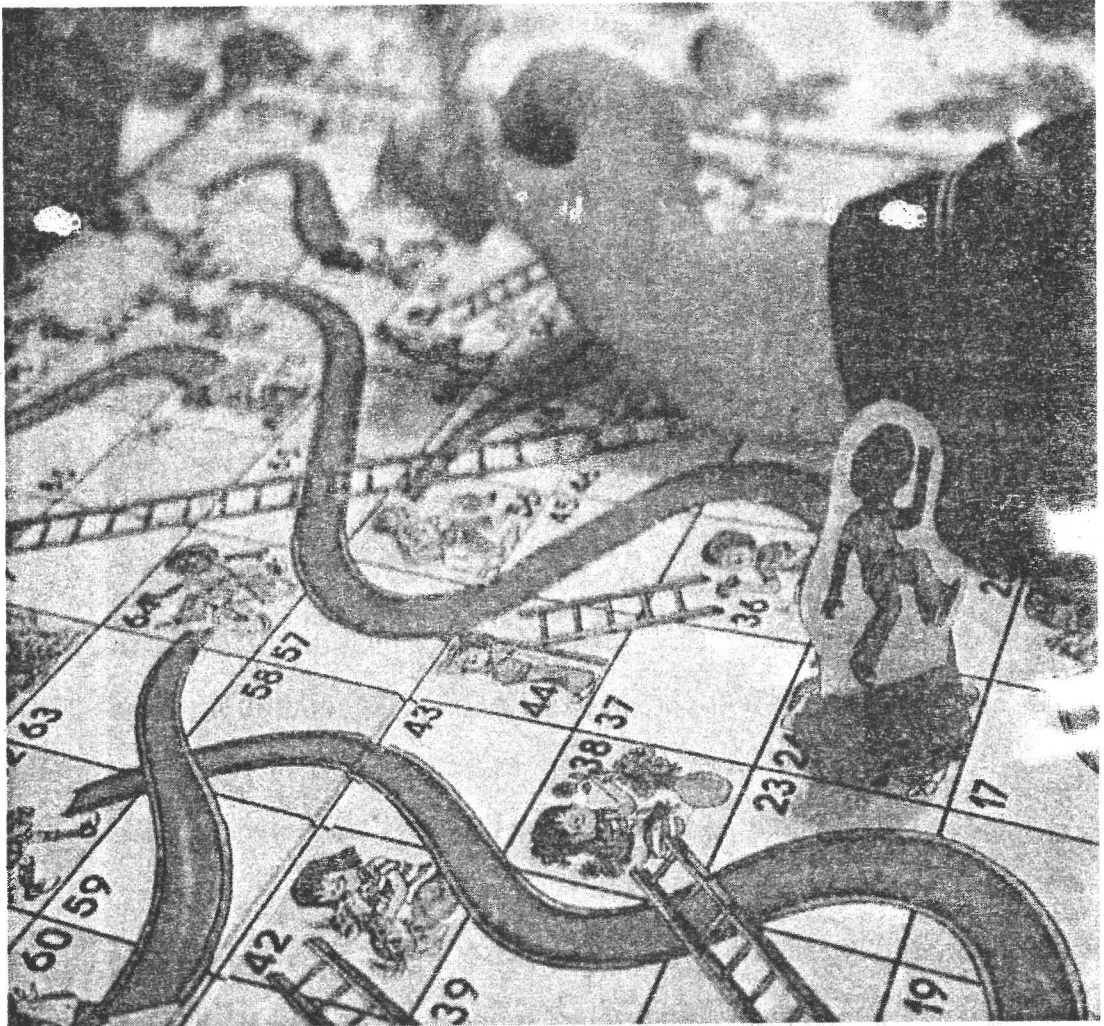
So, is cognitive development fundamentally continuous or fundamentally discontinuous? A reasonable answer seems to be, “It depends on how you look at it and how often you look.” For example, under relatively facilitative circumstances, infants show early forms of object permanence by 3 or 4 months, and they gradually extend the range of times for which they can remember hidden objects as they grow older. However, on Piaget’s original object permanence task, infants do quite quickly change toward the end of their first year from not reaching for hidden toys to reaching for them, even after they’ve experienced a substantial delay before being allowed to reach. Thus, the debate between those who emphasize discontinuous, stage-like changes in cognitive development and those who emphasize gradual continuous changes remains a lively one.

### **Applications to Education**

Understanding how children think and learn has proven useful for improving education. One example comes from the area of reading. Cognitive developmental research has shown that **phonemic awareness**—that is, awareness of the component sounds within words—is a crucial skill in learning to read. To measure awareness of the component sounds within words, researchers ask children to

decide whether two words rhyme, to decide whether the words

start with the same sound, to identify the given component sounds within words, and to indicate what would be left if a sound were removed from a word. Kindergartners' performance on these tasks is the strongest predictor of reading achievement in third and fourth



grade, even stronger than IQ or social class background (Nation, 2008). Moreover, teaching these skills to randomly chosen 4- and 5-

year-olds results in their being better readers years later (National Reading Panel, 2000).

**Fig: 3.6:** Activities like playing games that involve working with numbers and spatial relationships can give young children a developmental advantage over peers who have less exposure to the same concepts. [Photo: Ben Hassmann]

Another educational application of cognitive developmental research involves the area of mathematics. Even before they enter kindergarten, the mathematical knowledge of children from low-income backgrounds lags far behind that of children from more affluent backgrounds. Ramani and Siegler (2008) hypothesized that this difference is due to the children in middle- and upper-income families engaging more frequently in numerical activities, for example playing numerical board games such as **Chutes and Ladders**. Chutes and Ladders is a game with a number in each square; children start at the number one and spin a spinner or throw a dice to determine how far to move their token. Playing this game seemed likely to teach children about numbers, because in it, larger numbers are associated with greater values on a variety of dimensions. In

particular, the higher the number that a child's token reaches, the greater the distance the token will have traveled from the starting point, the greater the number of physical movements the child will have made in moving the token from one square to another, the greater the number of number words the child will have said and heard, and the more time will have passed since the beginning of the game. These spatial, kinesthetic, verbal, and time-based cues provide a broad-based, multisensory foundation for knowledge of **numerical magnitudes** (the sizes of numbers), a type of knowledge that is closely related to mathematics achievement test scores (Booth & Siegler, 2006).

Playing this numerical board game for roughly 1 hour, distributed over a 2-week period, improved low-income children's knowledge of numerical magnitudes, ability to read printed numbers, and skill at learning novel arithmetic problems. The gains lasted for months after the game-playing experience (Ramani & Siegler, 2008; Siegler & Ramani, 2009). An advantage of this type of educational intervention is that it has minimal if any cost—a parent could just draw a game on a piece of paper.



Understanding of cognitive development is advancing on many different fronts. One exciting area is linking changes in brain activity to changes in children's thinking (Nelson et al., 2006). Although many people believe that brain maturation is something that occurs before birth, the brain actually continues to change in large ways for many years thereafter. For example, a part of the brain called the prefrontal cortex, which is located at the front of the brain and is particularly involved with planning and flexible problem solving, continues to develop throughout adolescence (Blakemore & Choudhury, 2006). Such new research domains, as well as enduring issues such as nature and nurture, continuity and discontinuity, and how to apply cognitive development research to education, insure that cognitive development will continue to be an exciting area in the coming years.

#### 4.4. The Meta-cognition Domain

**Metacognition** is "cognition about cognition", "thinking about thinking", or "knowing about knowing". It comes from the root word "**meta**", meaning beyond. It can take many forms; it includes knowledge about when and how to use particular strategies for learning or for problem solving.<sup>[1]</sup> There are generally two components of metacognition: knowledge about cognition, and regulation of cognition.

Metamemory, defined as knowing about memory and mnemonic strategies, is an especially important form of metacognition. Differences in metacognitive processing across cultures have not been widely studied, but could provide better outcomes in cross-cultural learning between teachers and students.

Some evolutionary psychologists hypothesize that metacognition is used as a survival tool, which would make metacognition the same across cultures. Writings on metacognition can be traced back at least as far as *Peri Psūchês*; and the *Parva Naturalia* of the Greek philosopher Aristotle.

Traditional developmental research in memory and reasoning, as well as current investigations in such disparate areas as theory of

mind, episte-mological understanding, knowledge acquisition, and problem solving, share the need to invoke a meta-level of cognition in explaining their respective phenomena. The increasingly influential construct of metacognition can be conceptualized in a developmental framework. Young children's dawning awareness of mental functions lies at one end of a developmental progression that eventuates in complex metaknowing capabilities that many adults do not master. During its extended developmental course, metacognition becomes more explicit, powerful, and effective, as it comes to operate increasingly under the individual's conscious control. Enhancing (a) metacognitive awareness of what one believes and how one knows and (b) metastrategic control in application of the strategies that process new information is an important developmental and educational goal.

#### **4.4.1. Definitions**

This higher-level cognition was given the label metacognition by American developmental psychologist John Flavell (1979).

The term metacognition literally means cognition about cognition, or more informally, thinking about thinking.

Flavell defined metacognition as knowledge about cognition and control of cognition. For example, I am engaging in metacognition if I notice that I am having more trouble learning A than B; [or] if it strikes me that I should double check C before accepting it as fact. J. H. Flavell (1976, p. 232). Andreas Demetriou, in his theory, one of the neo-Piagetian theories of cognitive development, used the term hypercognition to refer to self-monitoring, self-representation, and self-regulation processes, which are regarded as integral components of the human mind.<sup>[6]</sup> Moreover, with his colleagues, he showed that these processes participate in general intelligence, together with processing efficiency and reasoning, which have traditionally been considered to compose fluid intelligence.

Metacognition also thinks about one's own thinking process such as study skills, memory capabilities, and the ability to monitor learning. This concept needs to be explicitly taught along with content instruction. Metacognitive knowledge is about our own cognitive processes and our understanding of how to regulate those processes to maximize learning.

Some types of metacognitive knowledge would include:

- Person knowledge (declarative knowledge) which is understanding one's own capabilities,
- Task knowledge (procedural knowledge) which is how one perceives the difficulty of a task which is the content, length, and the type of assignment,
- Strategic knowledge (conditional knowledge) which is one's own capability for using strategies to learn information. Young children are not particularly good at this; it is not until upper elementary where students start to develop the understanding of strategies that will be effective.

Different fields define metacognition very differently. Metacognition variously refers to the study of memory-monitoring and self-regulation, meta-reasoning, consciousness/awareness and auto-consciousness/self-awareness. In practice these capacities are used to regulate one's own cognition, to maximize one's potential to think, learn and to the evaluation of proper ethical/moral rules.

In the domain of experimental psychology, an influential distinction in metacognition (proposed by T. O. Nelson & L. Narens) is between Monitoring—making judgments about the strength of one's memories—and Control—using those

judgments to guide behavior (in particular, to guide study choices). Dunlosky, Serra, and Baker (2007) covered this distinction in a review of metamemory research that focused on how findings from this domain can be applied to other areas of applied research.

In the domain of cognitive neuroscience, metacognitive monitoring and control has been viewed as a function of the prefrontal cortex, which receives (monitors) sensory signals from other cortical regions and through feedback loops implements control (see chapters by Schwartz & Bacon and Shimamura, in Dunlosky & Bjork, 2008).

Metacognition is studied in the domain of artificial intelligence and modelling.<sup>[8]</sup> Therefore, it is the domain of interest of emergent systemics.

It has been used, albeit off the original definition, to describe one's own knowledge that we will die. Writers in the 1990s involved with the grunge music scene often used the term to describe self-awareness of mortality.

#### 4.4.2. Component

Metacognition is classified into three components:

1. *Metacognitive knowledge* (also called metacognitive awareness) is what individuals know about themselves and others as cognitive processors.
2. *Metacognitive regulation* is the regulation of cognition and learning experiences through a set of activities that help people control their learning.
3. *Metacognitive experiences* are those experiences that have something to do with the current, on-going cognitive endeavor.

Metacognition refers to a level of thinking that involves active control over the process of thinking that is used in learning situations. Planning the way to approach a learning task, monitoring comprehension, and evaluating the progress towards the completion of a task: these are skills that are metacognitive in their nature.

Metacognition includes at least three different types of metacognitive awareness when considering metacognitive knowledge:

1. **Declarative knowledge:** refers to knowledge about oneself as a learner and about what factors can influence one's performance. Declarative knowledge can also be referred to as "world knowledge".
2. **Procedural knowledge:** refers to knowledge about doing things. This type of knowledge is displayed as heuristics and strategies. A high degree of procedural knowledge can allow individuals to perform tasks more automatically. This is achieved through a large variety of strategies that can be accessed more efficiently.
3. **Conditional knowledge:** refers to knowing when and why to use declarative and procedural knowledge. It allows students to allocate their resources when using strategies. This in turn allows the strategies to become more effective. Similar to metacognitive knowledge, metacognitive regulation or "regulation of cognition" contains three skills that are essential.
  1. **Planning:** refers to the appropriate selection of strategies and the correct allocation of resources that affect task performance.
  2. **Monitoring:** refers to one's awareness of comprehension and task performance



3. **Evaluating:** refers to appraising the final product of a task and the efficiency at which the task was performed. This can include re-evaluating strategies that were used.

Similarly, maintaining motivation to see a task to completion is also a metacognitive skill. The ability to become aware of distracting stimuli – both internal and external – and sustain effort over time also involves metacognitive or executive functions. The theory that metacognition has a critical role to play in successful learning means it is important that it be demonstrated by both students and teachers.

Students who demonstrate a wide range of metacognitive skills perform better on exams and complete work more efficiently. They are self-regulated learners who utilize the "right tool for the job" and modify learning strategies and skills based on their awareness of effectiveness. Individuals with a high level of metacognitive knowledge and skill identify blocks to learning as early as possible and change "tools" or strategies to ensure goal attainment. Swanson (1990) found that metacognitive knowledge can compensate for IQ and lack of prior knowledge when comparing fifth and sixth grade students' problem solving. Students with a high-metacognition were reported to have used fewer strategies,

but solved problems more effectively than low-metacognition students, regardless of IQ or prior knowledge. In one study examining students who do text messaging during college lectures, it was suggested that students with higher metacognitive abilities were less likely than other students to have their learning impacted by using a mobile phone in class.

Metacognologists are aware of their own strengths and weaknesses, the nature of the task at hand, and available "tools" or skills. A broader repertoire of "tools" also assists in goal attainment. When "tools" are general, generic, and context independent, they are more likely to be useful in different types of learning situations.

Another distinction in metacognition is executive management and strategic knowledge. Executive management processes involve planning, monitoring, evaluating and revising one's own thinking processes and products. Strategic knowledge involves knowing *what* (factual or declarative knowledge), knowing *when and why* (conditional or contextual knowledge) and knowing *how* (procedural or methodological knowledge). Both executive management and strategic knowledge metacognition are needed to self-regulate one's own thinking and learning.

Finally, there is no distinction between domain-general and domain-specific metacognitive skills. This means that metacognitive skills are domain-general in nature and there are no specific skills for certain subject areas. The metacognitive skills that are used to review an essay are the same as those that are used to verify an answer to a math question.

Metacognitive experience is responsible for creating an identity that matters to an individual. The creation of the identity with meta-cognitive experience is linked to the identity-based motivation (IBM) model. The identity-based motivation model implies that "identities matter because they provide a basis for meaning making and for action." A person decides also if the identity matters in two ways with meta-cognitive experience. First, a current or possible identity is either "part of the self and so worth pursuing" or the individual thinks that the identity is part of their self, yet it is conflicting with more important identities and the individual will decide if the identity is or is not worth pursuing. Second, it also helps an individual decide if an identity should be pursued or abandoned.

Usually, abandoning identity has been linked to meta-cognitive difficulty. Based on the identity-based motivation

model there are naive theories describing difficulty as a way to continue to pursue an identity. The incremental theory of ability states that if "effort matters then difficulty is likely to be interpreted as meaning that more effort is needed." Here is an example: a woman who loves to play clarinet has come upon a hard piece of music. She knows that how much effort she puts into learning this piece is beneficial. The piece had difficulty so she knew the effort was needed. The identity the woman wants to pursue is to be a good clarinet player; having a metacognitive experience difficulty pushed her to learn the difficult piece to continue to identify with her identity. The entity theory of ability represents the opposite. This theory states that if "effort does not matter then difficulty is likely to be interpreted as meaning that ability is lacking so effort should be suspended." Based on the example of the woman playing the clarinet, if she did not want to identify herself as a good clarinet player, she would not have put in any effort to learn the difficult piece which is an example of using metacognitive experience difficulty to abandon an identity.

#### 4.4.3. Complex Relation between Metacognition and Cognition

Most conceptualizations of metacognition have in common that they take the perspective of 'higher-order cognition about cognition.' There is a higher-order agent overlooking and governing the cognitive system, while simultaneously being part of it. This is the classical homunculus problem or Comte's paradox: One cannot split one's self in two, of whom one thinks whilst the other observes him thinking. The issue whether cognition and metacognition can be disentangled is not merely an academic one. In fact, metacognition draws on cognition. It is very hard to have adequate metacognitive knowledge of one's competencies in a domain without substantial (cognitive) domain-specific knowledge, such as knowledge about relevant concepts and theories in a domain, about intrinsic difficulties of a domain, and about what is irrelevant (cf. Pressley, this issue). In terms of metacognitive skills, one cannot engage in planning without carrying out cognitive activities, such as generating problem-solving steps and sequencing those steps. Similarly, one cannot check one's outcome of a

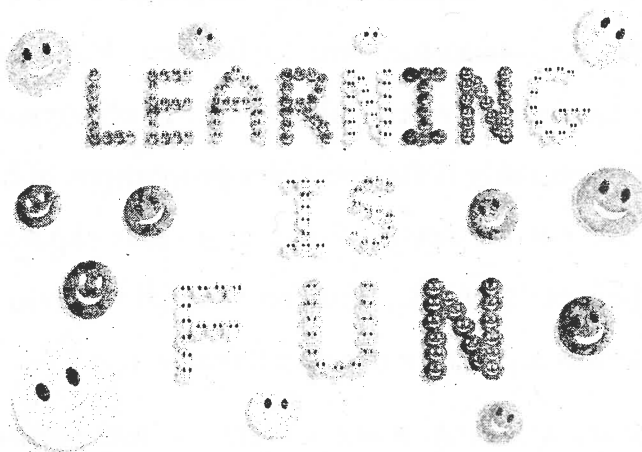
calculation without comparing the outcome with an estimation of it, or recalculating the outcome in another way.

If metacognition is conceived as (knowledge of) a set of self-instructions for regulating task performance, then cognition is the vehicle of those self-instructions. These cognitive activities in turn are subject to metacognition, for instance, to ongoing monitoring and evaluation processes. This circular process of metacognitive and cognitive activities makes it hard to disentangle them in the assessment of metacognition. Occasionally, metacognition can be observed in students' verbalized self-instructions, such as "this is difficult for me, let's do it step-by-step" or "wait, I don't know what this word means." Metacognition, however, is not always explicitly heard or seen during task performance. Instead, it has often to be inferred from certain cognitive activities. For instance, doing things step-by-step may be indicative of planned behavior, although self-instructions for planning are not explicitly verbalized. Future research has to differentiate far more precisely between explicitly verbalized metacognitive knowledge and self-instructions, cognitive activities that are indicative of

metacognition, and purely cognitive activity. Despite their intertwined relation with cognitive processes, metacognitive skills cannot be equated with intellectual ability (cf. Sternberg, 1990). There is ample evidence that metacognitive skills, although moderately correlated to intelligence, contribute to learning performance on top of intellectual ability. On the average intellectual ability uniquely accounts for 10 percent of variance in learning, metacognitive skills uniquely account for 17 percent of variance in learning, whereas both predictors share another 20 percent of variance in learning for students of different ages and background, for different types of tasks, and for different domains (for an overview, see Veenman, Wilhelm & Beishuizen, 2004; Veenman & Spaans, 2005). The implication is that an adequate level of metacognition may compensate for students' cognitive limitations.

#### 4.5. Emerging Capabilities across Domains Related to the Creative domain

Creative and habitual actions represent competing behavioral options that may be simultaneously influenced by multiple domains of social action. This article integrates psychological and sociological descriptions of creativity and conformity to present a theory of individual creative action within organizational settings composed of intertwined group, organizational, institutional, and market domains. This theory contributes to the innovation literature by illustrating how intentional action and evolutionary processes that legitimize action interact to facilitate creativity and innovation.



Often in the early school years, children will begin to have homework. Homework offers parents a wonderful



opportunity to spend time nurturing their children, encourage their love of learning, and reinforce concepts that children are learning in the classroom. Often, teachers will provide extra activity ideas to interested parents which can further encourage at-home learning, especially if a child is struggling in a particular area or subject.

Another fun way that children can learn while playing is through at-home science experiments. Parents can design safe, age-appropriate and stimulating interactive activities that help children to learn concepts like measurement, cause and effect, gravity and the life cycle. As is the case with many academic topics, fostering children's early interest in science tends to pay off in their continuing interest as they grow. Science demonstrations are more complicated than most reading or math exercises. Therefore, parents frequently need to supervise these activities more closely than others if planned outcomes are to happen. For instance, a model volcano that erupts when baking soda is combined with vinegar won't work properly if the necessary proportions of baking soda to vinegar are not followed. However, parents shouldn't do everything for their children. Experiments that allow children to interact with materials are what will teach them best.

Science experiments will often make a mess. A little preparation can reduce parents "mess stress". Covering the table or floor with

old sheets or drop cloths can help with clean up. As well, a basement, garage, shed, or outside location might become the preferred place to conduct science experiments during decent weather. Additionally, children scientists should wear aprons or old clothes while experimenting to protect their school clothing from damage.

Most importantly, parents need to make sure that any objects or materials used in science experiments are age appropriate and safe for children. There should be no toxic or dangerous chemicals, no fire or extreme heat, nor any small parts that can pose a choking hazard for toddlers, if toddlers are involved. Older children, who may engage in more sophisticated experiments with different substances (alcohol, baking powder, vinegar, crystals, etc) should be supervised and assisted. In addition, all "scientists" should be reminded to wash their hands, and avoid putting any of the equipment in their mouths.

Toddlers might love to learn about the physics of water through activities such as outdoor "painting." On a dry sunny day, parents can take their toddlers outside with a little cup of water and a clean paint brush. Children can paint objects (e.g., rocks, the family car, or a park bench) with the water. As the kids watch the water "disappear," parents can provide a simple explanation of evaporation. In another fun water activity, toddlers can place

different objects (e.g., rocks, plastic toys, feathers, or vegetables) in a tub of water to see which ones sink and which ones float.

Both toddlers and preschoolers will enjoy science experiments including magnets. For toddlers, parents can take empty two-liter pop bottles and fill them with sand and small metal objects that will react to magnets (leave a couple of inches open at the top and glue the cap back on to prevent sand spillage). Toddlers can take magnets and trace the outside of the bottle, dragging the metal pieces inside through the sand. Likewise, older preschoolers can take a magnet around the house and community to test which items are attracted to the magnet and which aren't. Just be careful that children do not put their magnets close to computers or other computerized equipment, as magnets can erase memory or data from these devices!

To learn about life science, both toddlers and preschoolers can be encouraged to become little farmers and grow things. Adults can help children fill see-through containers with soil and bean seeds or cut-up pieces of potato. After giving these mini gardens sunlight and water for a few days, families can watch the beans and potatoes shoot sprouts, roots, and even leaves. Older children can help plant and take care of flowers or herbs on the windowsill, or help cultivate a backyard garden.

Young school-aged children can learn from more complicated life science experiments. For example, kindergartners and first graders can go outside on a sunny day and observe their shadows in the morning, lunch time, and later afternoon. Have them guess, or hypothesize what makes the shadows grow and shrink, and then discuss the movement of the sun and how it changes the appearance of shadows. By second grade, children can take this knowledge one step further and build their own sun dial out of cardboard with their parents' assistance and supervision (as sharp scissors will be necessary!). By observing how the shadows change on the sundial's face at different times, children can mark off the hours.

#### **4.6. Emerging Capabilities across Domains Related to ethics**

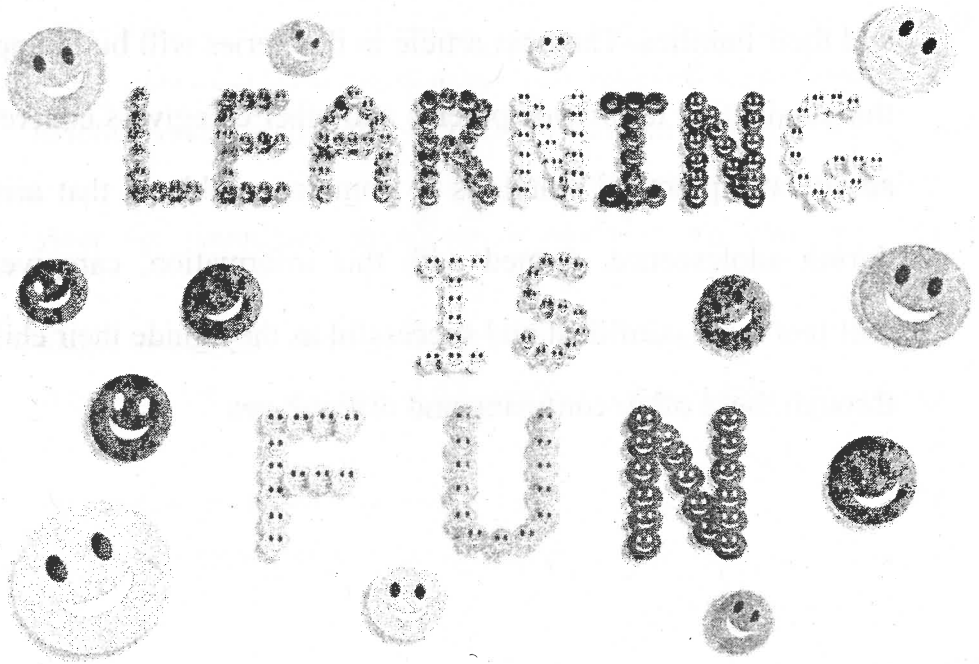
Prior to addressing the above questions, however, the distinction between ethics and morality will be clarified, as people tend to use the words interchangeably. For example, psychologists tend to study moral behavior and the literature reflects this. Quite often, the word "ethics" is not even mentioned in research articles describing "moral behavior." Popular media, however, use the term "ethics" when talking

about behavior and standards of behavior, and "ethical behavior" is generally perceived as "good" or "right" behavior. "Ethics" and "ethical" are terms often used in place of "morality" and "morals." This is in contrast with the philosophical, classical view, in which "ethics" refers to the study of conduct, where conduct, as opposed to behavior, refers to how a person chooses a particular course of action when he has a moral choice. "Morals" refers to behavior, either good or bad, right or wrong. It reflects the behavioral choice someone has made in his or her actions. Therefore, one could say ethics is the theoretical study of morality (Johnson, 1958).

#### **4.7.Summary**

In conclusion, adolescent youth experience monumental changes in every single aspect of their lives as they make the transition from childhood into adulthood. The purpose of this article was to provide parents and other caregivers the foundational information needed to recognize and to appreciate the normal developmental progression of adolescents. Therefore, this article was primarily descriptive in nature. However, the process of adolescent development can become

quite challenging and sometime overwhelming for both youth and their families. The next article in this series will build upon this foundation to provide parents and other caregivers concrete advice and practical solutions to common problems that arise during adolescence. Armed with this information, caregivers will feel more confident and successful as they guide their child through these often confusing and difficult years.



## 6.7. Check Your Progress

**Q.14** Why are there different theories of cognitive development?

Why don't researchers agree on which theory is the right one?

**Q.15** Do children's natures differ, or do differences among children only reflect differences in their experiences?

**Q.16** Do you see development as more continuous or more discontinuous?

**Q.17** Can you think of ways other than those described in the module in which research on cognitive development could be used to improve education?

**Q.18** How can designers of programming interfaces, interactive tools, and rich social environments enable more people to be more creative more often?













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## UNIT 3

# Issues Related To Puberty

### STRUCTURE

**12.1. Introduction**

**12.2. Objectives**

**12.3. How You Can Help**

**12.3.1. When Puberty Starts Early**

**12.3.2. When Puberty Starts Late**

**12.4. Mental/emotional/social changes through puberty**

**12.4.1. Lack of Sleep**

**12.4.2. Adolescent Brains Are Still Maturing**

**12.5. Adolescent Development and the Biology of Puberty**

**12.5.1. Changes in the Study of Adolescent Development**

**12.5.2. The adolescent years need not be troubled years**

**12.5.3. Only a segment of the adolescent population is at high risk for experiencing serious problems**

**12.5.4. Adolescent behavior is influenced by complex interactions between the biological and social contexts**

**12.5.5.** Current understanding of adolescent development remains limited.

**12.5.6.** Researchers from diverse fields, including the biological, behavioral, and social sciences, have developed new techniques to study adolescent development

**12.5.7.** An Increasing Number of Disciplines are Beginning to Conduct Research on Adolescent Development

## **12.6. Adolescence and the problems of puberty**

### **12.7. Teenagers and puberty**

**12.7.1.** What is puberty?

**12.7.2.** How will a child's puberty affect the parents?

**12.7.3.** How do young people view themselves at puberty?

**12.7.4.** Puberty – child or adult?

### **12.8. Summary**

### **12.9. Check your progress**

### **12.10. Assignment/activity**

### **12.11. Points for discussion and clarification**

### **12.12. References / further readings**

## Chapter 4 UNIT 3

# Issues Related To Puberty

### 3.1.INTRODUCTION

The physical changes that occur during puberty give rise to a variety of social and emotional changes as well. First, the ongoing physical maturation process directly affects body and brain to alter children's needs, interests, and moods. Then, as children start to look and act differently, an array of social influences further accelerate the social and emotional changes children experience.

As children observe that their bodies are changing, they may experience a new and unfamiliar set of social experiences. Reinforced by their first enjoyable experiences of sexual arousal, and by their peers and culture, they become interested in forming what can become intense, romantic, and sometimes sexualized relationships with others. Also, as these bodily changes become visible to others, children may begin to experience being treated differently by others. For example, more rapidly maturing youth may experience an increase in their popularity, while their more

slowly maturing peers may experience a decline in popularity. Youth may also notice that other people are suddenly paying a great deal more attention to how they look than they are accustomed.

The physical changes associated with puberty become the basis for new emotional experiences. For example, it is common for parents to note their children become more moody and irritable during this period of their lives. This moodiness is commonly attributed to the sudden and fluctuating hormonal levels, or "raging hormones". It is certainly true that sex hormones are powerful chemical agents that can affect mood. During puberty, the body is adjusting to these fluctuating hormone levels and this fluctuation does create mood swings. However, there are several other physical causes accounting for increased moodiness apart from fluctuating hormones.

The period at which maturation of the sexual organs occurs, begins at about age 11 or 12 for girls and 13 or 14 for boys. However there are wide variations. The age at which puberty begins has important implications for the way adolescents feel about themselves as well as how others treat them. The individual differences in adolescent development have far-reaching effects on personality and social adjustment. Growth during adolescence is

not uniform. An adolescent's legs grow first and are followed by growth in the trunk. This pattern of growth results in the long-legged, clumsy appearance that is used in popular descriptions of the adolescent. By the time the adolescent's growth is completed, the trunk comprises approximately 37.5 percent of the total body height, the head 12.5 percent, and the legs 50 percent. This compares with corresponding percentages for preadolescence of 40 percent, 14 percent, and 46 percent respectively.

### 3.2. OBJECTIVES

**After going through this unit you will be able to:**

- Understand the aspects of puberty starts early and late;
- understand the developmental characteristics of adolescents;
- have an idea of disorders of children and adolescents;
- Understand the nature, types and causes, and treatment of developmental deviance.

### 3.3. HOW YOU CAN HELP : WHEN PUBERTY STARTS EARLY or LATE

#### How you can help

Talk to your children before physical changes start to happen. Instead of overloading your child in one sitting, talk to your child over a period of a year or two about changes that are upcoming. Offer your child books about puberty that are geared toward teens, and set a time to talk about what your child learned.

Share some of your own teen experiences so that your child will know that Mom and Dad went through this time too.

Young adolescents may not be aware of developing body odour and the need for deodorants and more frequent bathing. They may develop pimples, whiteheads and blackheads, or acne and need instruction on how to care for their skin.

Teach teens about the changes that occur with puberty, such as the following:

- Girls' hips become more rounded.
- Girls' nipples grow first and then the breasts under them.

- Girls and boys get fine pubic and underarm hair, and then the hair becomes coarser.
- Boys' penises and testicles grow larger.
- Boys sometimes have wet dreams.
- Boys sometimes have temporary breast growth during puberty.
- **Menstruation** is a sign that girls can become pregnant. Girls should be instructed on how to use pads or tampons. Explain that periods may not be regular at first but they typically last 4 to 6 days and occur every 21 to 45 days in the first 2 years.

Show compassion. Let your child know that you are there to help and will not tease or ridicule.

Adolescents are usually very aware of how their development compares to that of their friends. Any development that varies significantly from the norm can be a source of great anxiety along with social and emotional struggles.

The tables below highlight some of the advantages and disadvantages related to the timing of puberty.



### 3.3.1 WHEN PUBERTY STARTS EARLY

	<b>Girls who mature early:</b>	<b>Boys who mature early:</b>
<b>Advantages of maturing early</b>	<p>Tend to be more popular and may have a more active social life.</p> <p>May have an easier time coping with the stresses of adulthood. These girls have more social experiences.</p>	<p>Tend to be more popular and are often seen as leaders by other teens.</p> <p>Often do well in sports because of their physical maturity.</p> <p>May seem more attractive to girls because girls usually mature earlier than boys.</p>
<b>Disadvantages of maturing early</b>	<p>May be embarrassed about having periods, developing breasts, and growing taller sooner than their peers.</p> <p>May have more emotional problems and a lower self-image.</p> <p>May have problems dating if they aren't emotionally ready.</p> <p>May have less time to adjust to puberty and may be expected to act like</p>	<p>May feel pressure to grow up too soon and to take on duties that they may not be ready for.</p> <p>May act more aggressive and antisocial.</p> <p>May start sexual activity sooner.</p> <p>May have problems dating if they aren't emotionally ready.</p> <p>May not have enough time to enjoy being a teenager.</p>

	<b>Girls who mature early:</b>	<b>Boys who mature early:</b>
	adults.	

### 3.3.2 WHEN PUBERTY STARTS LATE

	<b>Girls who mature late:</b>	<b>Boys who mature late:</b>
<b>Advantages of maturing late</b>	<p>May enjoy relatively "safe" teenage years because they have more time to get emotionally ready for puberty.</p> <p>May not be pressured to date too early or have sex.</p>	<p>May grow up with greater curiosity about how their body will change and may learn better ways to cope with those changes.</p> <p>May be more focused on school and getting good grades than on dating.</p>
<b>Disadvantages of maturing late</b>	<p>May be anxious, wondering when their bodies will develop.</p> <p>May be made fun of by other teens.</p> <p>May stay "childlike" longer.</p>	<p>May find it harder to compete in sports, date, or take on leadership activities because of their delayed physical development.</p> <p>May have a lower self-image and more negative body image.</p>

### 3.4. Mental/Emotional/Social Changes Through Puberty

The physical changes that occur during puberty give rise to a variety of social and emotional changes as well. First, the ongoing physical maturation process directly affects body and brain to alter children's needs, interests, and moods. Then, as children start to look and act differently, an array of social influences further accelerate the social and emotional changes children experience.

As children observe that their bodies are changing, they may experience a new and unfamiliar set of social experiences. Reinforced by their first enjoyable experiences of sexual arousal, and by their peers and culture, they become interested in forming what can become intense, romantic, and sometimes sexualized relationships with others. Also, as these bodily changes become visible to others, children may begin to experience being treated differently by others. For example, more rapidly maturing youth may experience an increase in their popularity, while their more slowly maturing peers may experience a decline in popularity. Youth may also notice that other people are suddenly paying a great deal more attention to how they look than they are accustomed.

The physical changes associated with puberty become the basis for new emotional experiences. For example, it is common for parents to note their children become more moody and irritable during this period of their lives. This moodiness is commonly attributed to the sudden and fluctuating hormonal levels, or "raging hormones". It is certainly true that sex hormones are powerful chemical agents that can affect mood. During puberty, the body is adjusting to these fluctuating hormone levels and this fluctuation does create mood swings. However, there are several other physical causes accounting for increased moodiness apart from fluctuating hormones.

### **3.4.1. LACK OF SLEEP**

Children's moodiness can be affected by their lack of sleep. There are both physical and social reasons for why sleep deficits may occur during puberty. First, the body's sleep-wake cycle is dependent upon a "circadian rhythm" which in turn, is influenced by hormones. During puberty, a natural shift occurs in a teen's circadian rhythm that causes them to feel more fully alert later at night. Unfortunately, they must still rise early for school and

other activities. As a result, they get less sleep than they require. This occurs just as their educational, extracurricular, and social schedules become more demanding. Youth may also develop an irregular sleep pattern, such as a desire to "sleep-in" during the weekends, while simultaneously sleeping less during weeknights. This lack of sleep can increase irritability and decrease concentration ability, and contribute to children suddenly finding it difficult to complete tasks that were once simple. This new struggle only adds to their frustration and moodiness.

### 3.4.2. ADOLESCENT BRAINS ARE STILL MATURING

A second factor that complicates adolescent moodiness is that their brains are still physical maturing: Children's brains are not fully developed until they are in their early 20's! This incomplete brain development is responsible for much of the cognitive and emotional immaturity that can so easily frustrate parents.

Cognitive immaturity refers to youths' still-developing thinking skills which are not yet as sophisticated and reliable as those characteristic of adults. Cognitively immature people lack good judgment. Immature thinking result in a youths' having difficulty thinking things through so as to anticipate the consequences of their actions and make informed decisions or choices based upon those anticipated consequences. As a result, youth easily appear (and can indeed be) impulsive, hasty, and even selfish.

The brain's incomplete physical development is also in large part responsible for youthful emotional immaturity. Youth have more difficulty than mature adults in regulating their emotions and putting events in proper perspective. Emotion regulation is an important ability

because it enables people to consciously control (within limits) how strongly they will feel emotions like anger, joy or fear. Such control helps people limit the emotional highs and lows that are commonly called "mood swings." To make things worse, during periods of high emotional arousal, the brain's thinking capacity is temporarily further diminished.

Parents need to know about children's still-immature brain structure, sleep alterations and changing hormones and the emotional and cognitive immaturity that results from this still- developing state so that they can regard their children's behavior in proper perspective. Though adolescent children may become moody and make poor choices, they are not doing this purely out of spite, but rather because they cannot be substantially otherwise at this point in their development. Despite their resistance, parents need to continue to provide their adolescent children with clear behavior guidelines and set and enforce age-appropriate behavior limits. Through doing so parents provide children with the proper mixture of safety and freedom they require to enable and enhance their further growth. Children need enough room to



express their individuality and to practice (and sometimes fail) independent decision-making AND they need to be protected from the consequences of their worst decisions in order for them to thrive.

### **3.5. ADOLESCENT DEVELOPMENT AND THE BIOLOGY OF PUBERTY**

Adolescence is one of the most fascinating and complex transitions in the life span. Its breathtaking pace of growth and change is second only to that of infancy. Biological processes drive many aspects of this growth and development, with the onset of puberty marking the passage from childhood to adolescence. Puberty is a transitional period between childhood and adulthood, during which a growth spurt occurs, secondary sexual characteristics appear, fertility is achieved, and profound psychological changes take place.

Although the sequence of pubertal changes is relatively predictable, their timing is extremely variable. The normal range of onset is ages 8 to 14 in females and ages 9 to 15 in males, with girls generally experiencing physiological growth characteristic of the onset of

puberty two years before boys. Pubertal maturation is controlled largely by complex interactions among the brain, the pituitary gland, and the gonads, which in turn interact with environment (i.e., the social, cultural, and ambient environment). A relatively new area of research related to puberty is that of brain development. Evidence now suggests that brain growth continues into adolescence, including the proliferation of the support cells, which nourish the neurons, and myelination, which permits faster neural processing. These changes in the brain are likely to stimulate cognitive growth and development, including the capacity for abstract reasoning.

Although the biology of physical growth and maturation during puberty is generally understood, available data on the biochemical and physiological mediators of human behavior are extremely primitive, and their clinical applicability remains obscure. Despite the limitations of available data, a substantial body of evidence suggests that variations in the age of onset of puberty may have developmental and behavioral consequences during adolescence. Mounting evidence also suggests that

gonadal hormones, gonadotropins, and adrenal hormones influence and are affected by social interactions among groups of experimental animals, and they may also play an important role in regulating human social behavior. Interesting and potentially informative parallels exist between the maturational process in human beings and in other animals, especially those having well-documented social structures.

Research conducted with both humans and nonhuman primates suggests that adolescence is a time for carrying out crucial developmental tasks: becoming physically and sexually mature; acquiring skills needed to carry out adult roles; gaining increased autonomy from parents; and realigning social ties with members of both the same and the opposite gender. Studies of such commonalities underscore the critical importance of this part of the life course in establishing social skills. For many social species, such skills are further developed through peer-oriented interactions that are distinct from both earlier child-adult patterns and later adult pairings.

Adolescence is a time of tremendous growth and potential, but it is also a time of considerable risk. Most

people would argue that being an adolescent today is a different experience from what it was even a few decades ago. Both the perceptions of this change and the change itself attest to the powerful influence of social contexts on adolescent development. Many of the 34 million adolescents in the United States are confronting pressures to use alcohol, cigarettes, or other drugs and to initiate sexual relationships at earlier ages, putting themselves at high risk for intentional and unintentional injuries, unintended pregnancies, and infection from sexually transmitted diseases (STDs), including the human immunodeficiency virus (HIV). Many experience a wide range of painful and debilitating mental health problems.

One of the important insights to emerge from scientific inquiry into adolescence in the past decade is the profound influence of settings on adolescents' behavior and development. Until recently, research conducted to understand adolescent behavior, particularly risk-related behaviors, focused on the individual characteristics of teenagers and their families. In 1993, the National Research Council conducted a study that took a critical look at how families, communities, and other institutions

are serving the needs of youth in the United States. This study concluded that adolescents depend not only on their families, but also on the neighborhoods in which they live, the schools that they attend, the health care system, and the workplace from which they learn a wide range of important skills. If sufficiently enriched, all of these settings and social institutions in concert can help teenagers successfully make the transition from childhood to adulthood.

Family income is perhaps the single most important factor in determining the settings in which adolescents spend their lives. Housing, neighborhoods, schools, and the social opportunities that are linked to them are largely controlled by income; a family's income and employment status decide its access to health care services and strongly influence the quality of those services (National Research Council, 1993). Opportunities for advanced education and training and entry into the workforce are also closely linked to family income. Moreover, income is a powerful influence in shaping what is arguably the most important setting, the family. At this point in time, the evidence is clear—persistent poverty exacts a

significant price on adolescents' health, development, educational attainment, and socioeconomic potential, even though the causal relationships are not well understood in all cases.

Not only is current research attempting to more fully characterize the physiological mechanisms responsible for initiating and regulating neuroendocrine maturation and somatic growth, but it is also attempting to characterize these environmental and contextual factors that may interact with biological ones to enhance or impede maturation. This research is attempting to address questions that could help to inform the development of policies and the delivery of services for youth. Such questions include: What is the pubertal experience like for teenagers today, and how does it differ from that in the past, both in the United States and in other cultures? How do pubertal experiences, in some circumstances and for some subgroups, trigger maladaptive responses? What role do pubertal processes play in cognitive change? How does puberty, in conjunction with other events that occur during early adolescence, influence the emergence of developmental psychopathology?

### 3.5.1. CHANGES IN THE STUDY OF ADOLESCENT DEVELOPMENT

Over the last two decades, the research base in the field of adolescent development has undergone a growth spurt. Knowledge has expanded significantly. New studies have allowed more complex views of the multiple dimensions of adolescence, fresh insights into the process and timing of puberty, and new perspectives on the behaviors associated with the second decade of life. At the same time, the field's underlying theoretical assumptions have changed and matured.

Researchers of human development have consistently observed that the second decade of life is a time of dramatic change: a period of rapid physical growth, endocrine (hormone) changes, cognitive development and increasing analytic capability; emotional growth, a time of self-exploration and increasing independence, and active participation in a more complex social universe. For much of this century, scientists and scholars studying adolescence tended to assume that the changes associated with adolescence were almost entirely dictated by biological influences. It has been viewed as a time of storm and stress, best contained or passed through as quickly as possible. *Adolescence*, a 1904 book by G. Stanley Hall, typified

this standpoint. It was Hall who popularized the notion that adolescence is inevitably a time of psychological and emotional turmoil (Hall, 1904). Half a century later, psychoanalytic writers including Anna Freud accepted and augmented Hall's emphasis on turmoil (Petersen, 1988). Even today, "raging hormones" continue to be a popular explanation for the lability, aggression, and sexual activity associated with adolescence (Litt, 1995). Intense conflict between adolescents and their parents is often considered an unavoidable consequence of adolescence (Petersen, 1988). However, this assumption is not supported by scientific evidence. The assumption that turmoil and conflict are inevitable consequences of the teenage years may even have prevented some adolescents from receiving the support and services they needed.

Research is now creating a more realistic view of adolescence. Adolescence continues to be seen as a period of time encompassing difficult developmental challenges, but there is wider recognition that biology is only one factor that affects young people's development, adjustment, and behavior. In fact, there is mounting evidence that parents, members of the community, service providers, and social institutions can both



promote healthy development among adolescents and intervene effectively when problems arise.

The study of adolescence is now becoming an increasingly sophisticated science. Thanks to powerful new research tools and other scientific and technological advances, today's theories of adolescent development are more likely to be supported by scientific evidence than in the past. Indeed, there has been sufficient research to allow a reassessment of the nature of adolescent development. At the same time, there is greater recognition that neither puberty nor adolescence can be understood without considering the social and cultural contexts in which young people grow and develop, including the familial and societal values, social and economic conditions, and institutions that they experience. This research has contributed the following to our understanding of adolescence:

**3.5.2. *The adolescent years need not be troubled years.***

There is now greater recognition that young people can move through the adolescent years without experiencing great trauma or getting into serious trouble; most young people do. Although adolescence can certainly be a challenging span of years, individuals negotiate it with varying degrees of difficulty, just

as they do other periods of life. Moreover, when problems do arise during adolescence they should not be considered as "normal"—i.e., that the adolescent will grow out of it—nor should they be ignored (Petersen, 1988).

**3.5.3. *Only a segment of the adolescent population is at high risk for experiencing serious problems.***

Over the past 50 years, studies conducted in North America and Europe have documented that only about a quarter of the adolescent population is at high risk for, or more vulnerable to, a wide range of psychosocial problems (Carnegie Corporation of New York, 1995). These adolescents are not believed to be at increased risk because of biological or hormonal changes associated with puberty, but rather from a complex interaction among biological, environmental, and social factors. Indeed, as discussed by Anne Petersen, there is mounting evidence that most biological changes interact with a wide range of contextual, psychological, social, and environmental factors that affect behavior (Buchanan et al., 1992; Susman, 1997, see also Brooks-Gunn et al., 1994). Researchers are also concluding that behaviors associated with adolescence, including some high risk

behaviors, are influenced by the social milieu (Brooks-Gunn and Reiter, 1990). Studies show that, in contrast to children and adults, the most common causes of mortality among adolescents are associated with social, environmental, and behavioral factors rather than genetic, congenital, or biological diseases. Indeed, many of today's adolescents are using alcohol and other drugs, engaging in unprotected sexual intercourse, and are both victims and perpetrators of violence, which puts them at increased risk for a wide range of developmental and health-related problems, including morbidity and mortality. It is important to note that the leading causes of morbidity and mortality among adolescents are entirely preventable. Although relatively small, a significant number of adolescents also experience morbidity and mortality associated with genetic and congenital disorders (such as cystic fibrosis, muscular dystrophy, cerebral palsy), cancer, and infectious diseases that affect their development, behavior, and well-being.

**3.5.4. *Adolescent behavior is influenced by complex interactions between the biological and social contexts.***

In the past, researchers tended to conduct research designed to examine the impact of hormones on adolescent behavior. While this work continues, there is now an appreciation for the

complex reciprocal relationship and interaction between biological and social environments, and the interaction between these environments and adolescent behavior (Graber et al., 1997).

**3.5.5. *Current understanding of adolescent development remains limited.***

Although the study of adolescence is becoming more sophisticated in nature, researchers also recognize that the current knowledge base on adolescent development and behavior is quite limited. The research conducted to date has predominately been descriptive in nature, relied on cross-sectional data, and been unidimensional in focus. Indeed, few research studies have successfully considered the multiple factors that collectively influence adolescent development. As discussed by Iris Litt, there is now a growing appreciation that new research is needed, including research that employs longitudinal designs; characterizes developmental changes associated with the onset of puberty well before the age of 8; and seeks to characterize growth and development across the life span—i.e., from infancy to adolescence, young adulthood,

adulthood, and the senior years. Studying these developmental stages in isolation from one another provides only a partial and incomplete picture.

**3.5.6. *Researchers from diverse fields, including the biological, behavioral, and social sciences, have developed new techniques to study adolescent development.***

Use of more rigorous research methods has improved the reliability and validity of the measurement techniques used, and consequently the ability to document the multifaceted dimensions of growth and maturation during adolescence. For example, the development of radioimmunoassay methodology in the late 1960s, and the considerable re- finement of that process over the decades, have made it possible to study the hormones that control reproductive maturation. The development of neuroimaging technology in the 1970s created exciting new opportunities for studying brain development; these techniques include more sensitive, easy-to-use hormone assay technology and new brain imaging technologies, allowing insight into brain development and function. Moreover, longitudinal studies are increasingly being designed to

characterize the interaction among genetic, biological, familial, environmental, social, and behavioral factors (both risk and protective in nature) among children and adolescents. For example, a valuable new source of data that has the potential to significantly advance the knowledge base of physiological and behavioral development among adolescents is the National Longitudinal Study of Adolescent Health (called Add Health). From the collection of longitudinal data, it will be possible to examine how the timing and tempo of puberty influences social and cognitive development among teenagers. This dataset will also permit analyses to examine how family-, school- and individual-level risk and protective factors are associated with adolescent health and morbidity (e.g., emotional health, violence, substance use, sexuality).

**3.5.7. *An Increasing Number of Disciplines are Beginning to Conduct Research on Adolescent Development.***

Understanding adolescent development requires answers to a number of difficult questions: how do adolescents develop physically, how do their relationships with parents and friends change, how are young people as a group viewed and treated by society, how does adolescence in our society differ from adolescence in other cultures, and how has adolescence and

adolescent development changed over the past few decades. A complete understanding of adolescence, and the potential to answer these questions depends on an integrated approach, and involvement of a wide range of disciplines, including but not limited to endocrinology, psychology, sociology, psychiatry, genetics, anthropology, neuroscience, history, and economics. While each discipline offers its own view point regarding adolescence and adolescent development, the field will not be able to successfully answer these questions without integrating the contributions of different disciplines into a coherent and comprehensive viewpoint. Fortunately, studies of puberty are increasingly drawing on and therefore benefiting from the knowledge base of these diverse fields.

### 3.6. Adolescence and the problems of puberty

#### **Adolescence and puberty are not the same.**

Adolescence is that ten to twelve year period of social and psychological growth that transforms the dependent child (beginning in late elementary or early middle school) into a functionally independent young adult in his or her early to mid twenties.

Puberty is the one to three-year process of hormonal and physical change that causes the young person to reach sexual maturity, girls usually entering it about a year earlier than boys.

Among other changes wrought by puberty, there are growth spurts that create bigger bodies to manage. For girls hips broaden, breasts swell, menstruation begins, and they can produce eggs. For boys muscles enlarge, voice drops, ejaculation begins, and they can produce sperm. For both male and female there is more hair around sex organs, more body odor, and more active skin glands that can create acne.



Now young people, as young as ten to fourteen are capable of participating in sexual reproduction, which doesn't mean that they immediately want to fulfill that potentiality. What it does mean, however, is that parents do need to start educating their son or daughter about socially managing sexual maturity and delaying sexual activity in a popular culture that glamorizes looking and acting sexual in every way.

This is no time for a young person to be uninformed about what is going on in their bodies because in ignorance they will believe they are unique and wonder what is wrong with them, when nothing is. This is a time for parents to explain the process of puberty that unfolds for everyone and what changes to expect.

An easy way to do this is for parents to search online for sites explaining puberty, find one that they like, and then read the information with their son or daughter, inviting any questions the young person may have. Normalize the process so the young person doesn't 'abnormalize' themselves.

Adolescence does not depend on puberty to start. In fact, in most cases adolescence begins first. Parents notice the negative attitude (more criticism and complaining), the passive and

active resistance (more delay and arguments), and the testing of limits (more seeing what can be gotten away with) that are the hallmarks of early adolescent change. But when puberty does begin, the adolescent transformation becomes emotionally intensified and more complex.

Puberty now creates two problems in one. First, it creates a process problem: how to manage the physical changes that are besetting their bodies. This is the problem of self-consciousness. And second, it creates an outcome problem: how to act young manly or young womanly. This is the problem of sex role definition.

Start with the problem of self-consciousness. For most young people, puberty catches them at a bad time - during the early adolescent years (around ages 9 - 13) when they are separating from the shelter of childhood and begin striving for social belonging and place among their society of peers. Already feeling adrift from family and at sea in this brave new world of more social independence, puberty demonstrates how they are also out of control of their body.

Developmental insecurity and early adolescence go hand in hand. For most young people, puberty is the enemy of self-

esteem. It changes how they look at a time when physical appearance becomes more important for social acceptance and social standing.

As body shape and characteristics alter, they feel more vulnerable on that account, whether they are physically maturing too fast or not fast enough. This is the period when self-examination is microscopic, when any new blemish can be a source of misery, when it takes much longer to "get ready" to go out, when what to wear and how to groom absorb protracted attention.

At home, parents must remember that the changes of puberty are no laughing matter. The rule for parents is there must be no teasing, no joking, no making fun of self-preoccupation, physical appearance, bodily change, or choice of dress. There is enough of this torment from peers who are all suffering from similar insecurities themselves.

Early adolescence is an age of intolerance, where perceived differences or departures from the dominant or desired norm are not treated kindly. Now a young woman or young man can be teased and picked on for not looking womanly or manly enough. A painfully self-conscious early adolescent can take

this social cruelty very personally. "What's wrong with me?" "I hate how I look!" "I'll never fit in!" Self-esteem can plummet when being teased causes a young person to become self-rejecting.

Or there can be a vulnerability to rumoring that can come from appearing so mature so young - peers gossiping that because you look so sexually mature you are prepared to act that way. So now you have a sexual social reputation.

At this juncture, parents need to help the young person evaluate this cruelty for what it is. "Being teased or rumored this way shows nothing wrong with you, but it shows a lot wrong about them. They are ridiculing what they fear being attacked about themselves, and they are choosing to at mean. This mistreatment is about them, not about you."

Now consider the problem of sex role definition. While adolescence begins growth toward more independence, puberty adds another dimension to this journey -- the need to claim one's young manhood or young womanhood. But where are young people supposed to learn these definitions?

Certainly there are models in the family, if older siblings and parents are available to provide salient examples to follow. Even so, these are not the most commanding images at hand.

It is the cultural ideals for being a man and being a woman that young people find most alluring, ideals portrayed in the images and messages and icons that media advertising and entertainment constantly communicate.

To approximate these young manly and young womanly attributes means incorporating some of them into one's desired appearance. So come puberty, the social/sexual stereotypes kick in as young women worry about weight and thinning down their bodies by dieting, and young men worry about muscle size and strengthening their bodies by lifting weights.

And now social role definition is added to the mix. According to stereotype, the male is encouraged to be sexual aggressor, the female is encouraged to be sexual attractor. You can literally see these images played out at the middle and high school football games, for example, where young men bulk up to play a collision sport in front of young women who dress and dance

in form-fitting clothing to cheer them on. These are very incomplete sex role definitions.

After puberty, young women who are not deemed attractive enough by their peers, and young men who are not deemed aggressive enough by their peers, can feel punished by being told and shown how they are not measuring up - girls for being too fat, boys for being too weak.

Hopefully, at this juncture, parents can help their son or daughter escape the pressure of these dehumanizing sex role definitions by explaining a more healthy way to grow. For example, they could say something like this.

"Don't pay too much attention to what the popular sexual stereotypes have to say about how you should be because when it comes to appreciating human variation, they're very restrictive. The truth is, there are as many good ways to be a woman as there are women. There are as many good ways to be a man as there are men. And your job is to discover and develop a good way to be womanly or manly that fits and fulfills the authentic person you want to become."

A final word needs to be said about early puberty, a reality that affects girls a significant number of girls. When puberty begins prior to the usual onset of adolescence (around ages 9 - 13) it can put a girl at serious disadvantage.

1) Not yet ready to separate from childhood, altered appearance makes it look like she is. Wearing a bra and menstruation mark her as physically older than is psychologically the case.

2) In consequence, she is now physically out of step with most of her peers and to a painful degree can be socially set apart and feel lonely. Maybe she starts associating with older girls with who she shares more physical similiarity, and now older social pressures come to bear.

3) She can become sexually suspect based on her early maturing body -- envied and teased by other girls, joked about by male peers, and become the object of unwanted sexual attention from older boys. Even adults can look at her with suspicion, censoring her for acting so sexual by appearing so womanly at such a young age. How older she looks is how old she is treated.

4) Now, like it or not, her journey to young womanhood has begun because now she starts wondering and worrying about whether her body will approximate the ideals of sexual body type portrayed in the media that pressure her to resemble the popular icons that are paraded in this cruelly exploitive world.

5) And of course she feels anxious as her body changes in ways that are beyond her young power to control.

Early puberty is not for the faint of heart.

### **3.7. TEENAGERS AND PUBERTY**

#### **3.7.1. What is puberty?**

Puberty is a period of time during which the onset of sexual maturity occurs and the reproductive organs become functional.

This is manifested in both sexes by the appearance of secondary sexual characteristics – growth of the breasts, pubic hair and first menstrual period.



(menstruation) in girls, and facial and pubic hair and deepening of the voice in boys.

### **3.7.2. How will a child's puberty affect the parents?**

A year or two before reaching puberty, the child will start to change physically and emotionally.

Their growth (and appetite!) increases suddenly, before slowing and finally stopping around the age of 18. The accelerated growth that girls experience in puberty happens at an earlier age than for boys.

At puberty, the child's attitude towards his or her parents is likely to change. Often, children think their parents are hopeless, annoying and old-fashioned.

In return, parents may find their child cheeky and sullen. Obviously, it can be a time of conflict.

It's perfectly natural and inevitable that tensions and controversies between parents and teenagers arise. In fact, it may be more alarming to the parents if there are no conflicts at all because it may be a sign that their child is hiding their problems.

If teenagers continue to suppress emotional problems, they may eventually have problems establishing a normal relationship with other people.

### **3.7.3. How do young people view themselves at puberty?**

At puberty, most children are uncomfortable with their image. They may not like the way they look. They feel clumsy, shy and insecure.

For boys, their voice breaks – and for both boys and girls acne and pimples makes the situation even worse. However, a pharmacist can help with over the counter products, which teenagers will use if they appear in the bathroom!

Few teenagers consider consulting a doctor with these problems and a request by their parents seldom helps. However, there are excellent treatments available and spotty teenagers should seek the advice of their GP.

During puberty your child is developing into a sexually mature adult. Their sexual organs grow and their body changes physically. Boys and girls begin to grow hair under their arms and pubic hair between

their legs. Girls develop breasts and boys grow hair on their faces.

During puberty young people want to be like everyone else of their age.

So girls may be unhappy if they have their first period before the rest of their class or if they're the first – or last – to develop breasts.

For boys, the growth of pubic hair may cause similar problems.

#### **3.7.4. Puberty – child or adult?**

Puberty is a time of contrast because the child shifts between feelings of being a child and becoming an adult.

Friendship with others of the same age may strengthen a teenager's self-confidence. Insecurity may make them want to imitate other people in their age group.

Puberty is a time of life when the child begins to



feel liberated.

But support and security from parents is still of paramount importance. Parents are not only a safety net, but also the platform from which the child can jump out and eventually experience the whole world.

Parents should read as much as they can about the challenges of living with teenagers – the better prepared, the easier the inevitable conflict will be.

### **3.8. Parents can support their preteen:**

As your child approaches and enters puberty, be sensitive to his need for privacy. Preteens often become more modest while they bathe, for example, or change their clothes. Respect this wish for privacy, not only as it relates to their bodies but in other areas as well, such as remembering to knock before entering their rooms.

Preteens also become more sensitive about how they look during this time. Their interest in grooming increases, and they are frequently concerned about their appearance, thanks largely to influence from their peers and advertising messages. Watch for signs of a child who has a negative image of their bodies, which in some cases can result in eating disorders.

It is very important to avoid even good-natured teasing of your child's pubertal development changes. Most pre-teens will be easily embarrassed if they are teased about the changing shape of their bodies or their deepening voices.

### 3.9. Summary

Nobody truly enjoys puberty, but it's a stage of life we all go through. If your tween is approaching puberty, you should be aware of a few challenges or problems that might pop up during the experience. Being prepared is the best way to help your tween and get through this difficult phase of life.

#### **Puberty Problems You Might Encounter**

**Early or Late Puberty:** If puberty begins earlier or later than their peers, tweens may feel self-conscious and anxious. Precocious puberty is the term used to define puberty when it hits earlier than normal, and girls who experience precocious puberty may begin to develop long before they are ready. In addition, these children may experience taunting and bullying from their peers, making the experience even more difficult. Boys, on the other hand, may feel awkward if puberty begins later or after his peers.

**Unhealthy Body Image:** When children hit puberty they become self-aware and unfortunately, that may mean they become very critical of their own bodies. Children may obsess

over acne, hair, and weight -- even children who were previously secure with their bodies. Parents whose children are overly critical of their own bodies can help in numerous ways. For starters, be sure you don't criticize your child's weight or appearance, and point out that the public figures or models we see in magazines or television often don't look like they appear in the media, as their images are enhanced or "perfected" using technology. In addition, offer up positive tips on eating healthy and getting exercise for your child's growing and changing body.

**Sexual Experimentation:** Puberty means that your child is growing up and on his or her way to becoming an adult. Some tweens who go through puberty may be tempted to experiment with sex, putting themselves at risk in numerous ways. It's important your tween knows where you stand regarding sex and that he or she understands your expectations for them. In addition, any child who has gone through puberty should know how to prevent pregnancy, STDs and other potential dangers. Provide your child with important information, and be sure he or she knows that you are always willing to talk and discuss important issues. It's also a good idea to stay in touch with other

parents, so that you know what's going in your child's school and with his peers.

**Parent/Child Tension:** When a child goes through puberty both parents and children experience a great deal of change. Tension between parent and child can result from puberty, as your child pulls away from you and attempts to become independent. Of course, parents know that children aren't yet ready to take complete control over their lives, but the tweens don't always realize that. Try to minimize tension by giving your child a little more independence, and by rewarding responsible behavior. Take the time to bond with your child in new ways, and by allowing your tween to make friends a priority in his life.

**Bad Decision Making:** Adolescence is a time of risk taking, and that may mean that your child may experiment with drinking, drugs or other dangerous behaviors. Again, the best defense is to establish an open line of communication with your tween. Talk about these dangers and why you want your tween to avoid them. Be supportive and let your child know that he can talk to you about what's happening at school, in the neighborhood and with friends.



### 3.10. Check your progress

#### Q.9 When do boys go through puberty?

**Puberty** is the time in life when a young person starts to become sexually mature. In girls, **puberty** usually starts around 11 years of age, but it may start as early as 6 or 7 years of age. In **boys**, **puberty** begins around 12 years as age, but may start as early as 9 years of age

#### Q.10 Do boys have a period?

**Guys** don't have **periods** because they have don't have a uterus. The long answer is: Girls and **guys** have different reproductive organs. When girls get to a certain age they go through puberty and start to menstruate (**have periods**). There are other changes that happen too – girls develop breasts and pubic hair.

**Q.11 What happens to a guy during puberty?**

As a boy goes through **puberty** his penis will grow bigger and longer, and his testicles move lower down his scrotum. Sometimes one testicle grows faster than the other, and it is natural for one to hang lower than the other. Pubic hair will also start to grow at the base of his penis.

**Q.12 What is puberty in psychology?**

**Puberty** is the time in which a child's sexual and physical characteristics mature. It occurs due to hormone changes. Adolescence is the period between **puberty** and adulthood.







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## **Chapter 5 UNIT 4**

# **GENDER AND DEVELOPMENT**

### **STRUCTURE**

- 19.1. Introduction**
- 19.2. Objectives**
- 19.3. Gender Identity**
- 19.4. Adolescent Physical Development**
- 19.5. Puberty and Sexual Development**
- 19.6. Early or Late Sexual Development**
- 19.7. Physical Appearance and Body Image**
- 19.8. Physical Activity and Weight**
- 19.9. What's the Difference Between Gender and Sex?**
- 19.10. How Does Gender Identity Develop in Children?**
- 19.11. What parents can do:**
- 19.12. How do children typically express their gender identity?**
- 19.13. Gender identity and gender role**
- 19.14. Sex and gender**
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- 19.19. References / further readings**



## Chapter 6 UNIT 4

# GENDER AND DEVELOPMENT

### 19.1. INTRODUCTION

During adolescence, teens become more and more aware of their sexuality and what it means to be part of their gender. In this lesson, we'll explore how gender identity and sexual orientation develop in adolescence.

The term identity comes from the Latin noun "identitas," which means the same. The term, referring to a person's mental image of him or herself thus implies some sameness with others in a particular way. Each individual may have a number of identities, such as an ethnic identity, a religious identity, or a national identity (Kroger, 2007).

A very fundamental identity, however, is one's gender identity. Gender identity refers to the extent to which a person experiences oneself to be like others of one gender. One's sense of being male or female largely determines how people view themselves and provides an important basis for their interactions with others.

## **19.2. OBJECTIVES**

- To study about Gender Identity
- To understanding of Adolescent Physical Development
- To understanding Puberty and Sexual Development
- To study about Early or Late Sexual Development
- To Difference between Gender and Sex

### 19.3. Gender Identity

Over the years the terms gender identity and also gender role (behaviors, attitudes, and personality traits which, within a given society and historical period, are typically attributed to, expected from, or preferred by persons of one gender) have been used in different ways. In the 1950s, the terms were introduced in the clinical literature when psychologists working with individuals with disorders of sex development (DSD; previously called intersex conditions), and with gender dysphoria started to study gender identity development.

In most cases, gender identity will develop in accordance with physical gender characteristics. A baby with XY sex chromosomes and male genitalia will generally be assigned to the male gender, will show male typical behaviors, and have a male gender identity. Discordance between these gender aspects does occur, however, in some conditions. DSD are congenital conditions in which the development of chromosomal, gonadal, or anatomical sex is atypical (Hughes et al., 2006). For instance, in DSD, external male appearing genitalia may not correspond with the gonads, and/or sex chromosomes. Gender identity may be in line with the chromosomes and gonads, but not with the external genitalia.

Gender dysphoria refers to the distress resulting from incongruence between experienced/expressed gender and assigned gender. In gender dysphoric individuals, a gender identity may develop that does not match with sex chromosomes, gonads and genitalia, although the physical sex characteristics all correspond with each other.

Albert Ellis was one of the first to report on gender identity and sexual orientation variations in adults with DSD (Ellis, 1945).

A decade later, this line of research was continued and elaborated by John Money, a modern sexologist who worked with children with DSD (Money, 1994).

He proposed to make a clear distinction between the terms sex and gender, because, particularly in the field of DSD, sex is a confusing concept.

For instance, does a 46, XY person with a complete androgen insensitivity syndrome (CAIS), characterized by high testosterone levels, undescended testes, and a vulva belong to the male or female sex? Money also introduced the dual concept of gender identity/role (GI/R). He considered gender identity to be the private manifestation of gender role, and gender role the public manifestation of gender identity. However, in gender dysphoric persons, the gender role, which, according to Money is the public expression of one's gender

identity, is at least for some period, seriously blocked. Their gender identity, but not their gender role, may thus be different from their assigned gender. For this reason, and because in research the concepts are often dealt independently, gender identity and gender role are currently used separately.

Some decades ago, Stoller (1968) introduced the concept of core gender identity .He considered it the “...essentially unalterable core of gender identity (e.g., I am male) to be distinguished from the related but different belief, I am manly (or masculine)...” and speaks of an “inner conviction that the sex of assignment was right”.

In many ways, Andy is a normal 16-year-old and does normal 16-year-old things, like going to school and socializing with friends. But Andy feels very different from other 16-year-olds. While most teenage boys like football and action movies, Andy doesn't. In fact, Andy doesn't even feel like a boy. Despite what Andy's body looks like, Andy feels like a girl. She's even started spelling her name with an 'i' on the end.

Andi is in **adolescence**, or the time between childhood and adulthood. Many changes occur during adolescence, including those around gender identity like what Andi is going through.

Let's look closer at how gender and sexual orientation develop in adolescence.

Andi isn't alone in what she's going through. As children turn into adolescents, they begin to question what it means to be part of their gender, and some adolescents find that their gender and their sex organs don't match up, as with Andi.

One of the first stages of gender development in adolescence involves establishing **gender identity**, or what it means to be part of each gender. For example, Andi developed the idea that a man is tough and likes cars and sports. In early adolescence, people tend to be very rigid about gender roles. Boys sometimes act very hyper-masculine and macho and girls sometimes act very girly and lady-like. Many adolescents conceptualize masculinity and femininity in very rigid, differentiated ways. As adolescents develop, most of them begin to understand gender roles differently. For example, Andi eventually understood that men can be gentle and like cooking instead of sports. Later in adolescence, many people conceptualize genders roles as more flexible than before. For many people, thinking about gender identity is all that they ever have to think

about, but some adolescents, like Andi, discover that gender identity is more complicated than that.

To understand Andi's situation, let's first look at the difference in 'gender' and 'sex'. A person's **sex** is about the sexual organs. Because she has male sex organs, Andi's sex is male. But that's not the whole story. A person's **gender** is the psychological state of being male or female. For many people, gender and sex are the same; someone with female genitals feels like a girl. But sometimes, as in the case with Andi, a person's sex and gender are not the same. For example, Andi's sex is male, but her gender is female. As adolescents figure out gender identity, they also sometimes discover that their sex and gender are different, as Andi has.

#### **19.4. Adolescent Physical Development**

Entering puberty heralds the physical changes of adolescence: a growth spurt and sexual maturation. Professionals who work with adolescents need to know what is normative and what represents early or late physical development in order to help prepare the adolescent for the myriad changes that take place

during this time of life. Even in schools where sex education is taught, many girls and boys still feel unprepared for the changes of puberty, suggesting that these important topics are not being dealt with in ways that are most useful to adolescents (Coleman & Hendry, 1999).

### **19.5. Puberty and Sexual Development**

Although it sometimes seems that adolescents' bodies change overnight, the process of sexual maturation actually occurs over a period of several years. The sequence of physical changes is largely predictable, but there is great variability in the age of onset of puberty and the pace at which changes occur (Kipke, 1999). There are numerous factors that affect the onset and progression of puberty, including genetic and biological influences, stressful life events, socioeconomic status, nutrition and diet, amount of body fat, and the presence of a chronic illness. The growth spurt, which involves rapid skeletal growth, usually begins at about ages 10 to 12 in girls and 12 to 14 in boys and is complete at around age 17 to 19 in girls and 20 in boys (Hofmann & Greydanus, 1997). For most adolescents, sexual maturation involves achieving fertility and



the physical changes that support fertility. For girls, these changes involve breast budding, which may begin around age 10 or earlier, and menstruation, which typically begins at age 12 or 13.9 For boys, the onset of puberty involves enlargement of the testes at around age 11 or 12 and first ejaculation, which typically occurs between the ages of 12 and 14. The development of secondary sexual characteristics, such as body hair and (for boys) voice changes, occurs later in puberty.10 Many adults may still believe that the magic age of 13 is the time to talk about puberty, but for many boys and girls, this is years too late. A recent study of 17,000 healthy girls ages 3 through 12 visiting pediatricians' offices found that 6.7% of White girls and 27.2% of African American girls were showing some signs of puberty by age 7 (i.e., breast and/or pubic hair development) (Herman-Giddens et al., 1997; Kaplowitz and Oberfield, 1999). The findings of this study suggest that onset of puberty may be occurring about 1 year earlier in White girls and 2 years earlier in African American girls than had previously been thought.11 However, studies have not yet been completed on nonclinical samples to confirm that this is the case for girls in general. Relatively little research has examined differences in the course of puberty among different ethnic groups; this is clearly an area that deserves additional attention

(Lerner & Galambos, 1998). Professionals who work with children and their families can alert parents to the need to prepare their children early for the changes of adolescence. Professionals can also offer helpful advice to parents and other adults about how to discuss puberty with younger adolescents. Research findings suggest that adolescent girls who are unprepared for the physical and emotional changes of puberty may have the most difficulty with menstruation (Koff & Rierdan, 1995; Stubbs, Rierdan, & Koff, 1989). When 157 ninth grade girls were asked to suggest how younger girls should be prepared for menstruation, they recommended that mothers provide emotional support and assurance, emphasize the pragmatics of menstrual hygiene, and provide information about how it will actually feel, emphasizing positively their own first experiences with menstruation (Koff & Rierdan, 1995). The girls also recommended that fathers not comment on their daughters' physical changes, and that mothers not discuss these changes with fathers in front of the adolescent, even when they become evident. Although research on boys' first experiences of sexual maturation is limited, some evidence suggests that boys, too, are more comfortable with the physical changes of adolescence when adults prepare them. For example, young adolescent boys who were not prepared for

these changes have reported feeling “somewhat perplexed” upon experiencing their first ejaculations of semen during dreaming or masturbation (Stein & Reiser, 1994). The implication of these findings is that adolescents should be prepared for the upcoming changes early, at about 9 or 10 years of age, so they will not be caught off guard when the changes occur.

### **19.6. Early or Late Sexual Development**

It is important for adults to be especially alert for signs of early and late physically maturing adolescents— particularly early maturing girls and late maturing boys—because these adolescents appear to be at increased risk for a number of problems, including depression (Graber, Lewinsohn, Seeley, & Brooks-Gunn, 1997; Perry, 2000). For example, early maturing girls have been found to be at higher risk for depression, substance abuse, disruptive behaviors, and eating disorders (Ge, Conger, & Elder, 2001; Graber et al., 1997; Striegel-Moore & Cachelin, 1999).<sup>12</sup> Likewise, there is growing evidence that boys whose physical development is out of synch

with their peers are at increased risk for problems. Early maturing boys have been found to be more likely to be involved in high-risk behaviors such as sexual activity, smoking, or delinquency (Flannery et al., 1993; Harrell, Bangdiwala, Deng, Webb, & Bradley, 1998). Although early physical maturation does not appear to pose as many problems for boys as it does for girls, late maturation seems to place boys at greater risk for depression, conflict with parents, and school problems (Graber et al., 1997). Because of their smaller stature, late maturing boys may also be at higher risk for being bullied (Pollack & Shuster, 2000). Adults, including parents, may not be aware of the risks of early maturation for girls and be unprepared to help these adolescents deal with the emotional and social demands that may be placed on them (Graber et al., 1997). For example, older boys—and even adult men— may be attracted to early maturing girls at a time when the girls do not yet have the social maturity to handle these advances, placing them at risk for unwanted pregnancies and sexually transmitted diseases (Flannery, Rowe, & Gulley, 1993). Professionals can talk openly with early maturing youth and their parents about the likelihood that they will confront peer pressure to engage in activities that they are not yet emotionally ready to handle, such as dating and sexual activity.

For most teens, telling them to “just say no” does not help them to deal with sexually stressful interpersonal situations in which they are anxious to be liked. Instead, professionals can help the adolescent identify and practice strategies in advance for dealing with or avoiding these situations. Parents may need guidance to understand that adolescent autonomy should be linked to the teen’s chronological age and social and emotional development, and not to the level of physical development, whether early, on time, or late. For example, 13-year-olds should be given earlier curfews and be more closely supervised than older teens, even if they physically appear to be much older. Likewise, an adolescent whose physical maturity is behind his or her peers may still be ready for increased independence.

### **19.7. Physical Appearance and Body Image**

Regardless of the timing of the physical changes that take place during adolescence, this is a period in which physical appearance commonly assumes paramount importance. Both girls and boys are known to spend hours concerned about their appearance, particularly in order to “fit in” with the norms of

the group with whom they most identify. At the same time, they wish to have their own unique style, and they may spend hours in the bathroom or in front of the mirror trying to achieve this goal. Adults should take adolescents seriously when they express concerns about aspects of their appearance, such as acne, eyeglasses, weight, or facial features. If an adolescent is concerned, for example, that he is overweight, it is important to spend the time to listen, rather than dismissing the comment with the reassurance that “you look fine.” Perhaps a peer made a comment about his appearance at a time when he had been wondering about the same thing. Adults need to understand the meaning and context of the adolescent’s concern and to keep the lines of communication open. Otherwise, the adolescent may have a difficult time keeping the problem (and potential solutions) in perspective or be less likely to express concerns in the future.

### **19.8. Physical Activity and Weight**

Approximately 14% of adolescents aged 12 to 19 years are overweight—nearly 3 times as many as in 1980 (USDHHS, 2001). Overweight adolescents are at greater risk for type II

diabetes, high blood lipids, and hypertension and have a 70% chance of becoming overweight or obese adults. In addition, they may suffer from social discrimination, particularly from their peers, which can contribute to feelings of depression or low self-esteem. Diseases directly related to lack of exercise, such as obesity and diabetes, have been reported to be more prevalent among ethnic minority teens (Ross, 2000). For example, type II diabetes is particularly prevalent among Native American and Alaska Native adolescents, and obesity is more frequent among African American teenage girls than among White teenage girls (Ross, 2000). Several factors contribute to the increased prevalence of overweight among teens. One factor is that levels of physical activity tend to decline as adolescents get older. For example, a 1999 national survey found that over a third of 9th through 12th graders do not participate regularly in vigorous physical activity (USDHHS, 2000). Furthermore, enrollment in physical education drops from 79% in 9th grade to 37% in 12th grade; in fact some of the decline in activity is due to fewer opportunities to participate in physical education classes and to reduced activity time in physical education classes. Lastly, many teens do not have nutritionally sound diets: Three-quarters of adolescents eat fewer than the recommended

servings of fruits and vegetables per day (MMWR, 2000). Participation in sports, which has important direct health benefits, is one socially sanctioned arena in which adolescents' physical energies can be positively channeled. Other activities in which physical energy can be channeled include dance, theatre, carpentry, cheerleading, hiking, skiing, skateboarding, and part-time jobs that involve physical demands. These activities provide adolescents with opportunities for getting exercise, making friends, gaining competence and confidence, learning about teamwork, taking risks, and building character and self-discipline (Boyd & Yin, 1996). Despite the considerable rewards of sports and other extracurricular activities, many adolescents do not participate in them. Barriers to participation in organized sports activities include costs, lack of transportation, competing time commitments, competitive pressures in the sport, and lack of parental permission to participate (Hultsman, 1992). Other barriers can include lack of access to safe facilities, such as recreation centers or parks, particularly in inner city or rural areas. Some youth may also have other important obligations, such as working or caring for younger siblings, that prevent their participation. Youth with disabilities or special health needs may especially experience difficulty identifying recreational opportunities that



accommodate their particular needs (Hergenroeder, 2002). Professionals should examine each of these impediments to determine how to overcome them to reduce barriers to participation.

Professionals can help adolescents and their parents understand the importance of physical activity and good nutrition for maintaining health and suggest healthy options. In doing so, it is important to keep in mind the family's resources, such as the family's ability to pay for organized athletic activities, and its cultural background, which may, for example, influence its diet.

### **19.9. What's the Difference Between Gender and Sex?**

Being a boy or a girl, for most children, is something that feels very natural. At birth, babies are assigned male or female based on physical characteristics. This refers to the "sex" of the child. When children are able to express themselves, they will declare themselves to be a boy or a girl (or sometimes something in between); this is their "**gender identity**." Most children's gender identity aligns with their biological sex. However, for some children, the match between biological sex

and gender identity is not so clear. This article discusses how parents can promote healthy gender development in children.

### **19.10. How Does Gender Identity Develop in Children?**

Around two-years-old, children become conscious of the physical differences between boys and girls. Before their third birthday, most children are easily able to label themselves as either a boy or a girl. By age four, most children have a stable sense of their gender identity. During this same time of life, children learn gender role behavior—that is, doing "*things that boys do*" or "*things that girls do.*"

Before the age of three, children can differentiate toys typically used by boys or girls and begin to play with children of their own gender in activities identified with that gender. For example, a girl may gravitate toward dolls and playing house. By contrast, a boy may play games that are more active and enjoy toy soldiers, blocks, and toy trucks.

### 19.11. What parents can do:

All children need the opportunity to explore different gender roles and different styles of play. Ensure your young child's environment reflects diversity in gender roles and encourages opportunities for everyone. Here are some ideas:

- Children's books or puzzles showing men and women in non-stereotypical and diverse gender roles (*e.g. stay-at-home dads, working moms, male nurses, female police officers, etc.*)
- A wide range of toys for all children, including baby dolls, toy vehicles, action figures, blocks, etc.
- By age six, most children spend the majority of their playtime with members of their own sex and may gravitate towards sports and other activities that are associated with their gender. **It is important to allow children to make choices regarding what sports and other activities they get involved in.**

## 19.12. How Do Children Typically Express Their Gender Identity?

In addition to their choices of toys, games, and sports, children typically express their gender identity in the following ways:

- Clothing or hairstyle
- Preferred name or nickname
- Social behavior that reflects varying degrees of aggression, dominance, dependency, and gentleness.
- Manner and style of behavior and physical gestures and other nonverbal actions identified as masculine or feminine.
- Social relationships, including the gender of friends, and the people he or she decides to imitate.

**While a child's gender-specific behavior seems to be influenced by their identification with the males and females in their lives, the sense of being a girl or a boy (*i.e. gender identity*) cannot be changed.**

### Gender Stereotypes

Over time, society has recognized that stereotypes of masculine and feminine behaviors and characteristics are inaccurate. In the past, girls were only allowed to do feminine things like playing with dolls or cooking. They were expected to be more passive.

Boys were expected to be more aggressive and to only show masculine behaviors.

Times have changed:

Our expectations of "*what girls do*" and "*what boys do*" have changed. Girls frequently excel at sports and school subjects traditionally thought of as masculine. Boys frequently excel in artistic subjects once traditionally thought of as feminine. All children show some behaviors that were once thought of as typical for the opposite gender -- no one shows exclusively male or female traits -- and this is normal.

When a child's interests and abilities are different from what society expects, he or she is often subjected to discrimination and bullying. It is natural for parents to want their child to be accepted socially. However, children need to feel comfortable with and good about themselves. If your son doesn't excel in sports or even have an interest in them, for example, there will still be many other opportunities and areas in which he can excel. Each child has his own strengths, and at times, they may not conform to society's or your own expectations, but they will still be a source of his current and future success.

Thus, rather than force your child into the mold of current or traditional gender behavior, help him or her fulfill his or her

own unique potential. Don't become excessively concerned with whether your child's interests and strengths coincide with the socially defined gender roles of the moment

### **19.13. Gender identity and gender role**

Gender identity is defined as a personal conception of oneself as male or female (or rarely, both or neither). This concept is intimately related to the concept of gender role, which is defined as the outward manifestations of personality that reflect the gender identity. Gender identity, in nearly all instances, is self-identified, as a result of a combination of inherent and extrinsic or environmental factors; gender role, on the other hand, is manifested within society by observable factors such as behavior and appearance. For example, if a person considers himself a male and is most comfortable referring to his personal gender in masculine terms, then his gender identity is male. However, his gender role is male only if he demonstrates typically male characteristics in behavior, dress, and/or mannerisms.

Thus, gender role is often an outward expression of gender identity, but not necessarily so. In most individuals, gender identity and gender role are congruous. Assessing the

acquisition of this congruity, or recognizing incongruity (resulting in gender-variant behavior), is important in the developing child. It is important also to note that cultural differences abound in the expression of one's gender role, and, in certain societies, such nuances in accepted gender norms can also play some part in the definition of gender identity.

In order to understand gender identity development and related issues, definitions must be emphasized for clarity. The topic of gender identity is often discussed merely in terms of dysfunction, and the diagnosis of gender identity disorder is a known phenomenon in both children and adults.<sup>[1]</sup> However, physicians should remember that all individuals possess a gender identity and that the process of becoming aware of it is an important part of the psychosocial development of a child. In the realm of pediatrics, recognition of gender identity is a process rather than a particular milestone, and variance from societal norms can cause distress to both the child and the child's family. It is necessary to understand the varied pathways that lead to a mature and congruent gender role in order to fully assess a person's behavioral health.

### 19.14. Sex and gender

In the English language, the terms sex and gender are often used interchangeably in the vernacular. However, in a medical and technically scientific sense, these words are not synonymous. Increasingly, the term gender is being accepted to define psychophysiologic processes involved in identity and social role. Therefore, it is not uncommon to hear references to "gender" by professionals from numerous disciplines, including medicine, psychology, anthropology, and social science. Gender comes from the Latin word *genus*, meaning kind or race. It is defined by one's own identification as male, female, or intersex; gender may also be based on legal status, social interactions, public persona, personal experiences, and psychologic setting.

Sex, from the Latin word *sexus*, is defined by the gonads, or potential gonads, either phenotypically or genotypically. It is generally assigned at birth by external genital appearance, due to the common assumption that this represents chromosomal or internal anatomic status. When an intersex condition is noted in a newborn, one sex is often chosen with the intention of simplifying social interactions and rearing.



A person's sex is a primary state of anatomic or physiologic parameters. A person's gender is a conclusion reached in a broad sense when individual gender identity and gender role are expressed. An often-used phrase to point out the difference, while an oversimplification, has some merit when dealing with these definitions: Sexual identity is in the perineum; gender identity is in the cerebrum. Increasingly, the more subjective sense of gender identity takes precedence in evaluating patients' needs. In instances when a discrepancy exists between sex and gender, compassion and empathy are essential to foster better understanding and an appropriate relationship between the physician and the patient. Conceptually, professionals dealing with development may fairly state that sex is biologically determined, whereas gender is culturally determined.

Note that just as gender and sex are not interchangeable terms, neither are gender development and sexual development interchangeable. Physiologic sexual development progresses through distinct stages from the neonatal period through infancy, childhood, puberty and adolescence, and adulthood. Such physiologic change is distinguishable from gender-related behaviors during each of these stages. The sexual identity that emerges beyond childhood is very clearly a separate entity from gender identity. Aspects of physical sexual growth, eroticism,

and eventual sexuality, although closely related to gender, should not necessarily be used to draw conclusions about a patient's gender definitions.

### 19.15. Summery

Adolescents accept these prescribed gender roles, which shape their understanding of the 'man–woman relationship' and thus influence their attitude and behaviour towards the opposite sex and towards all sexual and reproductive health issues. Once such stereotyped gender-role attitudes are formed, it is very difficult to change them. This is why an urgent need is felt to provide adolescents with a non-stereotyped environment before they mature and begin to adopt rigid notions of stereotyped gender roles. Appropriate gender-role development among adolescents is regarded as essential for ensuring their healthy physical, emotional, and social growth and development. They need to appreciate the importance of equal relationships between men and women in all matters, including sexual relations and reproduction in a civilised society. Gender roles need to be redefined in order to meet the following requirements:

- It is important to realise that women not only have a particular identity as women but that they also have a universal identity as human beings. Like men, women

have equal self-worth, social worth, and dignity. All human beings are born free, and enjoy equal dignity and rights. A civilised society cannot afford to treat its women as objects. The man–woman relationship must be based on a respectful and harmonious partnership.

- It is important to respect the integrity of an individual. This requires mutual respect, mutual consent, and a willingness to accept responsibility for the consequences of sexual behaviour.
- Mutual respect and equitable relations between the sexes promote responsible sexual behaviour, thus contributing to the improvement of the quality of life of individuals.
- Society must take up reproductive health as a human rights issue encompassing women's right to have control over their bodies and to decide freely and responsibly on matters related to sexual and reproductive health, without coercion, discrimination, and violence. It is essential to create an environment in which women and girls can assert their wishes and take their own decisions.
- Sexual and Reproductive Health and gender relations are closely interrelated. These together affect the ability of

men and women to achieve and maintain sexual health and manage their reproductive lives.

- There is an urgent need to eliminate all forms of discrimination against the girl child and the root cause of son preference, which result in harmful and unethical practices. It is equally important to appreciate the value of the girl child and to strengthen her self-image, self-esteem, and status.

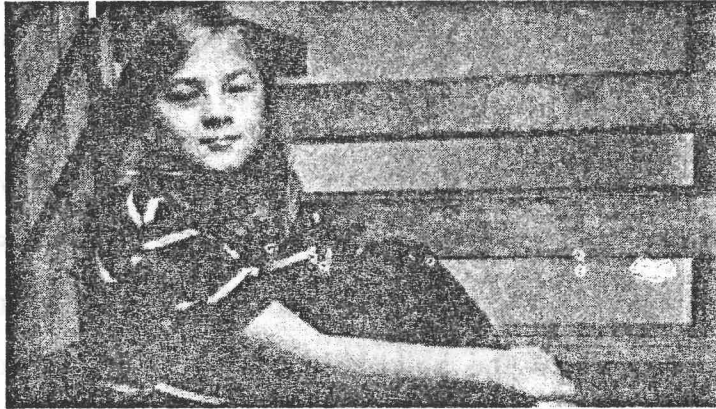
African American girls begin menstruating an average 6 months earlier than White girls, possibly due to genetic or dietary differences (Archibald, Graber, & Brooks-Gunn, 1999; Douchis, Hayden, & Wilfley, 2001; HermanGiddens, Slora, & Wasserman, 1999). 10 Health care professionals and researchers refer to the 5- point Tanner scale, which describes the external physical changes that take place during adolescence (e.g., the stages of development of breasts and pubic hair in girls and of genitalia and pubic hair in boys), to assess progression through puberty. Others, including parents and nonmedical professionals, can also learn to use this scale (Archibald, Graber, & Brooks-Gunn, 1999; Marshall & Tanner, 1969, 1970). 11 Several reasons have been proposed

for this early onset of puberty in girls, including increased body weight, genetics, exposure to hormones in meat or milk, and increased exposure to sexual images in the media. For a recent discussion in the popular press of why some girls are reaching puberty at earlier ages, see the Time magazine cover story, October 30, 2000.

The full participation and partnership of both men and women is required in reproductive life, including shared responsibilities for the care and nurturing of children and for the maintenance of the household. Underlying the plea for shared responsibilities is the need for addressing the larger question of unequal power relations between women and men and for questioning socially prescribed gender roles. Women's empowerment and male involvement in reproductive health are two sides of the same coin. Sensitisation of girls and boys to gender issues during adolescence is crucial in making them appreciate the importance of working together to achieve a healthy relationship.

## 19.16. Check Your Progress

### Chapter 7 Gender Non-Conforming & Transgender Children



Some children have a gender identity that is different from their

sex assigned at birth, and many have interests and hobbies that may align with the other gender. Some children, however, do not identify with either gender. They may feel like they are somewhere in between or have no gender. It is natural for parents to ask if it is "just a phase." But, there is no easy answer.

For some young children, expressing a wish to be or identifying as another gender may be temporary; for others, it is not. Only time will tell. Some children who are gender non-conforming in early childhood grow up to become transgender adults (*persistently identifying with a gender that is different from their birth sex*), and others do not. Many gender non-

conforming children grow up to identify with a gay, lesbian, or bisexual sexual orientation (*i.e. attracted to the same or both genders as opposed to feeling they are a different gender*).

### **Parenting a Gender Non-Conforming Child**

There is no way to predict how a child will end up identifying him or herself later in life. This uncertainty is one of the hardest things about parenting a gender non-conforming child. It is important for parents to make their home a place where their child feels safe and loved unconditionally. **Research suggests that gender is something we are born with; it can't be changed by any interventions. It is critically important that children feel loved and accepted for who they are.**

#### **Q.1 Will my child grow up to be transgender?**

Many Researches suggest that children who are persistent, consistent, and insistent about their gender identity are the ones who are most likely to become transgender adults. It is important support and follows the lead of the child. This may mean you will not have an answer for quite a long time, which can be very difficult for parents. Here are some examples:

- **If your teenager has identified as a different gender since early childhood, it is unlikely he or she will**



**change his or her mind.** A 12-year-old male who has consistently asserted, "*I am a girl,*" since the age of three, will most likely remain transgender throughout life.

- **Sometimes a young child who strongly identifies with another gender does change.** The most common time for this to occur is about 9 or 10-years-old. There is not enough research to know if this change means the child has learned to hide his or her true self due to social pressures, or if it was indeed "*just a childhood phase.*"
- **Puberty is another time when a child's gender identify can come into question.** Sometimes teens who never exhibited anything outside the norm in their gender expression or identity, may start feeling differently as their bodies change. Finding out your teen is transgender can be very confusing for parents who "*didn't see this coming.*" Many are unsure if it is just a "*teenage phase*" or their child is really transgender. It may be helpful to allow your teen to explore their gender identity with support from a counselor or therapist who has experience supporting transgender youth.

## **Q.2 What caused my child to identify with a different gender?**

While we do not understand why some children identify with a gender different from their birth sex, the cause is likely both

biological and social. **There is no evidence that parenting is responsible for a child having a gender identity that is not in line with his or her biological sex.** Experiencing childhood trauma will not cause a child to become gender non-conforming, transgender, or homosexual. There is nothing "wrong" with your child. However, children perceived as "different" may suffer from teasing or bullying. If this is happening, speak with the child's teacher and the school to create a plan to prevent bullying. The most important thing to remember is to support, love, and accept your child as he or she is.

**Q.3 Will my child choose to transition? What's like process like?**

At some point, a child who is persistently gender non-conforming may choose to "transition", or begin to live as his or her self-identified gender instead of the gender assigned at birth. The transitioning process is different for everyone, and is often initiated by the child.

- Some children make a transition early in childhood by wearing the clothing for their identified gender and changing their name or pronoun.
- Medical treatment is available to block the signs of puberty associated with the biological sex during early

adolescence. These are sometimes called "puberty blockers;" they prevent the secondary characteristics associated with puberty from occurring (*e.g. voice deepening, facial hair, and height in males; breast development in females*). These medications allow more time for the young teen and his or her family to make a decision about next steps in transitioning. The effects of these medications mimic those of a natural hormone found in the body and are completely reversible when the medications are stopped.

- Later in adolescence, teens can choose to use medication or hormones to transition and go through the puberty of the gender consistent with their identity.
- Some adults choose to have surgeries, and some do not. If a young person has taken puberty blockers prior transitioning, they will not require some surgeries to reverse the effects of puberty (*i.e. breast removal or facial feminization*).

In any case, those desiring to make a medical transition need to have a relationship with a counselor or therapist who has experience supporting transgender youth. The child will also need to see a pediatric endocrinologist or a doctor who

specializes in hormone therapy for young people, ideally just before the start of puberty.

### **Sexual Orientation vs. Gender Identity**

Sexual orientation refers to the person someone falls in love with or is attracted to. Sexual orientation becomes evident later childhood, while gender identity refers to the way one identifies him or herself in early childhood. While sexual orientation and gender identity are quite distinct tracks of development, children who are gender non-conforming often grow up to identify as gay or bisexual, and many gay or bisexual adults recall gender non-conforming behavior in childhood. **Like gender identity, an individual's physical and emotional attraction to a member of the same or the opposite sex cannot be changed.**

### Your Child's Mental Health

All gender non-conforming children (*regardless of whether they later identify as straight, gay, lesbian, bisexual, or transgender*), are at risk for bullying and mental health problems.

A large proportion of teenage suicide attempts are linked to issues of gender and sexuality, and many gay, lesbian, bisexual, and transgender youth attempt suicide. As a parent, your most

important role is to offer understanding, respect, and support to your child. A non-judgemental approach will gain your child's trust and put you in a better position to help him or her through difficult times. You need to be supportive and helpful, no matter what your child's gender identity or sexual orientation may be. **Research has shown that supportive families greatly reduce a teen's risk of suicide.**

**Q.4 What parents can do:**

- When your child discloses his or her identity to you, respond in an affirming, supportive way. Understand that although gender identity and sexuality are not able to be changed, the way people identify their sexual orientation or gender identity may change over time as they discover more about themselves.
- Accept and love your child as they are. They will need your support and validation to develop into healthy teens and adults.
- Stand up for your child when he or she is mistreated. Do not minimize the social pressure or bullying your child may be facing.

- Make it clear that slurs or jokes based on gender, gender identity, or sexual orientation are not tolerated. Express your disapproval of these types of jokes or slurs when you encounter them in the community or media.
- Be on the look out for signs of anxiety, insecurity, depression, and low self-esteem. Some children who do not have a supportive family or friend group may struggle with these emotional problems.
- Connect your child with LGBTQ organizations, resources, and events. It is important for them to know they are not alone.
- Celebrate diversity in all forms. Provide access to a variety of books, movies, and materials—including those that positively represent same-sex relationships. Point out LGBTQ celebrities, role models who stand up for the LGBTQ community, and people who demonstrate bravery in the face of social stigma.
- Support your child's self-expression through choices of clothing, jewelry, hairstyle, friends, and room decoration.
- Reach out for education, resources, and support if you feel the need to deepen your own understanding of LGBTQ youth experiences.

### **Support for Families**

Having a gender non-conforming child can be very stressful for parents and caregivers, as they deal with uncertainty and navigate schools, extended families, sibling relationships, and the world around them. There are several national and international organizations that support families with gender non-conforming children (*see resources below*), as well as excellent books. Many parents and siblings also find it helpful to meet with a mental health care professional or other families in a support group setting.

#### **Q.5 When to Talk to Your Child's Pediatrician:**

If your child persistently identifies as another gender, rather than just showing a mix of behaviors, talk to your pediatrician. Your child may need help from a mental health professional to sort out his or her feelings regarding gender or sexuality, or to help cope with being different.

Children who are gender-nonconforming are more likely to suffer from anxiety and depression due to bullying, discrimination, and non-acceptance. It is important to talk to your child's pediatrician or mental health professional if you are concerned that your child may be suffering from any mental health problems.











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## Chapter 8

### UNIT 5

# Influence of the Environment (Social, Cultural, Political) on the Growing Child

#### STRUCTURE

- Introduction
- Objectives
- Why are children particularly susceptible to external influences?
- What are social environments?
- The importance of positive social environments and relationships for parents
- How do social environments and social relationships influence a child's development?
- Summary
- Check your progress
- Assignment/activity
- Points for discussion and clarification
- References / further readings



## UNIT 5

# **Influence of the Environment (Social, Cultural, Political) on the Growing Child**

### **20.1. INTRODUCTION**

The final years of the twentieth century and first decade of the twenty-first century saw unparalleled global interest in the survival and development of children. This interest reflects commitments made under the terms of the UN Convention on the Rights of the Child to support and protect all young people below the age of 18, as well as efforts towards the Millennium Development Goals to reduce child mortality, eradicate poverty and hunger, and attain universal primary education and gender equity. It responds also to growing disquiet about the fact that children and young people today seemingly confront unprecedented levels of insecurity and risk (UNICEF 2011). The improvement of children's life-chances and well-being is thus a legitimate goal of development in itself. At the same time, there is increasing awareness that childhood experience is crucial to the adults that we become, and therefore it is increasingly recognised that enhancing the position of children

is intrinsically connected with a broader process of developing economies and societies. Moreover, there is mounting global consensus that economic growth is essential, but not sufficient, for the realisation of this human potential. Thus, investing in children is not only the right thing to do for their survival and quality of life: it is also vital for creating and sustaining broad-based economic growth (Commission on Growth 2008). International accords and advocacy to promote children's rights and development have galvanised government support for children and young people in many places. The first wave of measures, in health and nutrition, gained momentum from the Health for All commitments made in the 1978 Alma Ata Declaration, the International Drinking Water Supply and Sanitation Decade in the 1980s, and UNICEF's GOBI programme (to promote Growth monitoring, Oral rehydration, Breast-feeding and Immunisation). Together, these initiatives proved remarkably successful, dramatically reducing mortality and morbidity among infants and children under the age of 5 in most of the world. The second wave, in education, gave rise to the Education For All declaration in 1990. Education For All commitments have led to notable advances in school access and levels of literacy and numeracy and raised children's aspirations practically everywhere. But longer-term and more

transformational benefits remain beyond the reach of many or most children. Urban populations still regularly receive the lion's share of funds, and, while the poor benefit from a good portion of government spending on primary education in many countries, they capture much less of secondary-level spending and almost nothing of tertiary-level expenditure. Since the higher levels are much more costly to provide, state education in these countries is decidedly pro-rich (Rolleston 2011). Similarly, efforts aligned with the Millennium Development Goals have been more successful in raising overall access to basic services than in addressing the intractable inequalities that are commonly hidden within these targets. Moreover, rapid growth in public education provision has in some cases (for example, Kenya and Malawi) been associated with declining quality, while perceptions of poor quality are also connected with a growth in low-cost private schooling (as in Nigeria, Kenya, and India). The third wave of measures, in 'child protection', received its greatest impetus from the near-universal ratification of the UN Convention on the Rights of the Child, since many of the articles in this treaty focus on protecting children who are exposed to serious adversities, such as family separation, violence, and exploitation. Delivered largely through social-work practice and law enforcement and

intended to support the most vulnerable children and families, this wave is floundering, due to a multitude of factors, among which a lack of appropriate methodologies, the difficulty of dealing with social and cultural complexity, and the reluctance of politicians to tackle the underlying structural causes are fundamental. So, while a good deal has undoubtedly been achieved in recent years, much still remains to be done to improve children's life chances. Political imperatives are now underpinned more strongly than ever before by evidence from diverse global contexts of the detrimental outcomes for children of exposure to risks, whether due to deprivation or to distress (for a summary of this research, see Grantham-McGregor et al. 2007; Engle et al. 2007; 2011). This review essay contends that understanding child development is crucial for assessing the impact on children of wider economic and social processes, and for formulating appropriate policies to improve outcomes during childhood and into adulthood. It summarises current research into child development that investigates what promotes and what threatens children's growth and well-being. It examines how the well-being of children affects and is affected by societal (especially economic) development; whether and in what ways children have benefited from economic growth; and which policy

directions can help to make economic growth deliver advantages for poor children in developing countries. It reasons that economic growth can be an important factor in child survival and development, and moreover that securing children's development is key to reducing poverty and sustaining growth in the long term. It uses evidence from Young Lives<sup>1</sup> and a wider literature across several disciplines to illustrate the core arguments. Thus, while much of the discussion focuses on the Young Lives study countries – Ethiopia, India (Andhra Pradesh), Peru, and Vietnam – our conclusions are applicable more broadly across many other contexts. We find that economic growth in the Young Lives study countries has, in general, been good for children, although improvements have taken markedly longer for some groups than for others. Moreover, impressive advances in some areas distract attention from stagnation in others. It maintains that for economic growth to achieve its true potential for children, close attention needs to be paid to ensuring equitable access to jobs and social insurance, effective fiscal regimes, and, in particular, policies to support those children and families who have been consistently excluded to date. It is argued, in other words, that it is not economic growth per se, but rather the quality of growth that matters for children; by

which we mean growth that eliminates absolute poverty and reduces risk and relative deprivation by offering greater opportunities for poor families.

“It is not economic growth per se, but rather the quality of growth that matters for children; by which we mean growth that eliminates absolute poverty and reduces risk and relative deprivation by offering greater opportunities for poor families.”

## **20.2. OBJECTIVES**

- To study of impact of play in early childhood
- Study about Play is a child’s work, Play is important
- Different Types of play and Benefits of play
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

### **20.3. Why are children particularly susceptible to external influences?**

Human development is multidimensional in character and conventionally divided into distinct functional domains or pathways (physical-motor, cognitive, linguistic, emotional, social, and moral), each of which is composed of an array of states and competencies. Early research into child development tended to emphasise the universal biological factors, conceptualising it as the gradual unfolding of a series of developmental stages arranged sequentially, each stage building on and advancing competencies laid down in the previous one. While many aspects of Stage Theory remain profoundly influential today, contemporary thinking is noted for the diversity of its conceptualisations of human development. There is broad agreement, however, that development involves a complex transaction between genotypic, biological, and maturational processes that are shaped by children's experiences, actions, and interactions, as well as by broader environmental influences, including the cultural values of their caregivers, which in turn are embedded in diverse contexts (Engle et al. 1996; 2007; Rogoff 2003; Sameroff 2009; Wachs and Rahman, forthcoming; Walker et al. 2007). As such, individual characteristics (for instance, personality) and biological forces

(including genetics, epigenetics, and neurobiological factors) work together with family dynamics (for example, attachment to caregivers, family functioning), and broader historical, sociocultural, and environmental factors (such as socio-economic status) in shaping children's growth and adaptation. Some developmental pathways are determined largely by inherent processes that vary with age, while others are more susceptible to external influence. For example, while some sensory and motor functions are likely to remain relatively stable regardless of experience, others – for instance social competencies – are far more easily disrupted by external forces (Schaffer 1996: 392). Thus, the quality of children's social, emotional, moral, and spiritual development, especially their feelings about identity, self-worth, and personal well-being, is highly dependent on how they understand their relative social position, relative competence, and potential to access opportunities for personal, social, and economic advancement. Moreover, these are not for the most part individualised processes, but are experienced as part of a family group, peer group, and community (Boyden and Crivello 2011; Ridge 2002; Woodhead 2004). So, for example, children who experience approval, acceptance, and opportunities for skill development are far more likely to be independent and resilient than those who have been subjected to discrimination, humiliation,



rejection, or failure (Boyden and Mann 2005). Availability of both formal and informal mechanisms of support, such as the extended family, self-help groups, social protection programmes, health services, and education, directed at a child and/or at the child's caregivers, is understood as part of this complex environment of human development. Different children, households, communities, and societies are subject to different levels of hazard and risk at various points in the human and family life cycle, and there are different types and amounts of material and psychosocial resources to support children's development, as well as different levels of knowledge and beliefs about how best to raise them. This fundamentally affects children's everyday lives, including the things that they are taught or encouraged to do, to whom they turn for guidance, and whether and where they feel safe or in danger—all of which produces great variety in the developmental challenges and opportunities that boys and girls experience (Rogoff 2003). For example, while some communities view moderate exposure to risk and danger (experienced for instance in endurance tests incorporated in rites of passage) as an important basis for developing resilience and coping skills, others believe that it is more beneficial to shelter children from adversity (Boyden and Mann 2005: 10). Such differences lead to significant differences in the specific skills that children develop and to

variations in their developmental trajectories more generally. The various domains or pathways of development exist in a synergistic relationship, so that functioning in one domain affects functioning in the others. This emphasises the way in which competencies in different domains build on each other. Such knowledge is particularly relevant for understanding the child outcomes of risk exposure. It highlights the likelihood of adversity having compound effects (Behrman et al. 2010; Daniels and Adair 2004) and points to a cumulative-risk perspective whereby varying (moderating and mediating) influences at the individual, family, and social levels are seen to interact and intersect to influence child outcomes (Burchinal et al. 2008; Stevens 2006; Toth and Cicchetti 2010).<sup>2</sup> The dynamic development of competencies, with synergies across different domains, and with abilities or vulnerabilities at one point in time influencing children's development in later periods, has been documented in several Young Lives papers. Outes-Leon et al. (2010), for example, found that a child's feeling of being respected at the age of 8 years was strongly predictive of higher test scores for mathematics and reading at the age of 12. Similarly, using Young Lives data on Peru from 2002 and 2006, Sanchez (2009) reports a strongly significant impact of early childhood nutrition on later cognitive outcomes; this is, of course, a well-established result in the

literature from a variety of contexts. However, Young Lives research extends our knowledge of these processes, not only by confirming empirical findings of previous studies, but also by documenting them in entirely new contexts; while the link between child nutrition and later cognitive outcomes is now well established, recent work by Dercon and Sanchez (2011) also shows that a similar link exists between child nutrition and later psychosocial (noncognitive) outcomes, such as self-efficacy, self-esteem, and educational aspirations. Similarly, Helmers and Patnam (2011), extending the work of James Heckman and co-authors to developing countries, using Young Lives data from India, show that there is significant evidence of skills acquired at one stage of development influencing later cognitive skills and non-cognitive skill formation.<sup>3</sup> It is now widely understood that child developmental processes are timesensitive, in that there are periods during which children's responses to environmental stimuli are heightened (Shonkoff et al. 2009; Shonkoff and Phillips 2000; Shonkoff and Levitt 2010). This leads to greater vulnerability to long-term harm arising from risk exposure in these periods, but also offers a window for focusing on policy interventions that will be most potent. The negative impact of deprivations in these critical periods can be very large. Early childhood is generally recognised as the most crucial lifephase in

terms of developmental malleability, for this is when maturation processes are accelerated and genotypic milestones emerge (Shonkoff et al. 2012). Importantly, the time sensitivities of early childhood are also socially structured by influences that include the institutions of education, as early cultural learning selects and reinforces specific cognitive and psychosocial competencies. Unequal participation in early-childhood and primary education further determines long-term trajectories, in the sense that institutions, teachers, and assessment systems all tend to promote some children over others, depending on their perceptions of children's characteristics and potential (Streuli et al. 2011; Woodhead et al. 2009).

“Early childhood is generally recognised as the most important life-phase in terms of development, for this is when growth processes are accelerated and milestones emerge.”

Significantly, the child–environment influence operates in both directions, in that children do not simply absorb and react to external forces, but are instrumental in shaping their own environment by ‘selecting and even creating those settings that are compatible with their individual characteristics’ (Schaffer 1996:

394). This insight has led to the conceptualisation of children as social agents and the realisation that they are seldom the passive victims of overwhelming circumstances. Many studies have provided important evidence that even among boys and girls thought to be at heightened risk of poor outcomes there is considerable variation in individual capacity to achieve developmental tasks, and some children even thrive despite experiencing multiple developmental threats (Eisold 2005; Masten and Obradovi 2006; Obradovi and Boyce 2009; Rutter 1985; 2002). For example, Cortes and Buchanan (2007) found that Colombian child soldiers who did not exhibit trauma-related symptoms after experiencing armed combat were the ones with a sense of agency, social intelligence, empathy, and affect regulation, a sense of future, hope, and growth, and an awareness of spirituality and morality. So, more recently, research has also begun to focus on identifying and examining the promotive,<sup>4</sup> protective,<sup>5</sup> and mediating processes that shield children from various forms of adversity, including the individual characteristics of affected children, their opportunities for mastery, and the strategies that they use for reducing risk or overcoming misfortune.

## 20.4. What are social environments?

The social environment refers to an individual's **physical surroundings, community resources and social relationships.**

### **Physical environment**

The physical surrounding of a social environment

include **housing, facilities** for education, **healthcare, employment** and open space for **recreation**. The nature of physical surroundings



(including their quality, e.g. the extent to which open spaces are clean and buildings maintained) can influence the quality of parenting and in turn affect the health and wellbeing of children within that environment.

### **Community resources**

The availability of community resources refers to **community structures** (e.g. political governance) and or

**ganisations, knowledge and support** within the community. The extent to which resources are available in the community influences the health of individuals living within it. Living in a socio-economically deprived, underdeveloped community, has a negative impact on child development.

### **Social relationships**

Social relationships are the **interactions** between various **individuals** or **groups**. In every society, individuals develop relationships with other individuals to enable them to achieve their goals. These relationships may be entered into consciously or unconsciously (e.g. a friendly chat whilst waiting in a queue or a meeting with a child's teacher). The obligations, expectations, trust and norms of any relationship influence the extent to which these relationships enable an individual to develop "social capital". Social capital is a strong, supportive network of individuals who provides access to emotional and physical resources which an individual needs to fulfil their goals. The social relationships are collectively referred to as the social network. Good social networks are associated with greater levels of social cohesion, informal care and enforcing healthy behaviours such as not smoking and safe sexual practices.

## 20.5. The importance of positive social environments and relationships for parents

A child's social environment is largely dictated by where their parents live and send them to school. In turn, the social environment largely determines who children form social relationships with and the quality of those social relationships, as many of the relationships children form are within their family or neighbourhood. As such, parents' decisions (or, on the contrary, lack of decision making power) about where to live, work and school can markedly affect the health and wellbeing of their children.

### Physical surroundings

An individual's physical surroundings markedly influence their health. Environments characterised by poor physical surroundings (e.g. lack of open space, lack of facilities and



litter) are associated with poor health outcomes. For example, social environments characterised by quality, affordable housing are associated with reduced poverty and increased residential stability,



both of which affect a child's health and the social relationships which they form. Children who change neighbourhoods frequently because their parents are forced to move to find affordable housing may find it difficult to develop supportive social relationships and are more likely to be absent from or under-perform at school. Australian children who lived in cleaner neighbourhoods were assessed as having better social behaviours than those living in less clean environments.

The availability of good quality educational facilities within an environment is also important. For example, attending early childhood education is associated with improved childhood development and individuals living in socio-economically marginalised communities are less likely to have access to early childhood education facilities, and are thus less likely to attend and experience the benefits of early childhood education. Children who do not attend early childhood education have also been shown to be at greater risk of maltreatment during childhood.

The availability of job opportunities within a neighbourhood or community may also affect a child's development, by influencing their parents' work. Working locally means less travel time (and presumably, more time for family commitments) and associated stress. Work-related stress and time constraints have been shown to have negative effects on individuals and spill over into the

family and affect relationships within it, including the quality of parent-child relationships. Working locally can improve parenting, relationships between parents and children and ultimately child health and development. There is also evidence that the availability of housing and employment within a neighbourhood, affect levels of child maltreatment and children are less likely to be maltreated in communities where housing and employment are more readily available.

### **Community resources**

Parents play a key role in educating their children. However, they also rely on resources within their community including teachers, doctors and other adults (e.g. community members, family,



friends) to fulfil their parenting role. The degree of cohesion amongst members of the community (measured for example by the presence or absence of community organisations or community activism) influence the nature of these relationships. Communities characterised by high levels of cohesion, such as those with active community groups, provide good opportunities for individuals to become involved in and develop the resources in their community.

For example, an Australian study of children living in 257 neighbourhoods reported that a sense of belonging to the neighbourhood (having positive social relationships within the neighbourhood) was associated with more pro-social behaviour amongst children. An American study reported that children growing up in neighbourhoods characterised by impoverishment were more likely to experience maltreatment (negative social relationships) than those living in neighbourhoods without these characteristics.

The rules and norms which govern a community can also exert an influence. For example, many Australian communities now have laws which prevent adults smoking in the vicinity of children's recreational facilities, and these laws increase the capacity of communities to protect their children's health.

Factors relating to an individual's personal circumstances also influence the extent to which they are able to access resources within the community. For example, the length of time an individual has lived in a community influences the extent to which they engage with resources in the community, and residential stability increases an individual's sense of belonging to a community and access to resources. However, in Australia families are increasingly mobile, and this mobility may undermine the development of support networks within a community. A parent's work situation may also influence

their access to community resources. For example, parents who are working fulltime or working long distances away from their home community may find it difficult to get involved in community organisations.

The role of extended family members in providing support for parents is declining in Australia. This means that access to non-family resources which can provide such support is of increasing importance to families.

### **Social relationships**

The social environment also influences the nature and quality of the social relationships in which parents and children engage, as the social environment largely determines who, how often and on



what terms parents and children will interact socially. Developing and maintaining positive social relationships (e.g. characterised by trust, mutual satisfaction, respect, love and happiness) is fundamental to a good quality of life and psychological health. Individuals who have good relationships develop a sense of belonging and receive support from other members of their social network which helps them to

function normally from day to day and also to cope with stress and difficult times. Social relationships also provide opportunities for generating new ideas, discussing issues and concerns, sharing good news and obtaining social, economic and emotional support. However, some social relationships involve negative emotions and behaviours (e.g. lack of trust, envy, jealousy, breaking promises and violence) which may undermine an individual's wellbeing and life quality.

Living in a good social environment increases the likelihood that a child will develop positive social relationships. Social behaviour and the ability to develop positive relationships with others were traditionally conceived as skills which would develop naturally. However, there is an increasing recognition that social behaviours are learned and that children must be taught pro-social behaviour. Children learn from their social environment, for example by mimicking (or challenging) the social behaviour of their peers, and thus what they see in their day to day environment is likely to influence their social behaviour. Social skills can also be actively taught, for example when a parent or teacher reinforces and encourages good behaviours, the probability of these behaviours occurring is enhanced. Teachers and parents may also actively

encourage children to apply social skills learnt in one social setting (e.g. the classroom) to other settings (e.g. home or the playground).

Both the parent's and child's social relationships are increasingly recognised as a important factors influencing the quality of parenting, which in turn is an important contributor to the child's overall development. The children of parents who have strong and supportive social relationships are more likely to develop positive social relationships themselves and having positive and supportive social relationships and networks improves a child's development. In terms of parenting, social relationships of key importance include those between a child and their parents, but also a child and other adults (e.g. teachers, other children's parents) and other children (including their siblings). Parental involvement with the parents of other children creates trust and obligations, as well as community norms, which the parents set collectively for their children. This means that parents can collectively take responsibility for children's behaviour, for example by providing discipline if a child misbehaves.

Relationships between parents and children also affect a child's ability to develop social relationships in the community. One study reported that the children of parents who had difficulty disciplining their children and being affectionate towards them due to financial stress, received lower teacher ratings in terms of their social behaviour

compared to children whose parents did not experience these difficulties.

### **20.6. How do social environments and social relationships influence a child's development?**

There is a considerable body of evidence demonstrating that an individual's social environment influences their health status, although the mechanisms by which it does so are not yet fully understood. A number of possible mechanisms have been put forward. For example, it has been hypothesised that children may imitate what they see in their environment, thus those who grow up in contexts characterised by high-quality education and child-care, access to a range of essential services and recreational facilities and social cohesion, experience better developmental outcomes than those who grow up in contexts characterised by a lack of resources and social antagonism.

#### **Cognitive development and educational attainment**

A child's social environment influences their cognitive development and educational attainment. Children who engage in



good social relationships perform better academically than those who do not. Children living in social environments characterised by residential stability are less likely to be absent from school and perform better academically than those who do not. Those who live in poor quality neighbourhoods (e.g. low socio-economic status) are more likely to drop out of school before completion than those who do not.

Attending early childhood education, at which a child can develop social relationships with other children and teachers and in doing so, develop pro-social behaviour, has a particularly profound effect on future academic achievement. Children who attend preschool perform better academically and are less likely to repeat a grade. There is evidence that cognitive development is influenced by the social environment during early childhood even if a child subsequently moves to a different neighbourhood. For example, a child who lives in a disadvantaged neighbourhood during early childhood will experience reduced cognitive development and academic performance even if they move to a more affluent neighbourhood later in life. An intergenerational effect is also present, and children whose parents grew up in disadvantaged neighbourhoods also experience impaired cognitive development and educational attainment compared to those who did not, even if they grow up in a more affluent neighbourhood.



### **Risk-taking behaviour**

Growing up in a positive social environment is associated with less risk taking behaviour. Children who grow up in positive environments are less likely to have accidents requiring treatment than those who do not. There is also a reduced risk of developing a substance use disorder amongst children who have positive social relationships compared to those who do not.

### **Emotional and psychological wellbeing**

The sense of belonging which individuals experiences when they have good social relationships has a positive influence on their mental health. Children who have good social relationships have greater self esteem than those who do not and are less likely to experience mental health problems including depression and anxiety. There is also evidence that pro-social behaviour during childhood leads to better psychological health in adulthood.

The social environment may also influence a child's health by influencing the behaviour of their parents. For example, an Australian study reported that parents living in communities where services were more accessible, were less likely to use hostile parenting techniques (which are expected to have negative psychological effects on their

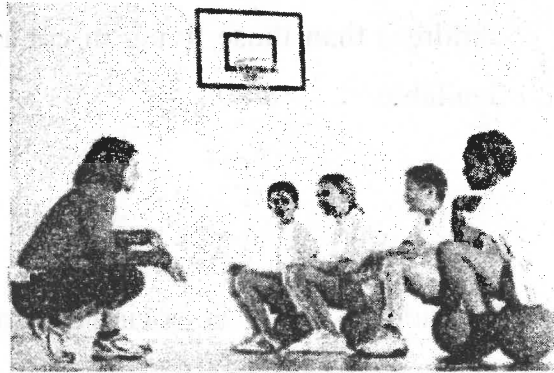
children) than those living in communities where resources were not available.

### **Motivation**

Individuals living in social environments characterised by positive social relationships are more motivated than those who do not. For example, peer support has been found to be an important predictor of a child's motivation to pursue social goals, while teacher support increases a child's motivation for both social and academic goal pursuits. Parent support also influences children in terms of their level of interest in school and their pursuit of goals.

## Physical health

A positive social environment also promotes improved physical health, including



- **A reduced risk of eating disorders** – children who engage in good social relationships are less likely to develop eating disorders than those who do not;
- **Increased likelihood of being immunised** – children living in positive social environments are more likely to be immunised than those who are not;
- **Reduced risk of teenage pregnancy** – young women living in poor quality neighbourhoods are more likely to experience teenage pregnancy than those who do not;
- **Sporting ability:** children with positive social relationships perform better at sports than those who do not.

## 20.7. Summary

### Tips

There are many ways in which parents can get involved in their communities, and in doing so improve their social relationships, their parenting skills and their children's health and development.

#### **Be physically, socially and mentally active**

Being physically, socially and mentally active can improve an individual's social environment and relationships and cause them to feel more involved in their community. For example, taking a walk or a bike ride provides opportunities for meeting or engaging other community members.

#### **Join a club, team or community organization**

Belonging to a group, whether it is a sporting team, book club or other organisation, is a good way to meet new people and develop relationships and a sense of belonging. Groups which actively intervene in communities to improve the social environment, for example by having a clean up day or organising a local government

petition, have been shown to be particularly effective in creating a sense of cohesion in the community.

### **Consciously encourage family rituals and routines**

Routines such as eating meals together as a family or going to the park on Sundays provide opportunities for family members to develop social relationships amongst



themselves. Family rituals also promote a sense of belonging. Bedtime routines are associated with better sleep patterns amongst children. Family routines may also make it easier for children to cope with stress such as parental separation or divorce.

### **Balance work and family life**

Parents may experience improvements in their social environment by adjusting their work schedules, for example by freeing up time to participate in community activities or organisations. Australian employees have an obligation to grant parents flexible working arrangements in reasonable circumstances. Parents should therefore be aware of their entitlements as doing so may enable them more of their time to focus on their community and family commitments.

### **Encourage children to play with groups of children**

Parents should also encourage their children to develop social relationships through play. Playing is one of the primary means by which children develop social skills and learn the abilities they need to form relationships with other children and adults. Playing promotes positive interactions between peers and reduces the likelihood of a child exhibiting aggressive behaviour. Cooperative (as opposed to competitive) games may be particularly useful for the development of pro-social behaviour as the success of the game is dependent on the group (not the individual) and children are encouraged to focus on the process of the game, rather than its outcome (the winner).

### **Develop parenting skill**

Parents may also contribute to their children's health and development by improving their parenting skills. Parenting programs which teach parents to develop their children's emotional competence have reported positive results, and that the development of emotional competence in children improves their social behaviour. Children who are emotionally confident are more likely to interact with other children and displayed fewer negative emotions which might interrupt their social relationships.

**20.8. Check Your Progress**



20.9. Assignment/Activity

Q.2

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Department of Psychology

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Psychology 035

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## **BLOCK 5**

# **TRANSITIONS INTO ADULTHOOD**

## UNIT 1

# Psychological Well-Being

### STRUCTURE

- 1.41. Introduction
- 1.42. Adult human development
- 1.43. Physical development
  - 1.43.1. Early adulthood
  - 1.43.2. Middle adulthood
  - 1.43.3. Late adulthood
- 1.44. Psychological and emotional development
- 1.45. Optimizing health and mental well-being in adulthood
  - 1.45.1. Managing stress and developing coping strategies
- 1.46. Personality in adulthood
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## UNIT 1

# Psychological Well-Being

### 3.9. INTRODUCTION

**Adult development** encompasses the changes that occur in biological, psychological, and interpersonal domains of human life from the end of adolescence until the end of one's life. These changes may be gradual or rapid, and can reflect positive, negative, or no change from previous levels of functioning. Changes occur at the cellular level and are partially explained by biological theories of adult development and aging. Biological changes influence psychological and interpersonal/social developmental changes, which are often described by stage theories of human development. Stage theories typically focus on "age-appropriate" developmental tasks to be achieved at each stage. Erik Erikson and Carl Jung proposed stage theories of human development that encompass the entire life span, and emphasized the potential for positive change very late in life.

The concept of adulthood has legal and socio-cultural definitions. The legal definition of an adult is a person who has reached the age at which they are considered responsible for their own actions, and

therefore legally accountable for them. This is referred to as the age of majority, which is age 18 in most cultures, although there is variation from 16 to 21. The socio-cultural definition of being an adult is based on what a culture normatively views as being the required criteria for adulthood, which in turn influences the life of individuals within that culture. This may or may not coincide with the legal definition.<sup>[2]</sup> Current views on adult development in late life focus on the concept of successful aging, defined as "...low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life."

Biomedical theories hold that one can age successfully by caring for physical health and minimizing loss in function, whereas psychosocial theories posit that capitalizing upon social and cognitive resources, such as a positive attitude or social support from neighbors and friends, is key to aging successfully. Jeanne Louise Calment exemplifies successful aging as the longest living person, dying at the age of 122 years. Her long life can be attributed to her genetics (both parents lived into their 80s) and her active lifestyle and optimistic attitude. She enjoyed many hobbies and physical activities and believed that laughter contributed to her longevity. She poured olive oil on all of her food and skin, which she believed also contributed to her long life and youthful appearance.

### 3.10. OBJECTIVES

**By the end of this unit you will be able to:**

- To study about adult human development
- Understand about physical development
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term



### **3.11. Adult Human Development**

When you think of human development, what is the first thing that comes to mind? Most likely the first image you have is of a teenager going through the stages of puberty. This is because a great deal of attention is usually placed on this period in regard to physical development. But what happens when this stage is over? Do adults develop physically as well? What about psychological and emotional changes?

Life would be pretty boring if we didn't continue to develop emotionally and psychologically. As adults, we continue to learn and gain experiences that change us. We also continue to develop physically, as well, even though some of these physical changes may eventually progress in a negative manner.

### **3.12. Physical Development**

First, let's look at the physical changes that take place during adulthood. Because of the dramatic physical developments that take place earlier, it may seem that less attention is placed on physical development in the adult years. Let's find out if this assumption is true as we look at three main stages to physical

development in adulthood: early adulthood, middle adulthood, and late adulthood.

### **3.12.1. Early Adulthood**

**Early adulthood** takes place roughly between the ages of 20 to 35. In early adulthood, a person may continue to add a bit of height and weight. Hormonal changes also continue to occur, but the effects are less pronounced than they were during adolescence. In terms of physical development, this period is the least dramatic.

### **3.12.2. Middle Adulthood**

**Middle adulthood** takes place roughly between the ages of 35 and 65. In middle adulthood, we may start to see more noticeable changes again. Because we start to see and feel the physical changes in our bodies, we may begin to think about our physical development once more. One of the most noticeable changes is the loss of skin elasticity. Have you noticed how many different anti-aging creams there are

available? Fine lines and wrinkles that begin to develop due to the loss of skin elasticity have definitely gotten some attention!

Have you heard of any new diet supplements that help you lose weight? The weight gain associated with getting older has gained some attention as well. A person will also start to lose strength and flexibility. Thinning of the hair can also occur, and the hair that hasn't thinned may start to turn gray. In middle adulthood, women will also go through a process called menopause and lose the ability to reproduce.

### 3.12.3. Late Adulthood

At some time around the age of 65, we enter the world of **late adulthood**. Yes, we will gain access to senior discounts, but the physical changes taking place in our bodies is a less positive result! More profound negative effects of aging will begin to take its toll on our bodies. This is the final stage of physical change. Those wrinkles will become more noticeable and you may start to develop brown age spots on your skin. Your reaction time begins to slow, and even if you have not needed glasses in the past, your deteriorating eyesight will most likely cause you to need them now.

There are two main physical concerns associated with adult physical development that may become evident in late adulthood. First is the loss of bone mass and second is loss of cognitive function. Other physical concerns may also occur, such as arthritis, heart disease, diabetes, and malnutrition due to an inability to absorb vitamins and nutrients. While age related changes cannot entirely be stopped, the symptoms can often be managed with proper diet, exercise, and medical care.

### **3.13. Psychological and Emotional Development**

Now that you have had an overview of the physical changes associated with adulthood, let's look at the emotional and psychological changes that take place. In early adulthood, these changes are going to be more noticeable than the physical ones. This is an important stage in adult emotional and psychological development, and we strive to find our place in the world. During this time, important life decisions are made about career and living arrangements. As we find our way in the world and gain our independence, our independent choices and resulting emotional consequences can have a profound impact our view of who we are.

One of the largest aspects of this period of development is the importance that is placed on relationship formation in early adulthood. Developing our own intimate relationships can be challenging, and we have to learn to understand our new independent identities in order for these relationships to fully develop. Marriage and family formation typically occurs during early adulthood. Our emotional and psychological well-being is often tied to how successful we are at forming these relationships.

As an example, let's imagine the difference in the emotional and psychological state of the following three scenarios:

- Bob is 27 years old and focused on the development of his career. He's highly successful at his job and has a few close friends. However, he has little time for romantic relationships.
- Shirley is 33 years old and has two young children. She married her college sweetheart, but unfortunately, they were unable to make the marriage work. She still has a friendly relationship with her ex-husband, who is supportive of his children.
- Joe is 30 years old and married to his high school sweetheart. They have one 11 year old son. He began

working just after high school to support his family. Joe now spends his evenings attending community college.

### **3.14. Optimizing health and mental well-being in adulthood**

Exercising four to six times a week for thirty to sixty minutes has physical and cognitive effects such as lowering blood sugar and increasing neural plasticity. Physical activity reduces loss of function by 10% each decade after the age of 60 and active individuals drop their rate of decline in half. Cardio activities like walking promote endurance while strength, flexibility, and balance can all be improved through Tai Chi, yoga, and water aerobics. Diets containing foods with calcium, fiber, and potassium are especially important for good health while eliminating foods with high sodium or fat content. A well-balanced diet can increase resistance to disease and improve management of chronic health problems thus making nutrition an important factor for health and well-being in adulthood.

Mental stimulation and optimism are vital to health and well-being in late adulthood. Adults who participate in intellectually stimulating activities every day are more likely to maintain their cognitive faculties and are less likely to show a decline in

memory abilities. Mental exercise activities such as crossword puzzles, spatial reasoning tasks, and other mentally stimulating activities can help adults increase their brain fitness. Additionally, researchers have found that optimism, community engagement, physical activity and emotional support can help older adults maintain their resiliency as they continue through their life span.

#### **3.14.1. Managing stress and developing coping strategies**

Cognitive, physical, and social losses, as well as gains, are to be expected throughout the lifespan. Older adults typically self-report having a higher sense of well-being than their younger counterparts because of their emotional self-regulation. Researchers use Selective Optimization with Compensation Theory to explain how adults compensate for changes to their mental and physical abilities, as well as their social realities. Older adults can use both internal and external resources to help cope with these changes.

The loss of loved ones and ensuing grief and bereavement are inevitable parts of life. Positive coping

strategies are used when faced with emotional crises, as well as when coping with everyday mental and physical losses. Adult development comes with both gains and losses, and it is important to be aware and plan ahead for these changes in order to age successfully.



### **3.15. Personality in Adulthood**

Personality change and stability occur in adulthood. For example, self-confidence, warmth, self-control, and emotional stability increase with age, whereas neuroticism and openness to experience tend to decline with age.

#### **3.15.1. Personality change in adulthood**

Two types of statistics are used to classify personality change over the life span. Rank-order change refers to a change in an individual's personality trait relative to other individuals. Mean-level change refers to absolute change in the individual's level of a certain trait over time.

#### **3.15.2. Controversy**

The plaster hypothesis refers to personality traits tending to stabilize by age 30. Stability in personality throughout adulthood has been observed in longitudinal and sequential research. However, personality also changes. Research on

the Big 5 Personality traits include a decrease in openness and extraversion in adulthood; an increase of agreeableness with age; peak conscientiousness in middle age; and a decrease of neuroticism late in life. The concepts of both adjustment and growth as developmental processes help reconcile the large body of evidence for personality stability and the growing body of evidence for personality change. There are normative adjustments in personality with increasing age, but personality is largely stable throughout adulthood.

### **3.16. Psychosocial Development during Emerging Adulthood**

Historically, a primary function of adolescence was the negotiation and completion of three fundamental psychosocial developmental tasks—autonomy achievement, separation-individuation, and identity formation—which reflect individual and interpersonal factors (Gottlieb et al., 2007, Tanner, 2006). Adult development is contingent upon completion of these tasks and maladjustment appears to be associated with the inability to achieve them (McClanahan & Holmbeck, 1992). With the recent cultural changes that

affect the speed and sequence of developmental markers and changes in self-perceptions of individuals 18 to 25, the completion of these psychosocial developmental tasks seems to be delayed until the emerging adulthood period (Arnett, 2000a).

### **3.16.1. Autonomy**

Developmental researchers and theorists consider autonomy an essential psychological characteristic of adulthood; however, it has been conceptualized in various ways, which emphasize either emotional or functional independence. The emotional component defines the process through which adolescents gradually gain greater interpersonal distance from their parents and become less dependent on them for approval and emotional support (Fuhrman & Holmbeck, 1995; Hoffman & Weiss, 1987; Kagitcibasi, 1996). The functional, or instrumental, element is characterized by the ability to be financially independent, the ability to manage one's affairs with little help from parents, and the capacity to make independent decisions and take responsibility for them (Arnett, 2000; Gurevitz Stern, 2004; Kagitcibasi, 1996; Moore, 1987). During autonomy

development, individuals develop the skills necessary to achieve independence (Arnett, 2000a). Although there is a human need for emotional closeness, some suggest that the concept of autonomy should simply reflect the functional component (Kagitcibasi, 1996). Relative to more traditional cultures, individualism is more valued in American culture; therefore, Americans tend to permit and encourage greater functional autonomy, making the ethic of autonomy particularly strong during emerging adulthood (Arnett, 1998; Arnett, 2000a; Arnett et al., 2001; Kagitcibasi, 1996). Despite, or perhaps because of, the opportunity for exploration during emerging adulthood, there are significant fluctuations in autonomy during this time (Cohen et al., 2003). Although some individuals feel free to make their own decisions and take responsibility for them while still living at home, for many others, emerging adulthood may be the first time that they make enduring decisions, which can affect their life course. This can be a source of acute pressure and anxiety (Arnett, 2000a; Graber & Brooks-Gunn, 1996a). Research examining the relation between autonomy and psychological adjustment has been inconsistent and most research has used college freshman as participants. While some studies have not shown a strong connection between functional independence and adjustment (Lapsley &

Edgerton, 2002; Moore, 1987), other studies have found significant relations between these variables. Specifically, higher levels of autonomy were generally related to higher levels of adjustment (Anderson & Flemming, 1986; Gutman & Sameroff, 2004; Holmbeck & Wandrei, 1993; Moore, 1987). One of the components of functional autonomy is home-leaving. While emerging adults are often viewed as either residentially dependent or independent, given that home-leaving may be a more complex process than previously believed, home-leaving may be better conceptualized as a continuous variable. Whereas many emerging adults continue to live at home into the mid-twenties, others return home after they leave (Cohen et al., 2003; Seiffge-Krenke, 2006). There is also a large number of emerging adults who are better described as semiautonomous. These persons do not live at home, nor do they live independently. Instead they typically live in either college dorms or army barracks. There is an element of ambiguity to this period away from home, because the possibility of returning there exists; therefore, it may not be a permanent break from the family (Goldscheider & Davanzo, 1986). Gender differences may also influence the process of home-leaving. Several studies have found that women are more likely to leave home at a younger age than men and remain

residentially independent once they do (Cohen et al., 2003; Goldscheider & Goldscheider, 1994; Seiffge-Krenke, 2006; Sherrod, 1996). Although women are more likely to marry earlier than men, sociocultural changes in recent decades suggest that other factors, such as men attaining financial independence later than women, may also play a role (Cohen et al., 2003). Differences in the conceptualization and measurement of home-leaving and in the target population may result in inconsistencies in the relation of autonomy of psychological outcomes. Living away from one's family can provide the necessary space for emerging adults to complete developmental tasks. Research demonstrates that remaining positively connected to one's family while gradually gaining autonomy most effectively cultivates and enables positive psychological development (Moore, 1987). For successful adjustment, it is necessary to balance the autonomy that comes with living independently and staying emotionally connected to one's family (Dubas & Petersen, 1996). The specific relation between home-leaving and adjustment, though, has been inconsistent (Graber & Brooks-Gunn, 1996a). For example, one study found that individuals who left home in their early twenties were more likely to exhibit psychological symptoms than those who left in their mid-twenties, suggesting that young

emerging adults may feel overwhelmed by the new demands of this period (Seiffge-Krenke, 2006). In contrast, another study found that emerging adults who remained at home were more likely to be depressed than those who did not, which may indicate that limited functional autonomy, evidenced by extreme proximity to family, may be detrimental to mental health functioning (Dubas & Petersen, 1996; Graber & Brooks-Gunn, 1996a).

### **3.16.2. Financial independence and self-governance**

Financial independence and self-governance are two other principal components of autonomy development, which have been associated with adjustment. Financial dependence reflects the substantial variability found in employment during the transition to adulthood (Galambos, Barker, & Krahn, 2006). Employment success can have beneficial effects on well-being, as it provides a sense of competence (Galambos et al., 2006; Masten et al., 2004; Montgomery & Schoon, 1997; Schulenberg, Bryant, & O'Malley, 2004). In contrast, unemployment, which is a strong predictor of depression, is commonly experienced by 18 to 24 year-olds. Many emerging adults also hold their first job for less

than a year and change jobs multiple times during the initial years of working (Arnett, 2006; Galambos et al., 2006, Thiessen & Looker, 1999). Emerging adults may also be ambivalent about receiving financial support. Continued dependence on parents can produce anxiety and guilt (Lapsley, Rice, & Shadid, 1989). Parental control and lack of self-governance may also accompany financial support, thus producing feelings of incompetence or anger (Lapsley et al., 1989; Masten et al., 2004). Emerging adults who have completed other psychosocial developmental tasks may be particularly resentful of the restrictions that come with financial assistance from parents (Lapsley et al., 1989). Additionally, the inability to be self-sufficient has been linked to the high rates of depression during the transition to adulthood (Mortimer et al., 2002). Gender also appears to affect financial independence. Both men and women experience greater financial independence over the course of emerging adulthood, with the greatest gains occurring early during this period. Men acquire more financial independence throughout the period than women. This may be due to the fact that women are more likely to be supported by a romantic partner than men or that they are more likely to work part-time (Cohen et al., 2003; Sneed et al., 2006). Given the inverse relation between the numbers of hours that one works and depression, it follows that women may be more at risk



for experiencing depressive symptoms (Montgomery & Schoon, 1997).

### **3.16.3. Separation-individuation**

Separation-individuation. Successful completion of separation-individuation is the second crucial task of psychosocial development. As a normal part of early development, children identify with their parents' attitudes and values, but in the late teens and early twenties this changes and individuals begin to divest themselves of their parents' attitudes and beliefs through the process of separation-individuation. The transition leaves room for individuals to create and modify their sense of self (Rice, Cole, Lapsley, 1990). Through the recognition that their parents' attitudes and ideology may not be perfect and the evolution of a new sense of self, emerging adults no longer automatically accept their parents' values as their own and, instead, they begin to develop and accept their own attitudes and beliefs (Rice et al., 1990). This process is, therefore, similar to the process of emotional autonomy during which individuals gradually rely less on parental validation and increasingly embrace their own beliefs. To accomplish separation-

individuation, adolescents attempt to update their relationship with their parents by incorporating their new ideas and a new-found sense of self into the present relationship (Quintana & Kerr, 1993). As with many aspects of development, this process does not progress along a linear trajectory (Quintana & Kerr, 1993). Although initially conceptualized as a process that occurs during infancy, when the infant recognizes that the mother is a separate being, Blos (1967) hypothesized that there was a second separation-individuation during adolescence. Individuals needed to become emotionally separate from their mothers and develop an integrated sense of self that was discrete and distinctive (Blos, 1979; Levine, Green & Millon, 1986; Rice et al., 1990). During separation, detachment from one's internalized object, typically the mother, facilitates discrimination between self and other. Simultaneously, adolescents develop relationships with persons their own age and their emotional energy is redirected towards them, such that peers become the objects of cathexis. It is during individuation that the individual defines who that differentiated adult self is within a relational context (Blos, 1967; Colarusso, 1990; Gavazzi & Sabatelli, 1990; Kroger, 1985; McClanahan & Holmbeck, 1992; Miller, 1995). Consequently, adolescents become emotionally independent beings and must renegotiate

their relationship with their parents (Blos, 1967; Colarusso, 1990; Kroger, 1985). Since Blos (1967) purposed the concept of a second separation-individuation during adolescence, other academics have expanded and advanced his initial theory. Colarusso (1990) suggested that the separation-individuation process during adolescence is unlike that which occurs during the late teens and early twenties. Specifically, he posited that the focus of the process during adolescence was to make friends so as to enable separation from parents. The adolescent, therefore, had not yet abandoned childhood objects. In contrast, separation-individuation during emerging adulthood was a transitional process during which individuals had already relinquished childhood attachments, but had not established enduring attachments with non-familial objects, which were unique to adulthood (Colarusso, 1990). More recently, Tanner (2006) proposed the theory of “recentering” in which there is a psychological shift from emotional dependence on parents to independence that is comparable to separation- individuation. Contrary to previous theories, which maintained that separation occurred during adolescence, Tanner contends that while the process begins in adolescence, it continues into and is completed during emerging adulthood (Tanner, 2006). Given that the goal of separation-individuation is the ability to meet

the demands of adulthood, adequate resolution of this task is predictive of adjustment (Holmbeck & Wandrei, 1993; Levine et al., 1986). As with autonomy, if the process of separation-individuation progresses as it should, individuals will see themselves as separate, and their dependency on parents will decrease with the person's well-being intact (Miller, 1995). To prevent either enmeshment or complete disconnection, a balance must be achieved between independence and connectedness (Gavazzi & Sabatelli, 1990; Holmbeck & Wandrei, 1993; Lapsley & Edgerton, 2002). This is also necessary to facilitate commitment to adult roles and responsibilities (Gavazzi & Sabatelli, 1990). Traditionally, developmental theory assumed that increased psychological individuation was believed to be negatively correlated with depression (Levitz-Jones & Orlofsky, 1985); however, recent theory contradicts this and proposes that successful separation-individuation during adolescence is related to healthy functioning in adulthood, particularly in relation to depression (Lemma, 2004). Positive feelings about separation from one's parents are a strong predictor of adjustment in college (Lapsley & Edgerton, 2002; Quintana and Kerr, 1993). Individuals who are too enmeshed or detached from their parents are likely to experience a conflicted relationship with their parents and be

less well-adjusted (Dubas & Petersen, 1996; Eberhart, & Hammen, 2006; Quintana & Kerr, 1993). In other words, when needs of separateness and nurturance are met, people exhibit fewer depressive and anxious symptoms (Holmbeck & Leake, 1999; Quintana & Kerr, 1993). It may be, then, that internalizing symptoms are a reaction to developmental challenges or that difficulty with this process produces a negative view of oneself (Eberhart, & Hammen, 2006; Quintana & Kerr, 1993). Although separation-individuation has been proposed as a universal experience, the experience may be different for males and females. Theory indicates that this process is more complex for females than for males, because girls, unlike boys, must simultaneously separate from the object (i.e., their mother) with which they are also supposed to identify in the process of gender identity development (Chodorow, 1978; Gilligan, 1979). It is unclear whether these differences are associated with adjustment. While some studies suggest that there are no gender differences (Fuhrman & Holmbeck, 1995; Kroger, 1985; Lapsley et al., 1989), others have demonstrated that gender moderates the relation between development and maladjustment. For example, excessive connectedness to others, and the resulting absence of differentiation, has been associated with anxiety and self-doubt in females (Ollech & McCarthy,

1997). In contrast, other studies have found that an absence of closeness to parents is predictive of poor outcomes in both males and females (Holmbeck & Wandrei, 1993; Quintana & Kerr, 1993). There are several explanations that may account for the differential influence of gender on separation-individuation relative to well-being. Historically, the study of human development has been based on males. The current concept of maturity, which is that of an individualized person, is based on males and may not reflect female development (Cooper & Grotevant, 1987; Gilligan, 1982). Due to socialization, personality development may be different for males and females (Gilligan, 1979). Female development occurs through connections with others, but from a psychoanalytic perspective, this is considered less individuated. Thus, theories of female growth emphasize the tendency towards relationships and interpersonal competence (Gurevitz Stern, 2004; Josselson, 1987). According to these theories, males and females are socialized differently. Mothers see their daughters as uniquely similar to themselves and, therefore, connectedness is emphasized in the mother-daughter relationship. This is distinct from the mother-son relationship in which individuation is encouraged. These relationships subsequently affect ego development (Gilligan, 1979). It may

be, then, that different developmental pathways account for the moderating effect of gender on the relation between separation-individuation and mental health (Holmbeck & Wandrei, 1993; Lapsley et al., 1989).

### 3.16.4. Identity development

Identity development. Identity development is the third fundamental task of emerging adulthood and refers to the progressive growth of identity (i.e. personal values, beliefs, and goals) from adolescence to adulthood (Waterman, 1982). During the transition to adulthood, individuals try out different life possibilities and progressively make lasting decisions about their lives (Arnett, 2000). Erikson (1959) describes development across the lifespan using stage theory, which incorporates both intrapsychic and psychosocial growth (Erikson 1959, 1963; Gurevitz Stern, 2004). According to him, the fifth stage of identity begins during puberty. It develops out of ego development and focuses on successful identity development. By engaging in exploration and commitment of life alternatives, identity achievement is accomplished (Erikson, 1959, 1994; Gurevitz Stern, 2004; Papini, Micka, &, Barnett, 1989). Although originally based on Erikson's theory of psychosocial development, the current prevailing paradigm is derived from Marcia's work (Valde, 1996). Marcia (1976) believes that stage theories of development do not accurately describe identity development. He contends that development does not follow a linear trajectory. Rather, he proposes that



there are status changes within development during which people progress and regress (Valde, 1996). Consequently, Marcia (1966, 1967) developed an interview that categorized people into four identity statuses: achieved, moratorium, diffused, and foreclosed (Gurevitz Stern, 2004). These vary in terms of the degree of exploration and commitment (Gurevitz Stern, 2004; Waterman, 1982). Exploration refers to experimentation and examination of possible roles and values. Commitment occurs when long-term decisions regarding these roles and values are made (Valde, 1996). Identity achievement and moratorium are classified as high statuses, because they are associated with healthy development (Kroger, 1985). For identity achievement to occur, two criteria must be met—exploration and commitment. As individuals are exposed to a growing number of life alternatives, they are increasingly likely to experience a crisis. Only after a person has undergone an identity crisis and has made enduring decisions regarding his or her role and values can identity achievement occur (Marcia, 1966; Valde, 1996; Waterman, 1982). It is expected that identity-achieved individuals are more individuated than their counterparts who have not experienced any self-exploration. These persons are more likely to experience healthy separation from parents and, consequently, to maintain close interpersonal

relationships (Papini et al., 1989). Moratorium, on the other hand, describes a person who is presently going through an identity crisis and is in the process of making commitments (Valde, 1996; Waterman, 1982). Individuals who have neither made commitments, nor prepared to make any, are in a period of identity diffusion (Valde, 1996; Waterman, 1982). They tend to be less organized and less open (Papini et al., 1989). Foreclosure is the status in which persons have made commitments without experimenting or examining alternative roles and values (Valde, 1996; Waterman, 1982). Foreclosed individuals show significantly lower levels of healthy separation and higher levels of dependency denial than identity achieved individuals. They are also more likely to seek nurturance from their interpersonal relationships (Papini et al., 1989). Historically, theories of identity development posited that identity achievement occurred during adolescence. More recently, Arnett (2004) argued that although identity development begins in adolescence, in industrialized societies, it continues into emerging adulthood (Arnett, 2000a). He maintains that exploration during emerging adulthood is more determined and focused than in adolescence (Arnett, 2000; Gurevitz Stern, 2004). As a result, consolidation of identity actually occurs during this time, which is evidenced by the fact

that life-long commitments are often made during emerging adulthood (Tanner, 2006). Thus, identity development is progressive and consolidates throughout adolescence and emerging adulthood (Waterman, 1982; Whitbourne & Tesch, 1985). Whereas some research has focused on the process of identity development, others have focused on the relation between identity status and mental health. Similar to other areas of psychosocial development, the relation between identity development and adjustment remains ambiguous. Although some studies have not found a direct relationship between identity status and adjustment, specifically depression and anxiety (Wautier & Blume, 2004), others have provided support for a significant relation between these variables (Anderson & Fleming, 1986; Tognoli, 2003). It appears that individuals who have less well-developed identities tend to be less well-adjusted and experience more depression than those with more achieved identities (Rasmussen, 1964; Nelson & Barry, 2005). It may be that individuals with adequate ego development are more comfortable moving towards independence and better able to cope with their environments. In other words, adequate ego development during emerging adulthood is indicative of successful completion of the transition to adulthood (Arnett, 2006; Rasmussen, 1964; Tanner, 2006). The effect of gender on

identity development has also been an area of great interest. Most research suggests that gender differences in identity development do not exist. Because identity development is culturally influenced, the absence of gender differences in recent studies may reflect cultural changes and increasingly similar developmental trajectories (Adams, Shea, & Fitch, 1979; Kroger, 1985; Waterman, 1982; Whitbourne & Tesch, 1985). Other studies have found gender differences in identity development, but there has not been a clear pattern (Luyckx, Goossens, Soenens, & Beyers, 2006; Montgomery, 2005; Waterman, 1982). Some theorists contend that differences result from unique developmental patterns in males and females. One hypothesis is that, unlike male identity, which is developed relative to the outside world, female identity formation is a more complex process that is developed in the context of intimacy (Cooper & Grotevant, 1987; Gilligan, 1979; Ollech & McCarthy, 1997). Ultimately, most studies have examined identity development during adolescence and college (Arnett, 2006). If identity development continues throughout emerging adulthood, a better understanding of development after college is needed (Arnett, 2006; Gottlieb et al., 2007). With the exception of a handful of studies, most of the work in the area of identity status and adjustment were done over 20 years ago

when the developmental trajectory was different and when it was common to establish functional independence in the early twenties. Research to date has yet to determine whether the extension of the transition to adulthood affects identity development (Sherrod, 1996). If identity formation, in addition to autonomy development and separation-individuation, is, in fact, culturally influenced and if emerging adulthood is a relatively new culturally sanctioned time for exploration and questioning, then the timing of these tasks may be different now than they were several decades ago. If this is the case, it may be appropriate to reconsider the effects of these processes during emerging adulthood and their impact on psychological functioning (Arnett, 2006).

### **3.17. SUMMARY**

The transition to adulthood can be a difficult period for many individuals and can produce significant internalizing symptoms (Reinherz et al., 1999; Reinherz et al, 2003). The factors that predict the occurrence of these symptoms during emerging adulthood tend to be unique to the transitional nature of this period (Gutman & Sameroff, 2004; Schulenberg & Zarrett,

















### 3.13 References / Further Readings

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## UNIT 2

# Formation of Identity and Self-Concept

### STRUCTURE

- 10.1. Introduction
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- 10.4. Erikson's Theory of Identity: Key Concepts
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## UNIT 2

# Formation of Identity and Self-Concept

### 10.1. INTRODUCTION

Billy, the adolescent hero in Cormac McCarthy's novel, *The Crossing* (1994), pauses in his search for the path that will lead him to his stolen horses and, symbolically, point the way into his own adult life. He listens to the words of an older opera singer as she conveys something of the road ahead. That journey one must make alone, she informs him. It is difficult even for two brothers to travel together on such a journey, for each person will have a different understanding of the same road. And some may not even wish to see what lies before them in plain sight. Everyone's journey upon the road will lead somewhere, whether to their original purposes or not. The road lying in front of Billy holds many fearful, painful, as well as pleasurable rites of passage and symbolizes the journey that each youth must make into the unknown terrain of adult life. Billy is equipped with a goal (to retrieve stolen horses and avenge his parents' deaths), with his own mental and physical skills sharpened for survival in pursuit of this

goal, and with the companionship of his younger brother and a girl. It is the vision of a desired future, retrieving horses, which enables Billy to set out on a road. And it is this particular desired future that causes him to select the particular road that he chooses, from among many possibilities. Community response, sometimes sage, sometimes shattering, provides Billy with a sense of where his boundaries are and who and what he will become. Correspondence regarding this article should be sent to Jane Kroger, Psychology Department, University of Tromsa, N-9037 Tromso, Norway. I would like to extend my grateful appreciation to Dr. Stephen J. Haslett, Director, Statistics Research and Consulting Centre, Massey University, Palmerston North, New Zealand, and Dr. Monica Martinussen, Psychology Department, University of Tromso, Tromsa, Norway, for their helpful comments regarding methodological issues discussed in this chapter.

It is this very unique combination of Billy's individual interests, needs, wishes, defenses (psychological elements), physical features such as his gender, strengths, limitations (biological elements), coupled with social response (social elements), that combine to form what Erik Erikson (1968) would refer to as Billy's sense of "ego identity." Key concepts used by Erikson to define identity and explain its developmental process are highlighted below, and empirical efforts to refine further Erikson's ideas will provide the

frame for this chapter. Erikson's attempts to define and understand ego identity seek ultimately to explain how youths, like Billy, come to find meaningful directions in the search for a way into adult life.

## 10.2. OBJECTIVES

**After going through the unit you will be able to:**

- Understand the meaning of Erikson's Theory of psychosocial approach to understanding identity
- To understand of Empirical Operationalizations of Identity;

## 10.3. What is Identity?

Erikson adopted a psychosocial approach to understanding identity by describing the interplay between the individual biology, psychology, and social recognition and response within an historical context. He gave equal emphasis to these elements, also stressing the importance of historical context for their definition. Later theorists, however, have differentially emphasized these particular elements both in defining identity and in researching its parameters. Historical, structural stage, sociocultural, and narrative models have all offered alternatives to a psychosocial definition of identity. These approaches, respectively, emphasize the overarching role of historical epoch in giving rise to identity questions, developmentally different ways in which individuals construct meaning and identity, social and cultural forces that create and shape identity, and the

narrative of one's own life story as the creation and foundation of identity. All of these approaches hold their own strengths and limitations, and a more complete review can be found in Kroger (2000).

#### **8.4. Erikson's Theory of Identity: Key Concepts**

Erikson has detailed many important concepts in describing the nature of ego identity and its developmental course over the years of adolescence. Some key Eriksonian contributions include the concept of ego identity, the Identity vs. Role Confusion task of adolescence, the identity-formation process, identity crisis, and the phenomenon of a psychosocial moratorium. By ego identity, Erikson (1968) refers both to a conscious sense of individual uniqueness as well as an unconscious striving for continuity of experience; an optimal identity is experienced as a psychosocial sense of well-being. "[Ego identity's] most obvious concomitants are a feeling of being at home in one's body, a sense of 'knowing where one is going', and an inner assuredness of anticipated recognition from those who count" (Erikson, 1968, p. 165).

Identity vs. Role Confusion marks the fifth in Erikson's eight-stage lifespan sequence of developmental tasks, which comes to the fore

during adolescence. During this time, adolescents will seek to find some resolution between these two poles. Optimally, adolescents undergo the identity-formation process. This process involves the ego's ability to synthesize and integrate important earlier identifications into a new form, uniquely one's own. Erikson also stresses the important role played by the community in both recognizing and being recognized by the maturing adolescent. Erikson viewed a psychosocial moratorium to be an important developmental process in which young adults freely experiment with various possible adult roles in order to find one that seems to provide a unique fit (Erikson, 1968, p. 156). Perhaps one of Erikson's most widely used and related concepts has been that of the identity crisis. By crisis, he does not mean an impending catastrophe, but rather a critical turning point in the life history of an individual, in which development can only move forward by taking a new directional course.

### **8.5. Empirical Operationalizations of Identity**

Over the years since Erikson first presented these concepts, there have been many attempts to operationalize and empirically examine each of them. Attempts to study Erikson's fifth

psychosocial task of Identity vs. Role Confusion have been undertaken in different ways. One line of research has examined the place that "Identity vs. Role Confusion" holds in the eight-stage lifespan scheme (e.g. Constantinople, 1967, 1969; Rosenthal, Gurney, & C Moore, 1981). A second line of work has focused on Erikson's fifth psychosocial stage alone and has conceptualized it in bipolar terms - as something one "has" to a greater or lesser degree (e.g., Simmons, 1970). A third, very general approach has attempted to study one or more dimensions of ego identity outlined by Erikson (e.g., Blasi & Milton, 1991). Within this third tradition, a very popular approach has emerged in the attempt to understand the relationship between exploration and commitment variables to the formation of ego identity. The identity-status model developed by Marcia (1966, 1967) identifies four different styles (or statuses) by which late adolescents approach identity-defining roles and values. Various personality features, subjective experiences, and styles of interpersonal interaction have been associated with the four positions. Given the popularity of this model, it will be described in some detail below, and empirical findings and questions emerging from its use will be the focus for the remainder of this chapter. Erikson had indicated that issues of vocational decision-making, adopting various ideological values, as well as a sense of sexual identity form the

foundation of one's ego identity. Thus, Marcia and others have examined how an individual selects meaningful personal directions regarding these issues through the processes of exploration and commitment. Marcia reasoned that if an identity had been formed, an individual could be expected to have commitments in certain areas that Erikson had detailed. After his first 20 interviews, however, Marcia found that commitments were arrived at in different ways and the manner of being non-committed took different forms. The identity statuses thus emerged from the interview data itself (Marcia, personal communication, 2000). The identity statuses were originally conceptualized by Marcia as topographical features of some underlying identity structures. The more areas or domains in which identity had been achieved, the greater the probability of a certain kind of identity structure being present. Identity-achieved individuals have undertaken explorations of meaningful life directions prior to their commitments, while foreclosed individuals have formed commitments without significant prior explorations. Many of the values and roles adopted by the foreclosed individual are based on parental values, with which an adolescent has strongly identified. Individuals in the moratorium identity status are very much in the process of searching for meaningful adult roles and values but have not yet formed firm commitments, while



those in the diffusion status appear uninterested in finding personally expressive adult roles and values. These youths may lack commitment for a variety of reasons, ranging from merely a happy-go-lucky approach to life to severe psychopathology.

The original identity status interview lasted about 30-45 minutes and covered themes of vocation, religious and political values (ideology), and, later, sexual-expression and sexrole values (Marcia et al., 1993). Each identity domain was assigned an identity-status assessment, and an overall identity rating was given according to the clinical judgment of the rater. Independent reliability checks generally revealed 75-80 percent agreement percentages between two independent raters. Since the original identification and validation work on the identity statuses, further measures of identity status have also been developed. Among the most popular of these instruments has been the Extended Objective Measure of Ego Identity Status-II (EOM-EIS-II; Adams, Bennion, & Huh, 1989; Adams, 1999), which has undergone several revisions. This paper-and-pencil measure comprises 64 items that assess the degree of identify achievement, moratorium, foreclosure, and diffusion for an individual within each of eight identity-defining areas. Occupational, political, religious, and philosophy of life values comprise a general ideological domain, and friendship, dating, sex-role, and

recreational values comprise a general interpersonal domain. Items use a Likert-type scale format to assess the presence or absence of exploration and commitment an individual has experienced with regard to each statement. While the Identity Status Interview (Marcia et al., 1993) and the EOM-EIS-II (Adams, Bennion, & Huh, 1989; Adams, 1999) have remained the most popular ways to assess ego-identity status, other alternatives have appeared. The Groningen Identity Development Scale (GIDS; Bosma, 1985, 1992) combines interview and questionnaire material to assess ego-identity status in the areas of school, occupation, leisure-time activities, parents, philosophy of life, friendship, and personal characteristics. The Delias and Jernigan (1990) Identity Status Inventory assesses identity status (identity achievement, moratorium, foreclosure); diffuse-luck, having no commitment with dependence on luck or fate; and diffused-diffuse (having superficial search with no commitment) in the areas of occupation, religion, and politics. Mallory (1989) has developed a Q-sort personality profile for each of the four ego-identity statuses, based on Block's (1961/1978) California Q-set. Additional measures have examined exploration and commitment components of identity in somewhat different ways than solely through Marcia's identity statuses. Balistreri, Busch-Rossnagel, and Geisinger (1995) have developed a self-report Ego Identity Process

Inventory that focuses more fully on the processes of commitment and exploration in a number of identity-defining domains. This instrument provides continuous scale measures of exploration and commitment for each individual, though it is possible to derive an identity status assessment from it. Meeus et al. (1999) have focused on exploration and commitment variables to study identity transitions and pathways over time.

### **8.6. Criticisms of the Identity-Status Approach**

Since 1988, several critical commentaries of the identity-status approach have appeared (Blasi & Glodis, 1995; Cote & Levine, 1988; van Hoof, 1999). One focus of criticism has been whether or not Marcia's identity-status approach captures Erikson's theoretical conception of identity. Blasi and Glodis (1995, p. 410) have criticized the identity-status construct for failing to address phenomenological dimensions of identity: "[Measures assessing ego identity status] neglect to address the experience of one's fundamental nature and unity, which, in Erikson's descriptions as well as in common understanding, constitutes the subjective side

of the phenomenon." From a somewhat different perspective, Cote and Levine (1988) point to a theoretical hiatus between Marcia's formulations of identity and Erikson's theory. Cote and Levine note that while the identity-status paradigm has focused on at least one essential element expressed in Erikson's writings on identity (the formation of commitments during the identity formation process), the identity-status construct has largely ignored not only the role of developmental contexts but also the interaction between person and environment. A third critique has come from van Hoof (1999), who argues that Marcia's identity statuses ignore what she believes to be the core of identity - spatial-temporal continuity. She also points to construct underrepresentation of Erikson's theory in the identity-status approach and questions what construct actually underlies the ego-identity statuses. At no time has Marcia claimed that his attempt to operationalize identity via the identity statuses captures all dimensions that Erikson included in his concept of ego identity. Any attempt to operationalize all of Erikson's identity dimensions in a single construct would be simply unwieldy, if not impossible. However, exploration and commitment variables used by Marcia to define the identity statuses were taken directly from part of Erikson's construct of identity. Similarly, the identity-defining roles and values of vocation, ideology, and sexuality, deemed by Erikson to be so

critical for adolescents in the identity-formation process, are those same values which are examined in commonly used measures of ego-identity status. Clearly, Marcia's identity-status approach has been based on some of Erikson's key ideas regarding ego identity.

Berzonsky and Adams (1999) have addressed the question of whether or not the identity-status construct is a valid measure of Eriksonian identity. They point out that in the need to be precise and specific, operationally defining a construct involves a trade-off, often in the loss of theoretical richness and scope. Multiple measurements are also necessary to establish construct validity. The identity statuses are an operational attempt to define and expand some, but not all, of Erikson's rich, clinically based observations included in his identity construct. Certainly, it is important and necessary to operationalize and research other dimensions of Erikson's identity construct. The identity-status construct has given rise to an estimated 500 studies of various personality variables, family antecedents, and developmental consequences associated with the various identity statuses (Waterman, 1999). As van Hoof (1999) has pointed out, however, a number of these studies have failed to hypothesize relationships that are directly grounded in Eriksonian theory. Future identity status research should take heed of this criticism as well as focus on additional identity dimensions that Erikson has described. A

second issue under recent discussion has been the construct validation of the identity statuses themselves. Van Hoof (1999) has adopted the rather conservative position that each of the four identity statuses must respond statistically differently to variables used to help establish their construct validity. She points out that most commonly only one or two identity statuses differ significantly from remaining identity statuses on measures of constructs used for validation. She concludes, therefore, that construct validity of the four different identity positions has not been established. Waterman (1999) has addressed this issue by noting the lack of any typological or complex stage system in psychology that would likely satisfy this stringent criterion for construct validation. Validation of a construct, Waterman and others have argued, should require that a distinctive pattern of responses be demonstrated. Thus, construct validation of the identity statuses should require not that each identity status be related significantly differently to every other identity status on dependent variables used to help establish construct validation. Rather, only a distinctive and hypothesized pattern of response should be associated with the four identity-status positions. One would not, furthermore, expect individuals in each identity status to score significantly differently from those in every other identity status on some variables used to help establish construct validity.

(Although some data do discriminate among the four identity positions; see Berzonsky & Adams, 1999.) Thus, for example, moratoriums would be theoretically expected to score higher than the other identity statuses on a measure of anxiety because of the uncertainty and indecision likely to be associated with the identity-formation process. However, they may not score significantly higher than every other identity status, and no theoretical expectations would be held for the interrelationships among remaining identity statuses. According to more commonly used criteria for the establishment of construct validity in psychology, considerable evidence has accrued for expected patterns of responses for each of the four ego identity statuses. However, a useful direction for future research would be a meta-analysis of variables commonly researched in relation to the identity statuses. This procedure would provide a mean estimate or effect size and make it possible to study variation among studies in actual effect sizes, ultimately enabling one to determine whether or not the mean effect could be generalized across settings (Hunter & Schmidt, 1990).

## **8.7. Characteristics of the Adolescents in Various Identity-Status Groupings**

Numerous studies have been undertaken to examine a broad range of personality features, interpersonal behaviors, family antecedents, and developmental patterns of movement for each of the identity statuses. Within many Western contexts, these characteristics have been found for both men and women in more recent decades. Early stages of identity status research through the 1970s focused primarily on core personality features of each identity status within the United States and Canada, with developmental patterns studied over only two data-collection points during adolescence. However, the past two decades have seen a wide range of personality features examined in many countries around the world. Developmental patterns have been examined over more points in time, and the study of identity-status patterns of change and stability has been extended into the years of early and middle adulthood. Recent criticism of the developmental nature of the identity statuses will be addressed in a subsequent section. The following section details personality variables, patterns of family interaction, and behavioral consequences associated with each of the four identity statuses.



### 8.7.1. Identity achieved

Identity-achieved individuals have shown such personality features as the high levels of achievement motivation and self-esteem (along with moratoriums; e.g., Orlofsky, 1978) and low neuroticism and high conscientiousness and extrovertedness (e.g., Clancy & Dollinger, 1993). Conversely, the identity-achieved have also shown the lowest use of defense mechanisms (e.g., Cramer, 1997), and low levels of shyness (e.g., Hamer & Bruch, 1994) relative to those of other identity statuses. They also have shown the highest levels of internal locus of control (e.g., Abraham, 1983). In terms of cognitive processes, identity-achieved individuals have demonstrated the ability to function well under conditions of stress (e.g., Marcia, 1966) and to use more planned, rational, and logical decision-making strategies than other identity statuses (e.g., Blustein & Phillips, 1990; Boyes & Chandler, 1992). This group has also demonstrated the highest level of moral reasoning regarding issues of both justice and care (e.g., Rowe & Marcia, 1980; Skoe & Marcia, 1991). They have

also demonstrated the highest levels of ego development in Loevinger's (1976) ego development scheme (e.g., Berzonsky & Adams, 1999). Interpersonally, identity-achieved individuals have demonstrated the highest levels of intimacy relative to other identity positions (e.g., Kacerguis & Adams, 1980; Orlofsky, Marcia, & Lesser, 1973). They are able to develop mutual interpersonal relationships with both close friends and a partner, and they are genuinely interested in others. Identity-achieved individuals have shown the greatest willingness to reveal themselves to others (e.g., Adams, Abraham, & Markstrom, 1987), and have also shown the most secure patterns of attachment to their families (e.g., Kroger, 1985). Identity-achieved and moratorium adolescents have been least likely to report maternal socialization behaviors that control or regulate but rather encourage free and independent behavior (e.g., Adams & Jones, 1983). Families of both identity-achieved and moratorium adolescents have emphasized both individuality and connectedness in family relationships (e.g. Campbell, Adams, & Dobson, 1984).

### 8.7.2. Moratorium

Anxiety has been a key personality variable associated with those in the moratorium identity status (e.g. Marcia, 1967). Moratoriums are in the process of searching for identitydefining commitments, and this appears to be a very anxiety-provoking process. Anxiety regarding death has been found to be significantly higher among moratoriums compared with each of the other three identity statuses (e.g., Sterling & Van Horn, 1989). Moratoriums have been shown to use denial, projection, and identification to help keep general anxieties at bay (e.g., Cramer, 1995). In research by Berzonsky and Kuk (2000), the more self-exploration that students had engaged in (those in both identity-achieved and moratorium identity statuses), the more prepared they were to undertake tasks in a self-directed manner without needing to look to others for reassurance and emotional support. Moratorium individuals have also shown a greater disposition to adaptive regression than those in other identity statuses (e.g., Bilsker & Marcia, 1991). Cognitively, students in a moratorium process have also been found to be skeptical about ever knowing anything with certainty (e.g., Boyes & Chandler,

1992). Moratoriums and achievements are significantly more experientially oriented compared with foreclosures and diffusions (e.g., Stephen, Fraser, & Marcia, 1992). They, like the identity achieved, have also demonstrated an analytic/philosophical cognitive style (e.g., Shain & Farber, 1989). In a study of adolescent females, both moratorium and achievement women were able to integrate and analyze information from a variety of perspectives, in contrast to other identity groups (e.g., Read, Adams, & Dobson, 1984). Berzonsky (1990) has found moratorium and achieved individuals to use an information-oriented style to construct a sense of identity. In general, moratorium adolescents have demonstrated the ability to reflect on diverse information in an analytical manner. Interpersonally, those in the moratorium status have been found most frequently to be preintimate in their style of intimacy - that is, they are most likely to have established close friendship relationships which are characterized by respecting the integrity of others, being open and nondefensive, but have not yet committed themselves to a partner. In relation to their families, moratorium adolescents have appeared ambivalent; for men, conflictual independence from parents has predicted degree of identity

exploration (e.g., Lucas, 1997). Parents of moratorium adolescents have emphasized independence in their child-rearing patterns (e.g., Campbell et al., 1984).

### **8.7.3. Foreclosure**

Foreclosed individuals have consistently shown personality characteristics such as high levels of conformity, authoritarianism, and levels of aspiration change, coupled with low anxiety, and use of defensive narcissism (e.g., Cramer, 1995; Marcia, 1966, 1967) The foreclosed identity status has been associated with racial and homophobic prejudice (e.g., Fulton, 1997). Foreclosed individuals rely on dependent strategies for their decision making (e.g., Blustein & Phillips, 1990) and are not generally open to new experiences (e.g., Clancy & Dollinger, 1993). They use an external locus of control (e.g., Clancy & Dollinger, 1993) and are especially oriented toward the more distant future, compared with other identity statuses (e.g., Rappaport, Enrich, & Wilson, 1985). Cognitively, foreclosed adolescents have been least able to integrate ideas and to think analytically; they, along with diffusions,

have also been most likely to make errors in judgment because of reduced attention (e.g., Read, Adams, & Dobson, 1984). In addition, the foreclosed, along with the diffuse, are most likely to share the view that absolute certainty is attainable (e.g., Boyes & Chandler, 1992). Foreclosure adolescents have been found to use a normative orientation in constructing a sense of identity - they conform to the expectations of significant others and are concerned about preserving their existing identity structure (e.g., Berzonsky, 1990, 1992). Foreclosed and diffuse individuals are also most likely to be pre-conventional or conventional in their level of moral reasoning (e.g., Rowe & Marcia, 1980) and the foreclosed are more oriented toward others needs only in their ability to care (e.g., Skoe & Marcia, 1991). Interpersonally, foreclosures are most likely to be stereotyped in their styles of intimacy (more concerned with superficial features of a relationship) (e.g., Orlofsky, Marcia, & Lesser, 1973). Additionally, mutually identified best friends shared distinct similarities in ego-identity status; foreclosed adolescents were most likely to have best friends who were also foreclosed (e.g., Akers, Jones, & Coyl, 1998). In terms of family patterns of interaction, foreclosed adolescents

have reported their families as very close and child-centered; in a study of adolescent females, when the mother is too close, involved, and protective of her daughter, the daughter mirrors parental values rather than exploring other possibilities (e.g., Perosa, Perosa, & Tam, 1996). Less reported conflict in families has also been associated with the foreclosed identity status (e.g., Willemsen & Waterman, 1991) Foreclosed adolescents have evidenced patterns of severe anxious attachment in the face of family separation threat more frequently than any other identity status (Kroger, 1985). Observational research has found parents who discourage the expression of individual opinions among family members have adolescents demonstrating low levels of identity exploration (e.g., Grotevant & Cooper, 1985). Youths who remain foreclosed during late adolescence have shown more anxious or detached attachment profiles relative to other identity statuses (e.g., Kroger, 1995).

#### 8.7.4. Diffusion

Diffuse individuals have shown low levels of autonomy, self-esteem, and identity (e.g., Cramer, 1997; Marcia, 1966). Having no firm identity-defining commitments nor interest in making them, diffusions seem content to "go where the wind blows" or wherever circumstances push them; they have demonstrated the lowest sense of personal integrative continuity over time (e.g., Berzonsky, Rice, & Neimeyer, 1991). Diffusions are also most likely to have difficulties in adapting to a university environment (e.g., Berzonsky and Kuk, 2000) and are most likely to be shy (e.g., Hamer & Bruch, 1994). Adams et al. (1984) found diffusions to be most influenced by peer pressures toward conformity, compared with other identity statuses. Diffusions were also the most self-focused of all identity statuses on a task that required them to estimate being the focus of others' attention (Adams, Abraham, & Markstrom, 1987); grandiose self-expression as well as disagreeableness have been associated with the identity diffusion status (e.g., Blustein & Palladino, 1992; Clancy &



Dollinger, 1993). Diffusions have also shown high levels of neuroticism (along with the moratoriums) and lowest levels of conscientiousness (e.g., Clancy & Dollinger, 1993). Taken together, these findings suggest impaired psychosocial development for the late adolescent diffuse individual. Cognitively, the adolescent diffuse either rely on intuitive or dependent styles of decision-making or show an absence of systematic approaches to solving problems (e.g., Blustein & Phillips, 1990). A diffuse/avoidant orientation to identity construction has been associated with the diffusion identity status (e.g., Berzonsky, 1990). This socialcognitive style is marked by procrastination and defensive avoidance of issues, as well as reliance on an external locus of control. Diffusions have demonstrated preconventional, conventional, or generally low levels of moral reasoning (e.g., Podd, 1972; Skoe & Marcia, 1991). Conformist or preconformist levels of ego development have also characterized the identity diffuse and foreclosed (Ginsburg & Orlofsky, 1981). Diffusions have also scored highest of all the identity statuses on a measure of hopelessness (Selles, MarkstromAdams, & Adams, 1994). In terms of interpersonal relationships, diffusions have reported distant or rejecting caretakers or

low level of attachment to parents (e.g., for males, Campbell, Adams, & Dobson, 1984; for females, Josselson, 1987). In addition, communication patterns have often been inconsistent. Memories of diffusions regarding their families has carried themes of a wistful quality, wishing for strong adults to care and set guidelines (e.g., Josselson, 1987). In terms of social relationships, diffusions have been most likely to use bribes and deception to exert influence on others compared with the other identity statuses (e.g. Read, Adams, & Dobson, 1984). Diffusions are most likely to be isolated or stereotyped in their styles of intimacy with others (e.g., Orlofsky, Marcia, & Lesser, 1973). In other words, they either have established no close relationships, or tend to have relationships focused on very superficial issues.

#### **8.7.5. Developmental patterns and processes**

Cross-sectional, longitudinal, and retrospective studies of identity status movements over time have all pointed to increasing numbers of adolescents in more mature (moratorium and achievement) identity statuses and

decreasing numbers in less mature (foreclosure and diffusion) statuses over time. This pattern has appeared for identity status ratings assigned both in global terms as well as in most individual identity domains (e.g., Archer, 1982; Cramer, 1998; Fitch & Adams, 1983; Foster & LaForce, 1999; Josselson, 1987; Kroger, 1988, 1995; Kroger & Haslett, 1987, 1991; Marcia, 1976; Meilman, 1979; Waterman, Geary, & Waterman, 1974; Waterman & Goldman, 1976; Waterman & Waterman, 1971). It is noteworthy, however, that across all of the above studies, approximately one-half of late adolescents have retained a foreclosed or diffuse identity status, in both global or domain ratings, by the time of leaving tertiary study. This pattern suggests considerable scope for change through the years of adult life. Developmental research has benefited the most from longitudinal studies designed to enable the observation of intraindividual pathways of identity development. Because of the generally short duration of the moratorium status, it is also important for longitudinal researchers to collect data at reasonably frequent intervals to enable a fuller understanding of all steps taken in various developmental trajectories of adolescence. Some additional issues regarding identity status change have also been

explored. Some researchers are currently focusing on issues involved in the moratorium process and the examination of factors most likely to precipitate developmental change. Personality factors (including readiness for change, the experience of conflict, and openness to new experience), in combination with various environmental factors (for example, the importance of a "bridging other") all may be important to understand movement into the moratorium process. Bosma and Kunnen (2001) provide a good review of recent researches into issues of identity-status transitions. The study of identity-status trajectories involving three or four data collection points has also been an important recent addition to the study of identity status development through the years of adolescence and adulthood. Works by Adams, Montemayor, and Brown (1992), Goossens (1992), Josselson (1996), and Mallory (1983) have all pointed to diversity of pathways as lives unfold during late adolescence and beyond. The meaning of identity status movements after the identity formation process of adolescence raises some complex issues, however, and a discussion is beyond the scope of the present unit.

## 8.8. Criticism Regarding the Developmental Nature of the Identity Statuses

Since 1988, several critiques have appeared regarding the developmental nature of the identity-status positions. One line of criticism has been directed at whether or not the identity statuses are sensitive enough to measure the identity formation process. Van Hoof (1999, p. 540) has argued that because a high percentage of adolescents remain stable in foreclosure or diffusion positions at the end of late adolescence (noted in the previous section), the identity statuses are "not sensitive enough" to measure the identity formation process. Other models of related developmental schemes have also noted the large percentages of individuals who do not move to more complex forms of identity resolutions by adult life. For example, a review of studies of Kegan's (1994) meaning-making construct point to the fact that approximately "one-half to two-thirds of the adult population appear not to have fully reached the fourth order of conscientiousness" [Eriksonian equivalent of attaining a sense of personal identity, Kegan, 1982] (Kegan, 1994, p. 191). It appears likely that a number of adolescents do retain less mature identity positions at the end of adolescence; among those who do change, however, movement is primarily in the predicted, progressive

direction. Waterman (1999), too, has observed that because stability of identity status is common during adolescence, one cannot conclude that the identity statuses do not measure the identity-formation process for those who do change. Another line of criticism has been directed at whether or not there is a continuum of identity-status movement and a theoretical rationale for it (Cote & Levine, 1988; Meeus et al., 1999; van Hoof, 1999). There is a clear, theoretical rationale for the prediction of movement from a foreclosed identity position to a moratorium to identity achievement. Erikson (1968, p. 159) has described a sequence in the movement of ego growth: "If we consider introjection, identification, and identity formation to be the steps by which the ego grows in ever more mature interplay with the available models, the following psychosocial schedule suggests itself." To Erikson, "tentative crystallizations of identity" occur during childhood, based upon identifying with the characteristics, roles, and values of important others. Identity attainment, at the end of adolescence, then, is "superordinated to any single identification with individuals of the past: it includes all significant identifications, but it also alters them in order to make a unique and reasonably coherent whole of them" (Erikson, 1968, p. 161). Marcia's (1966) foreclosed identity status is defined by identity commitments without exploration — an identity derived

from identifications with significant others. The moratorium status reflects the identity formation process of individual exploration of identity defining alternatives, while the identity-achieved status reflects an identity resolution based on a unique synthesis of previous identifications, following a time of exploration, to a position which is uniquely one's own. These three identity positions identified by Marcia correspond directly to Erikson's stages of ego growth in the identity-formation process. Marcia's diffusion-identity status, reflecting a position of little or no identity exploration and a lack of identity-defining commitments corresponds directly to Erikson's notion of identity diffusion. In non pathological circumstances, Marcia's diffusion status is developmentally most likely to precede identity foreclosure, before one has begun to consider issues of identity definition. As Meeus and van Hoof both note, among those individuals who do change identity status during adolescence, the most common pattern of movement is a progressive one, at least from the less mature (foreclosure and diffusion) to more mature (moratorium and achieved) identity positions. This movement is in accordance with theoretical prediction. At present, longitudinal studies of identity status change over late adolescence often have two- to three-year intervals between assessments. The longitudinal assessment of ego-identity status change at more frequent intervals

over time is needed, however, before complete details of the continuum of movement for those who do move can be fully evaluated. Van Hoof (1999) has argued that the frequent patterns of stability or decrease in the moratorium identity status in longitudinal and cross-sectional studies of identity status change argue against the notion of a developmental continuum. However, it is difficult to interpret what overall change or stability in the moratorium status actually means. One is expected to be in the moratorium status in late adolescence for a relatively brief period of time (Waterman, 1999). Time estimates for the area of vocational identity, for example, show the probability of movement from a moratorium position over a one-year time span during late adolescence/young adulthood to be 50-100 percent for various subgroups of the larger sample (Kroger & Haslett, 1987). At the same time, there is commonly a relatively long interval between identity-status assessments in both longitudinal and cross-sectional research. Thus, it is possible that considerable movement into and out of the moratorium status may have taken place unobserved. Such change may either fail to have been recorded by researchers at their infrequent data-collection points or appear as no change in cross-sectional studies, as comparable numbers of different individuals move into and out of this identity status. Additionally, the times at which identity status assessments



have been made in longitudinal studies of adolescent identity development are generally at entry and exit points of university attendance (e.g., Cramer, 1998; Kroger, 1988, 1995; Waterman & Goldman, 1976). University entry and exit times are unlikely to capture the moratorium identity-status position for those late adolescents who will undergo change. One might expect to find late adolescents in a moratorium position after they have had time for exposure to the diversity of new ideas and people in the university environment, as well as at the point of having to make identity-defining decisions such as choosing a college major or otherwise considering important adult life options, some time prior to university completion. Waterman and Waterman (1971) and Fitch and Adams (1983) have undertaken longitudinal studies over a 9—12-month interval following university entrance, when such processes are likely taking place. Both of these researches show considerable increases in the numbers into the moratorium position after 9-12 months at university. Longitudinal data collection at intermediate time intervals over the time of tertiary study is necessary to assess individual trajectories of movement across any identity-status continuum. Kroger and Haslett (1987, 1991) and Meeus et al. (1999) have pointed to the advantages of the use of log linear models and Markov chains for the analysis of identity-status movements over time as an

alternative to chi-square analyses. Van Hoof (1999), however, has been highly critical of the use of Markov chains used to estimate the probabilities of being in a particular identity status at a particular age, while at the same time advocating the use of dynamic systems models. Markov chains belong in the general class of dynamic models (Kiiveri & Speed, 1982; Berzuini et al., 1997). Markov chains are, simply, dynamic models for categorical variables (Kroger & Haslett, 1987; Liu & Chen, 1998). Use of simulation techniques (e.g. Markov Chain Monte Carlo and Bootstrap: Gilks, Richardson, & Spiegelhalter, 1991) will in some circumstances add to the discussion of movement patterns for the various identity statuses at the cost of additional model complexity. However, Markov chains per se have both a sound and well-documented history. They have further potential in the study of processes with time-varying states or statuses, and this includes the study of identity-status movements over time.

### **8.9. Identity and Broader Social Contexts**

Though Adams and Fitch (1983) first pointed to the important role of one context (differing academic environments) beyond the family in adolescent identity development, it has only been very

recently that researchers have been increasingly focusing attention on social context and its role in adolescent identity development. Clear patterns of difference in identity-status pathways of movement have been found in various adult lifestyle contexts under study, even when key demographic variables such as education level, marital status, parental status, and/or age group have been held constant (Josselson, 1996; Kroger & Haslett, 1987, 1991). To date, however, it has been difficult to determine the direction of effects and the question remains open as to whether individuals with certain kinds of identity structures are attracted to particular kinds of settings, whether particular settings steer the process of identity development, or a combination of both factors. At this point, from the above research on contexts it seems that social circumstances may set broad limits to likely behaviors, though individual personality characteristics do play a key role in influencing the course of identity development over time. Contexts, in broader terms, and their role in identity development have been a recent focus for several recent articles, including those by Adams and Marshall (1996), Cote (1996), and Yoder (2000). Adams and Marshall have stressed that identity develops out of both individual and social processes. They point out how processes of differentiation and integration underlie the relationship between individual and context, and how identity both

shapes and is shaped by the surrounding milieu. An interesting issue that could be explored in future research would be developmentally different ways in which individuals become differentiated from and integrated with their contexts over time. Cote has stressed that the best way to understand the relationship between identity development in context is to delineate the levels or dimensions of identity being explored in relation to a given context. He has also stressed the need to understand particular individual factors such as ethnicity and gender and the particular meaning such issues take on within particular contexts. A further perspective has been stressed by Yoder, in which she details various external "barriers" to development and how they may limit individual developmental options. Barriers may appear and disappear over time, and Yoder stresses various characteristics of barriers (e.g., sociocultural bias) which may be identified over a continuum. Her formulations present an interesting new way of examining the impact of changing historical circumstances on the identity-formation process of adolescence.

## 8.10. Identity and Gender

Several years ago, I undertook an extensive review of identity status research regarding possible gender differences on three questions: (1) Are there gender differences in the identity-status distributions of adolescents and adults to deal with identity-defining roles and values? (2) Are there gender differences in the identity domains most important to self-definition? (3) Are there gender differences in the developmental process of identity formation? (Kroger, 1997). I examined all published studies appearing between 1966 and 1995 in the Social Science Citation Index that made use of one of the more common measures of identity status or style for both genders. After eliminating sample duplications, some 56 studies were examined. Surprisingly few gender differences appeared in response to the above three questions. With regard to the question of possible gender differences in identity structure (global identity status ratings), some 35 studies reporting some 42 testings provided meaningful data. Only six distributions showed clearly statistically significant gender differences in identity status or style; there was no consistent pattern of gender differences across these studies. Some gender differences did appear in the identity-status distributions for the various identity content areas (or domains). However, no

consistent patterns across studies could be observed with one exception. For the few studies that included both genders and the content area of family/career priorities and/or sexual values, women generally predominated over men in moratorium and achievement-identity statuses. No gender differences appeared in the developmental pathways taken; both men and women showed increasing frequencies of moratorium and achievement ratings and decreasing foreclosure and diffusion ratings over time. By 1995, few studies had explored the issue of possible gender differences in relation to social context, with no trends apparent. In sum, there has been little evidence of gender differences regarding questions of identity structure, domain salience, or developmental process. It is important to note, however, that my review did not include an examination of possible gender X identity status interactions for dependent behavioral, psychological, or social variables. Recent work by Cramer (2000) suggests some gender X identity status differences in personality processes supporting identity development as well as in self-descriptions. A promising line of future identity research is also likely to be exploring the potentially mediating impact of gender-role orientation (masculine, feminine, androgynous) on the identity-formation process of late adolescence. Preliminary evidence from five researches to date suggests that gender-role orientation, rather than

gender per se, is an important predictor of difference in resolutions to questions of identity, moral reasoning, and intimacy (Bartle-Haring & Strimple, 1996; Cruise, as cited in Marcia, 1993; Dyk & Adams, 1990; Skoe, 1993; Sochting, Skoe, & Marcia, 1994). Future identity research must recognize considerable intrasex variation, particularly regarding gender-role adherence, and examine the impact of this potential mediator on dependent variables under study.

### **8.11. Identity and Ethnicity**

For most Caucasian-American adolescents, awareness of their cultural ancestry is important, but not of vital concern to their sense of ego identity. However, for members of many ethnic minority groups living within majority cultures, questions regarding ethnic identity have prompted vital identity explorations. Indeed, Phinney and Alipura (1990) have shown that self-esteem for many ethnic minority group members has been directly related to the extent to which individuals had thought about and resolved identity issues concerning their ethnicity. Smith et al. (1999) have found self-esteem to be strongly related to one's ethnic identity. In the words of one of my own research participants from an ethnic minority group, "I think feeling

comfortable with my ethnic identity is a prerequisite to discovering my personal identity" (Kroger, 2000, p. 126). Jean Phinney has been a researcher active in the development of measures of ethnic identity. She has developed an interview means of assessing ethnic identity, with identity statuses reflecting the degrees of crisis and commitment to questions of ethnicity (Phinney, 1989). With this measure, Phinney found stages of ethnic identity development apparent across Asian American, black, and Hispanic high school students; interestingly, whites could not be reliably coded on this measure. Ethnically identity-achieved minority-group adolescents had the highest scores on independent measures of ego identity and psychological adjustment. Phinney and her colleagues (1999) have also developed the Multigroup Ethnic Identity Measure (MEIM). This measure has been used across a variety of ethnic groups and provides a global composite index of ethnic identity. Ethnic identity has been strongly related to measures of coping ability, mastery, self-esteem, and optimism and negatively related to loneliness and depression. Studies over the past decade have examined a diversity of issues related to ethnic identity development in varied cultural settings. The relationship between Marcia's identity statuses (or exploration and commitment processes) and selected personality variables have been explored



in various cultural settings (e.g., Alberts & Meyer, 1998; Nurmi, Poole, & Kalakoski, 1996). The relationship between ethnic community context and ethnic identity has been examined among aboriginal Sami adolescents living in coastal and inland communities in northern Norway (Kvernmo & Heyerdahl, 1996). Ethnic identity has been one predictor of fidelity among African American but not European American adolescents in a one-year longitudinal study (Markstrom & Hunter, 1999). Reviews of research that attempt to integrate the great diversity of important ethnic identity issues are badly needed. In addition, studies focusing on the impact of intercultural exposures to adolescent identity formation are a further area in need of investigation.

## 8.12. Summary

This chapter began by examining five general approaches to the study of identity development during adolescence that dominate the field today. Erik Erikson (1963, 1968) first used the term "ego identity," and has provided central, identity-related concepts which researchers continue to explore today in empirical and narrative investigations. Among researchers, Marcia's (1966, 1967) identity-status paradigm has provided a popular model for expanding and empirically investigating Erikson's notions regarding identity. This chapter has focused primarily on this paradigm, over viewing key personality factors associated with the identity statuses, as well as developmental patterns of movement over time. The chapter has also focused, in conclusion, on general issues related to identity development in context, as well as on questions regarding the relationship of gender and ethnicity to adolescent identity development. Individual sections have presented some possibilities for future research directions that might fruitfully be explored, and responses to recent major criticisms of the identity-status approach have been presented.

### 8.13. Check Your Progress









## 2.16 References / Further Readings

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## UNIT 3

### Roles and Responsibilities

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## UNIT 3

# Roles and Responsibilities

### 15.1 INTRODUCTION

The transition to adulthood is a critical stage of human development during which young people leave childhood behind and take on new roles and responsibilities. It is a period of social, psychological, economic, and biological transitions, and for many young people it involves demanding emotional challenges and important choices. To a large degree, the nature and quality of young people's future lives depend on how successfully they negotiate through this critical period. Yet in many developing countries, it is a stage of life that has only recently begun to receive focused attention.

The challenges for young people making the transition to adulthood are greater today than ever before. Globalization, with its power to reach across national boundaries and into the smallest communities, carries with it the transformative power of new markets and new technology. At the same time, globalization brings with it new ideas and lifestyles that can conflict with traditional norms and values. And while the economic benefits are

potentially enormous, the actual course of globalization has not been without its critics who charge that, to date, the gains have been very unevenly distributed, generating a new set of problems associated with rising inequality and social polarization. Regardless of how the globalization debate is resolved, it is clear that as broad global forces transform the world in which the next generation will live and work, the choices that today's young people make or others make on their behalf will facilitate or constrain their success as adults. Traditional expectations regarding future employment prospects and life experiences are no longer valid.

Concerns about how global forces are altering the passage into adulthood are all the more urgent because of the changing demographic profile of many developing countries. The acceleration of these global changes has coincided with unprecedented growth in the size of the population of young people in developing countries. By 2005, the total number of 10-24-year-olds is estimated to have reached 1.5 billion, constituting nearly 30 percent of the population of these regions and 86 percent of all young people in the world. And each subsequent cohort of young people in the developing world is projected to continue to increase until 2035, as rapid growth in Africa and

parts of Asia counteracts some slow declines in absolute numbers elsewhere in Asia and in Latin America and the Caribbean.

Recognizing the need to learn more about this crucial period of life, the National Research Council convened a panel of experts to examine how the transition to adulthood is changing in developing countries, and what the implications of these changes might be for those responsible for designing youth policies and programs, in particular, those affecting adolescent reproductive health.

According to the panel's findings, important transformations in young peoples' lives are under way. In much of the developing world, adolescence is a stage of life that is gaining in significance. In the past, young men and women tended to move directly from childhood to adult roles. But today the interval between childhood and the assumption of adult roles is lengthening. Compared to the situation 20 years ago, young people are:

- Entering adolescence earlier and healthier,
- More likely to spend their adolescence in school,
- More likely to postpone entry into the labor force, and
- More likely to delay marriage and childbearing.

As a result of these changes, on average, young people in the developing world now have more time and opportunities than ever before to acquire the information and skills necessary to become effective participants in decisions about their own lives and futures.

These broad statements capture only the average tendencies for young people in developing countries, which tend to be statistically dominated by trends in developing Asia, where 70 percent of young people in developing countries live, 42 percent in India and China alone. Differential rates of change have led, in some cases, to growing differences among adolescents within and across countries, as some young people experience progress while others are left behind. Over the past 20 years, economic growth rates in Latin America and the Caribbean and in sub-Saharan Africa have diverged negatively from economic growth rates in developed countries, while growth rates in East and South Asia, where the majority of young people live, have converged toward economic growth rates in developed countries. These very different circumstances across regions mean that the experiences of today's young people, as well as the implications of globalization for them, vary enormously. And even in countries in which the rate of economic growth has been very high, for some young people,

particularly those in rural areas, the outward patterns and rhythms of life may appear to be largely unaffected.

Because of rapid population growth, young people who are poor are about as numerous today as they were in the past despite declining poverty rates; current estimates imply that roughly 325 million young people in developing countries are growing up on less than \$1 a day. Furthermore, the continuing growth in the absolute numbers of young people as well as the lengthening period of years spent unmarried (and in many cases sexually active) ensure a rapid and continuing growth in young peoples' need for education, as well as for reproductive and other health services. Further challenges include relatively poor learning outcomes in school among enrolled students and persistent disadvantages for young women, young people from low-income families, and young people living in the least developed countries.

Sub-Saharan Africa is a region of special concern. Not only are poverty rates rising and population growth rates proceeding at unprecedented levels, but also the risks of HIV/AIDS for young people are very high and increasing. Furthermore, recent data on school participation suggest that, in some settings during the 1990s, school attendance rates for boys fell as the prevalence of child labor rose. Growing pressures on school systems may further

compromise school quality, which is already poor. While fewer African young people marry or bear children during adolescence relative to previous generations, many lack opportunities to use this lengthening adolescent phase of their lives to acquire needed education and training.

## **15.2 OBJECTIVES**

- To study Behaviors that young people adopt at this age
- To understanding about various the transition to adult roles
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

### 15.3 CRITERIA FOR SUCCESS

The panel's policy and program recommendations emerge from a conceptual framework that we developed to organize and guide this report. The framework identifies criteria for successful transitions in the context of contemporary global changes. We identified the importance of adequate preparation for five key adult roles: adult worker, citizen and community participant, spouse, parent, and household manager.

The defining attributes of such a conceptualization of successful transitions to adulthood, which must be seen within the constraints of personal endowments and capabilities, include at least the following:

- Good mental and physical health, including reproductive health, and the knowledge and means to sustain health during adulthood.
- An appropriate stock of human and social capital to be a productive adult member of society.
- The acquisition of prosocial values and the ability to contribute to the collective well-being as citizen and community participant.

- Adequate preparation for the assumption of adult social roles and obligations, including the roles of spouse or partner, parent, and household and family manager.
- The capability to make choices through the acquisition of a sense of self and a sense of personal competence.
- A sense of well-being.

While success is ultimately measured at the individual level, societies and their institutions at the international, national, and local levels, including governments of developed countries, can enhance successful transitions to adulthood. In the panel's view, policies that support universal primary schooling of adequate quality, that support the expansion of good secondary schooling, and that promote good health during this phase of the life cycle are essential in their own right but also important because of their role in promoting success in these other domains. In the panel's judgment, poverty is the greatest enemy of successful transitions.



### 15.3.1 SCHOOLING

Young people in developing countries are spending more of their adolescence in school than ever before. Recent growth rates in all indicators of school participation and grade attainment have been substantial, historically unprecedented, and greater for girls than for boys. For example, on the basis of survey data representing 60 percent of the population of the developing world, mean grades attained have risen over the past 20 years from 6.0 to 7.4 (23 percent) for young men ages 20-24 on average and from 3.8 to 6.0 (58 percent) for young women ages 20-24. Furthermore, the percentage who have never attended school has fallen from 21 to 11 percent for boys ages 10-14 and from 39 to 18 percent for girls of the same age over the same period. These positive overall trends in schooling, while typical, are not universal.

Despite these trends, there remain large differences in school attendance rates according to wealth and residential status, with poor girls suffering particular disadvantage. Recent well-designed evaluation studies have shown that conditional grants

or targeted subsidies can be effective strategies for increasing school attendance and progression rates among economically disadvantaged groups.

Global trends in population, health, urbanization, and education have all contributed positively to the growth in the demand for schooling. In most parts of the developing world today, young people live within reasonable proximity of a primary school—a notable achievement given the rapid growth in the school-age population. The results of recent internationally comparable standardized tests, however, raise serious concerns about how much students are actually learning in school—and therefore about school quality. Poor school quality and poverty remain major factors limiting enrollments, encouraging dropout, and compromising learning outcomes.

### **15.3.2 THE HEALTH**

The health of young people in developing countries is improving. Young people are entering the transition to adulthood healthier and with improved chances of surviving to old age. And continued reductions in mortality seem likely,

with the major exception of countries strongly affected by the HIV/AIDS epidemic.

HIV/AIDS is now the leading cause of death among young people in sub-Saharan Africa. In other regions, it is among the least significant causes of death; instead, noncommunicable diseases predominate as well as injuries for men. Nevertheless, given the much higher mortality rates in sub-Saharan Africa than in the rest of the world, HIV/AIDS is now the leading cause of death for women ages 15-29 for the world as a whole and one of the leading causes of death for men in the same age group. Moreover, given the much larger population of young people in Asia, an increase in the epidemic there, which is projected by many, would mean that the numbers of young people affected would increase substantially.

Mortality and morbidity related to pregnancy and childbirth (particularly in sub-Saharan Africa and South Asia, where levels of early childbearing remain high) and as a direct consequence of unsafe abortion across all developing regions remain among the most significant risks to young women's health. Although young women appear less likely than older women to seek abortion, they are more likely to have the

abortion later in the pregnancy and to choose an unsafe provider, thus putting them at greater risk.

Behaviors that young people adopt at this age have critical implications for their future health and mortality. In particular, unprotected sex is one of the riskiest behaviors that young people can undertake, particularly in settings in which HIV/AIDS is widespread. Evidence from Latin America and sub-Saharan Africa suggest that contraceptive use rates are increasing among sexually active young women, especially unmarried ones. Condom use, however, remains relatively low but is increasing rapidly in Latin America and the Caribbean as well as Eastern and Southern Africa. Poverty and economic vulnerability enhance the likelihood that young people will engage in risky sexual behaviors. Furthermore, there is growing evidence that coercive sex is not an uncommon experience for many girls and young women.

However, sex is not being initiated at an earlier age relative to the past in most countries. While there has been an increase in the percentage having premarital sex before age 18 in many countries over the past 20 years, delays in the age of marriage in most countries have meant that, on balance relative to 20 years ago, fewer young women report themselves to have been

sexually active before age 18. Thus while sex is being delayed, the context of first sexual experience is changing, with a greater likelihood now than in the past that first sex will be experienced prior to marriage.

Other adolescent behaviors with compromising long-term implications for health include smoking, drinking, and using illicit drugs. Across the developing world, tobacco use is increasing, and the gender gap in smoking prevalence is closing rapidly. There is also evidence that the prevalence of illicit drug use among young people is rising slowly. Alcohol intake is highest among affluent and urban young people and thus is also expected to increase with continued urbanization.

## 15.4 THE TRANSITION TO ADULT ROLES

### 15.4.1 THE TRANSITION TO WORK

The rise in school enrollment and the delay in the timing of school exit have resulted in a delay in the timing of labor force entry and a concomitant decline in the percentage of young people participating in the labor force, particularly at younger ages. Household poverty is strongly associated with the likelihood that children will participate in the labor force; thus a global decline in poverty is an important explanation for declines in the prevalence of labor market work among children. Rising poverty rates in sub-Saharan Africa imply a less positive outlook for trends in children's labor force participation, however.

The rise in school enrollment and attainment and the rapidly closing gender gap in schooling is leading to a growing equalization of work burdens between young men and women during their adolescent years. This is because students spend relatively little time in the labor market, and gender differences in mean daily hours spent by students in noneconomic household work (e.g., household chores) are relatively small. This equalization in work roles is further reinforced by the rise

in the proportion of young women entering the labor force, in particular the paid labor force.

The economic returns to schooling at the secondary and tertiary levels are consistently high (and differentially high for young women). The gap between the returns to higher and lower levels of schooling is widening, thus putting an increasing premium on secondary and tertiary schooling for later success in the labor market. It is not known the extent to which this shift in rates of return is due to globalization or other factors, such as declines in primary school quality resulting from rapid growth in the student population. Nevertheless, young people with secondary or tertiary schooling are increasingly advantaged in the labor market relative to their less educated peers not only in terms of earnings but also in terms of job stability and upward mobility.

In many parts of Asia, as well as in Latin America and the Caribbean, increased numbers of young people, including a rising percentage of young women, have been absorbed into the formal or informal labor market without any large increase in unemployment rates among young people. Indeed, some countries, particularly in Asia, have succeeded in maintaining strong economic growth at the same time that the labor force

has been increasing rapidly, thus reaping an economic dividend as a result of these demographic shifts. However, youth unemployment is still a substantial challenge in some of the poorer countries of Asia, sub-Saharan Africa, and the Middle East, which continue to experience unprecedented growth in the size of their 10-24-year-old populations even though in many cases rates of population growth have now peaked.

#### **15.4.2 THE TRANSITION TO CITIZENSHIP**

Globalization, trends toward greater democratization, rising school enrollment, and greater access to media have all increased opportunities for young people to engage in civic and political life. Recent survey data show that a majority of young men in many Latin American and Asian countries express an interest in politics and a willingness to engage in political activism, whereas young women appear somewhat less inclined to express these views. At the same time that young people are expressing greater voice at the local, national, and international levels, they are becoming increasingly aware of the growth of global diversity and inequality.



Various forms of participation in the life of the community, beyond political participation, are embraced in concepts of citizenship. A variety of institutions and programs, among them schools, employers, national service programs (including military service), sports, other nonformal programs, and the media are increasingly viewed as potentially important in citizenship formation. However, comparative data are lacking on the extent and nature of community participation among young people or on the roles that various institutions play in encouraging or discouraging participation.

#### **15.4.3 THE TRANSITION TO MARRIAGE**

While the transition into marriage is a key component of the transition to adulthood in most contexts, marriage, in and of itself, is not necessarily a marker of adulthood, particularly for the numerous young women who wed during the teenage years. Substantial delays in the timing of marriage among most young people, however, are contributing to an overall lengthening of the interval between childhood and the assumption of adult roles.

Compared with previous generations, a smaller proportion of young women and men are married in most regions. Men still marry at older ages than women. While only one-third of men in the developing world are married by ages 20-24, nearly two-thirds of women are married in this age group. Moreover, in certain regions, most notably the Middle East, a large fraction of men now postpone marriage until their 30s.

The minimum legal age of marriage for both men and women has risen in many countries in the past decade, and women are less likely to be married during the teenage years than in the past. However, child marriage, defined as marriage prior to age 18, is still widespread and viewed by many as a major violation of human rights. On the basis of survey data representing 60 percent of the population of the developing world, 38 percent of young women ages 20-24 married before age 18 (down from 52 percent 20 years ago), with the highest rates of child marriage currently occurring in Western and Middle Africa and South Asia. Young women who marry as minors are more likely to come from poor households and rural areas and to have relatively few, if any, years of schooling.

The age gap between spouses—often thought of as a measure of the degree of equality in marriage—appears to be narrowing,

especially in sub-Saharan Africa and South Asia. There is also some evidence of growing agency on the part of young women with regard to choice of marriage partner, suggesting that the nature of marriage itself is changing.

#### **15.4.4 THE TRANSITION TO PARENTHOOD**

As in the past, entry into marriage is strongly associated with entry into parenthood. Over 90 percent of first births occur within marriage, and this percentage has changed only minimally over the past 20 years. With rising ages of marriage, the age of parenthood has been rising, but the gap between age at marriage and age at first birth has narrowed, falling from 22 to 16 months on average over the past 20 years. These postponements of marriage and parenthood allow young people more time to prepare for adult roles and provide an increasing number of young women with the opportunity to participate in the labor force prior to becoming a parent.

Rates of early childbearing remain high in many parts of the developing world because of high rates of early marriage, as noted above. Based on survey data representing 60 percent of the population of the developing world, 23 percent of young people

ages 20-24 gave birth before age 18 (down from 30 percent 20 years ago).

As a result of declines in early marriage, there has been a slight rise in the percentage of births to young women that are premarital. The level of premarital childbearing varies substantially across regions: from 14 percent having a premarital birth by the age of 20 in Eastern and Southern Africa to less than 1 percent in Asia and the Middle East. While Eastern and Southern Africa and Latin America and the Caribbean have seen recent small increases in the rates of premarital childbearing, the rates in other regions appear very low, but measurement is more difficult given continuing reluctance to interview unmarried women in Asia.

Although there is plentiful evidence that early childbearing is correlated with various negative outcomes, rigorous research confirming a causal role for age at birth in producing these outcomes does not exist. Major global changes, such as increasing school enrollment during late adolescence, rising rates of labor force participation among young women, and rising HIV/AIDS prevalence among young women in Africa, are likely to have important implications for the transition to parenthood, but little is known about the implications of these trends for first parenthood.

## 15.5 POLICY AND PROGRAM RECOMMENDATIONS

Policies and programs designed to achieve positive and sustainable development and combat poverty confront both the opportunity and the challenge of promoting successful transitions to adulthood for a steadily growing population of young people living in developing countries. Substantial investments in the health and schooling of young people, if designed and targeted effectively, will position these young people to participate constructively in shaping their own and their countries' futures.

The panel's policy and program recommendations were derived from a careful sifting of the empirical evidence. They address areas that are potentially encompassed by the scope of the UN Millennium Development Goals as well as others that are not within their current scope but are nonetheless of vital importance for young people. In the panel's view, policies and programs, if they are to be effective, will need to be evidence-based, appropriate to the local context, and developed in cooperation with developing country governments and local communities.

### 15.5.1 POVERTY

The UN Millennium Development Goals, the international community's unprecedented agreement on targets toward the elimination of extreme poverty, were not originally developed with a particular focus on young people. Nevertheless, the successful achievement by 2015 or beyond of many of these goals will require that policy makers center their attention on young people. Young people currently growing up in poverty face much greater health risks in both the short and longer term and are much less likely to attend schools of adequate quality, to complete primary school, to find secure and productive employment, to have opportunities for community participation, to marry well, or to be able to provide good care and support to their children.

Policies and programs designed to enhance successful transitions for young people, whether they are reproductive health programs, programs to enhance school quality or reduce dropout rates, job training programs, livelihood or civic education programs, or programs for first-time parents—should be targeted to the poor, particularly poor young women, who are often doubly disadvantaged. Evaluation research shows that

important actors in the system—parents, students, teachers, employers, and administrators—can be very responsive to well-designed incentive programs.

### **15.5.2 SCHOOLING**

At their best, schools have the capacity to enhance success in all transitions to adulthood through the acquisition of literacy in a commonly spoken language and the transmission of knowledge and means to sustain health, prosocial values and citizenship knowledge and skills, decision-making, negotiating, and leadership skills and skills for lifelong learning. While the panel supports the UN Millennium Development Goals for education, it does not see the achievement of these goals—universal primary school completion rates and the elimination of gender disparities at all levels of schooling—as sufficient for the next generation of young people to acquire the skills necessary for successful transitions to adulthood. The rapidity of global change and changing patterns of employment require that policy makers give equal attention to investments in school quality in order to ensure adequate learning outcomes at the primary level as well as to create a stronger base for further expansions in enrollment at the secondary level. The panel also

identified carefully targeted subsidies as a particularly promising way to increase enrollment and reduce the prevalence of child labor among the poor.

Declines in fertility and improvements in child health have been shown to have contributed to past increases in the demand for schooling. Policies and programs supporting further progress in these areas are likely to continue to contribute to future growth in school enrollment and attainment.

### **15.5.3 GENDER EQUALITY AND THE EMPOWERMENT OF WOMEN**

Throughout its report, the panel documents systematic gender differences in pathways to adulthood as well as the universal persistence of dual social norms relating to the sexual behavior of young people. The panel's recommendations on gender equality emphasize the promotion of equitable treatment in the classroom through gender training for teachers and school administrators, the development of compensatory educational and training programs for disadvantaged and out of school youth, particularly girls, and the adoption of



policies and programs that support delays in marriage in places where girls still marry before age 18. Addressing gender problems in society will call for interventions that affect all social classes and that give as much attention to boys' attitudes and behaviors as to girls'.

#### **15.5.4 HEALTH, PARTICULARLY REPRODUCTIVE HEALTH**

In developing recommendations, the panel focused on policies and programs for young people in the area of sexual and reproductive health as specified in the panel's original charge. We also documented the emergence of other areas of health and health behaviors that need policy and program attention, including mental health and health compromising behaviors such as smoking. The panel identified maternal mortality as one of the major causes of death and morbidity for young women in all developing regions except Eastern Asia and HIV/AIDS as the major cause of death and morbidity for young people in sub-Saharan Africa.

The provision of information and services for young people, married and unmarried, in the area of sexual and reproductive health is generally limited to small-scale efforts that reach a fraction of the population of young people. The panel recommends that policy makers give priority to increasing the provision of general health information and sex education, including negotiating skills, in school and out of school for all young people and to increasing the availability of services for those who are sexually active. No single approach is likely to serve the needs of all young people, however, given their diversity of life circumstances.

In the view of the panel, programs designed to reduce risky and unprotected sex among young people are critical to successful transitions and will require multipronged and multisectoral approaches that are culturally appropriate, community based, and sensitive to the needs and preferences of young people, including active collaboration between the health and education sectors. Indeed, some of the most important reproductive health interventions for young people may lie outside the health sector. For example, school participation and

attainment appear to have important and mostly positive associations with young people's health; both male and female students who remain enrolled during their teens are substantially less likely to have had sex than their unmarried nonenrolled peers. Thus resources spent on expanding opportunities for secondary schooling may have a direct impact on the reproductive health of both young men and women.

#### **15.5.5 YOUTH EMPLOYMENT**

Policies and programs with implications for young people's successful transition to work in developing countries exist at all levels of action. However, regulations that are commonly enacted in developing countries for the purpose of improving the terms and conditions of employment put young people at a disadvantage in competing for jobs in the formal labor market and encourage the growth of an informal, unregulated sector. Young people are likely to fare better in a labor market in which employers do not face excessive regulation or in which government incentives encourage firms to invest in training.

The panel has also noted that too often policies affecting aid and trade are not coordinated. For example, trade sanctions against products produced with child labor or against countries known to violate international labor standards relating to child labor are likely to do more harm than good in contexts in which poverty is persistent and the family economy still relies on child labor. While the focus of this report has been on policies and programs directly targeted to young people, the panel notes that agricultural and trade policies aimed at reducing nonmarket imperfections in the terms of trade between developed and developing countries could potentially be a far more effective means of helping the world's poor.

## 15.6 SUMMARY

Much more is known about basic patterns and trends than about the determinants or the consequences of these trends or about the extensive variability among young people in developing countries. Gaps in knowledge that emerge from the juxtaposition of our conceptual framework and our compilation of solid evidence form the basis of research questions that are provided at the end of each

chapter. From these, many additional cross-cutting questions emerge. From the very rich experience of researchers in industrialized countries, we have learned how much there is to be gained from building multidisciplinary research teams, following cohorts over prolonged periods of time, and measuring a full range of social, psychological, health, and economic outcomes while deploying a mix of research methods:

In the final chapter, we recommend specific ways that existing data collection and compilation operations can be enhanced, identify promising quantitative and qualitative research approaches (not always new but underutilized) that would significantly deepen understanding of transitions to adulthood and suggest how findings from research and program and policy evaluation can be more effectively integrated into innovative and large-scale interventions. In particular, the panel recommends that evaluation should be adopted as an integral part of policy and program innovation for all interventions designed to enhance successful transitions to adulthood.

## 15.7 Check Your Progress

Q.5.

Q.6.

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## UNIT 4

# Life Skills and Independent living

### STRUCTURE

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- 23.2. Objectives**
- 23.3. Life skills**
  - 23.3.1.** life skills are critical at home or in public
  - 23.3.2.** What are life skills?
  - 23.3.3.** Why are life skills so important?
  - 23.3.4.** What essential skills are required at home, at work, and in public?
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## UNIT 4

# Life Skills and Independent living

### 24.1. INTRODUCTION

Independent living skills are the skills and abilities a person needs to function independently as an adult. In this section, you will find programs and services that assist teens and young adults with general life skills, money management, transportation, pregnancy and parenting, advocacy skills, and legal needs in San Diego County.

### 24.2. OBJECTIVES

- To understand theory about Independent Living of Development
- To understand of culturally appropriate independent living services can meet the needs of Indian youth
- goals and objectives for independent living plan
- To evaluation of independent living programs
- To study about genes and environment
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

### **24.3. LIFE SKILLS**

**A person needs to be comfortable in their ability to manage their lives at home, work, and in public. Meeting that goal requires a mix of concentrated skills development in specific areas, and the ability to modify one's approach to everyday tasks.**

#### **24.3.1. LIFE SKILLS ARE CRITICAL AT HOME OR IN PUBLIC**

The ability to complete tasks with as little assistance as possible is as important at home as it is when a person is at work, school, or enjoying recreational activities.

Therefore, functionality in a variety of situations depends on the life skills that a person develops over time. For each person and his or her disability, this means different things. A person with minor to moderate physical disability may practice modified methods of completing daily tasks; those with severe



disabilities may employ assistive devices or require help from an assistant.

What all people have in common, with or without a disability, are the basic life skills that allow us to thrive must be cultivated. Those with differing levels of ability are charged with the same tasks and responsibilities as anyone else if they choose to live independently.

#### **24.3.2. WHAT ARE LIFE SKILLS?**

Life skills range from those that are societal norms, such as self-care, to those that sustain life, such as preparing food. From a broad perspective, being adept at life skills with minimal assistance enhances a person's daily living, and overall quality of life.

The benefits of mastering essential life skills include:

- Greater potential for independent living
- Capability to obtain and maintain employment
- Potential for more satisfying relationships
- Acumen to manage a home, finances

- Ability to live a healthier life
- Proficiency to look after one's personal needs without assistance
- Reduced dependence on government or social programs

### 24.3.3. WHY ARE LIFE SKILLS SO IMPORTANT?

Life skills are considered the fuel that powers life; without the ability to survive and thrive, it would be difficult to lead a productive life. Daily living requires that people complete certain tasks; these are physical in nature, intellectual, and they're related to a person's quality of life.

People with disabilities learn, from the time they are young, how to work within their physical and intellectual capabilities. This means two terms that many people of differing levels of ability learn to understand: Compensate and modify. When this is achieved, it's the beginning of the transition from childhood to adulthood.

Does mastering these skills mean that a person must learn to do everything on his or her own? No, it doesn't. However, a person

that needs assistance must be aware of what tasks are a challenge, and be able to manage the situation.

The benefits of cultivating life skills include:

- Making friends
- Building social, professional ties
- Participating in employment
- Developing responsible behaviors
- Cultivating self-esteem, self-worth
- Fostering interests, hobbies
- Creating opportunities for independence, with or without supports
- Assuming an adult role in the community

#### **24.3.4. WHAT ESSENTIAL SKILLS ARE REQUIRED AT HOME, AT WORK, AND IN PUBLIC?**

At home is where most people take care of 90 percent of the tasks they need to complete. It's where a person showers, sleeps, fills out an online job application, or

ponders his or her next big move. In short, a person's home is their sanctuary, and a nerve center.

But managing a home is a process that requires physical skills, and intellectual acumen. Not only are self-care skills required to prepare for the day, there are the responsibilities of home upkeep. Financial obligations such as paying for repairs, paying bills, and managing money are also imperatives in terms of a functional household.

Some of the self-care skills that are required within the home, and outside of it, include:

- Personal hygiene
- Dressing and undressing
- Washing clothes, taking clothes to cleaners
- Toileting
- Grooming

At home, a person will also need to masters skills to maintain their health. These include:

- Meal planning and preparation
- Grocery shopping, choosing foods
- Eating and drinking

- Adhering to a medication schedule
- Committing to exercise, movement
- Using the phone to seek medical assistance, if needed
- Managing personal care assistants, if applicable
- Practicing first aid, safety measures

Physical skills that are needed at home include:

- Housekeeping, domestic skills
- Ability to keep up a home, or find providers
- Navigating a home, creating usability
- Entering and exiting a home
- Identify strange odors, sounds, situations
- Organizing all needed tools and objects in a way that works

Intellectual and psychological skills required to manage a home include:

- Money management, budgeting, banking
- Interviewing, interacting with attendants
- Implementing an emergency plan
- Emotional self-regulation coping alone or with guests
- Managing time

At work, many of the life skills learned will be immensely beneficial. However, interpersonal skills are an integral factor in building a successful career.

People with disabilities already face significant barriers when it comes to employment. Even if a person has worked hard to cultivate skills that are in demand in the marketplace, people with special needs still face a jobless rate of roughly 40 percent, according to several studies.

Appropriate life skills, in combination with job training and higher education, can mean the difference between making a living or depending on social programs. Because many people with disabilities are just as capable as others by using modified means to complete tasks, there's no reason employment has to be an obstacle. The higher level of education or skill a person has, the easier he or she will find and keep gainful employment.

Interpersonal skills that are required in the workplace include:

- Ability to apply for jobs, follow up with managers
- Capability to interact socially, or people skills
- Ability to communicate affectively
- Capacity to empathize with others
- Proficiency to manage stress, anger

- Ability to use technology
- Capability to follow instructions
- Capability to negotiate, handle conflict
- Ability to accept responsibility, criticism
- Ability to cope with change, adversity
- Understanding concepts like filling out paperwork, punctuality
- Ability to be assertive, cultivate confidence
- Capability to maintain organization, manage time

Functional skills that are required in the workplace include:

- Ability to communicate verbally, or by alternate means
- Physical capability to complete tasks
- Desire and proficiency to work with minimal help
- Ability to present oneself as professional, capable to work
- Capability to work independently, or as part of a unit
- Ability to commute to and from the work site, navigate sidewalks and crosswalks

Outside of the home and the workplace, all of these skills are vital. When it comes to participating in society from a social perspective, a new set of skills comes into play. Building relationships in the community, volunteering, and other

activities require skills sets both functional and intellectual that for many people don't come naturally. People with special needs are often shy; developing confidence can also be a challenge that is not easily overcome.

If people with special needs develop skill sets that help them connect with others; they will participate in activities outside the home that are meaningful, and enjoyable. Studies show that people with special needs often report feeling isolated; this is a significant source of stress. Developing skills that encourage interaction reduces the chance of a person having to go it alone.

The interpersonal skills that are helpful in society include:

- Capability to choose friends
- Ability to choose activities
- Capability to contribute to conversations, activities
- Ability to listen, respond and react

The functional skills that are helpful in society include:

- Ability to travel to and from the homes, obtain transportation
- Capability to hold onto money, pay for goods or services
- Ability to navigate spaces indoors and outdoors



### **24.3.5. WHERE ARE LIFE SKILLS DEVELOPED?**

Life skills are developed in several settings, including medical and therapeutic and education. Sometimes, skill sets are also developed if a person takes as part in specialized training offered by non-profit agencies.

Where the skills are developed, is dependent on what skills are being taught. Physical skills allow people to move from place to place and are most often cultivated within a physical therapy setting. Others skills, such as self-care, eating, or writing are developed in occupational therapy because they involve fine motor skills.

Most often, a child's skill set is developed and nurtured at school. All of those tasks that are needed to thrive in society or at home are affected by a child's transition plan, which is a large component of his or her Individualized Education Plan, or IEP. These services are required by the IDEA law.

A transition plan is designed to address a child's conventional education, as well as task development and job skills. Transition planning gives educators an opportunity to assess a child to find out what services will best prepare him or her for life after school. The transition plan may be called an Individualized

Transition Plan, or ITP. This plan should be implemented by the time a child turns 14 years old.

The transition plan identifies:

- What vocational training may help a child
- What type of work, activities interest a child
- A child's strengths and weaknesses
- A child's activities and training for post-school life

A transition plan is typically divided into age appropriate steps designed to make sure that any plan is focused on workable goals. The five stages begin when a child begins attending classes and end when a child is about 22 years old or older. At the end stage, a child should be prepared for work, or go to college, depending on a person's goals.

The five stages are:

- **Growth stage** – Helping a child develop a healthy self-image, introducing the concept of a career or work, teaching children positive attitudes and work ethics. This step lasts until a child is 10 years old.
- **Capacity stage** – Helping adolescents learn more about their abilities and how they apply to the workplace, and how they

will translate to independent living at home. Helping young people learn how to make decisions, take responsibility and solve problems. Teaching children how to recognize work benefits and pay. This stage lasts until a young person is 14 years old.

- **Exploration stage** – Encouraging a child to understand and celebrate his or her own desires and aspiration. Helping young people identify career and educational goals. This stage lasts until a child is 17 years old.
- **Transition stage** – A young person makes a choice regarding continuing education, vocational training, or work. Entry-level job skills are learned. This stage lasts until a young person is 21 years old.
- **Trial stage** – The final stage is where a young person follows through with goals, using the tools they have learned. This includes actively searching for jobs, resume preparation and possibly identifying a place to live.

At all stages, the following components are stressed in Learning settings:

- Choosing an occupation
- Understanding whether some tasks will require assistance at home and at work

- Learning about obligations such as bill payment, budgeting
- The importance of social interaction
- Learning to break down large tasks into smaller, manageable tasks
- The importance of maintaining health and fitness
- Determining a course of action that is achievable for a young person

These concepts are taught using several strategies, including:

- Classroom work
- Interactive and technological exercises
- Volunteerism
- Role-playing exercises
- Group and individual discussions
- Physical and intellectual assessments
- Positive reinforcement
- Mock interviews
- Group activities that encourage peer-to-peer interaction
- Field trips
- Discussions with family members and caregivers

**24.3.6. WHAT TYPES OF SERVICES ARE AVAILABLE TO ASSIST PEOPLE IN CULTIVATING LIFE SKILLS?**

Because people may not be able to tap into all of the services, they may need there are agencies in the community that may provide assistance in developing skills. Generally, these skills courses are offered by community agencies and non-profit organizations.

Supplemental training and services are provided by:

- Adult day training programs
- Community living services
- Residential facilities

Often, demonstrating proficiency regarding life skills may include securing help. People can still exercise their skills if they are living at home, or if they use the services of personal care attendants. Non-profit groups, or professional providers, fill skills gaps for people who still need assistance with the basics.

#### 24.4. SEPARATION-INDIVIDUATION

Separation-individuation. Successful completion of separation-individuation is the second crucial task of psychosocial development. As a normal part of early development, children identify with their parents' attitudes and values, but in the late teens and early twenties this changes and individuals begin to divest themselves of their parents' attitudes and beliefs through the process of separation-individuation. The transition leaves room for individuals to create and modify their sense of self (Rice, Cole, Lapsley, 1990). Through the recognition that their parents' attitudes and ideology may not be perfect and the evolution of a new sense of self, emerging adults no longer automatically accept their parents' values as their own and, instead, they begin to develop and accept their own attitudes and beliefs (Rice et al., 1990). This process is, therefore, similar to the process of emotional autonomy during which individuals gradually rely less on parental validation and increasingly embrace their own beliefs. To accomplish separation-individuation, adolescents attempt to update their relationship with their parents by incorporating their new ideas

and a new-found sense of self into the present relationship (Quintana & Kerr, 1993). As with many aspects of development, this process does not progress along a linear trajectory (Quintana & Kerr, 1993). Although initially conceptualized as a process that occurs during infancy, when the infant recognizes that the mother is a separate being, Blos (1967) hypothesized that there was a second separation-individuation during adolescence. Individuals needed to become emotionally separate from their mothers and develop an integrated sense of self that was discrete and distinctive (Blos, 1979; Levine, Green & Millon, 1986; Rice et al., 1990). During separation, detachment from one's internalized object, typically the mother, facilitates discrimination between self and other. Simultaneously, adolescents develop relationships with persons their own age and their emotional energy is redirected towards them, such that peers become the objects of cathexis. It is during individuation that the individual defines who that differentiated adult self is within a relational context (Blos, 1967; Colarusso, 1990; Gavazzi & Sabatelli, 1990; Kroger, 1985; McClanahan & Holmbeck, 1992; Miller, 1995). Consequently, adolescents become emotionally independent beings and must renegotiate their relationship with their parents (Blos, 1967; Colarusso, 1990; Kroger, 1985). Since Blos

(1967) purposed the concept of a second separation-individuation during adolescence, other academics have expanded and advanced his initial theory. Colarusso (1990) suggested that the separation-individuation process during adolescence is unlike that which occurs during the late teens and early twenties. Specifically, he posited that the focus of the process during adolescence was to make friends so as to enable separation from parents. The adolescent, therefore, had not yet abandoned childhood objects. In contrast, separation-individuation during emerging adulthood was a transitional process during which individuals had already relinquished childhood attachments, but had not established enduring attachments with non-familial objects, which were unique to adulthood (Colarusso, 1990). More recently, Tanner (2006) proposed the theory of "recentering" in which there is a psychological shift from emotional dependence on parents to independence that is comparable to separation-individuation. Contrary to previous theories, which maintained that separation occurred during adolescence, Tanner contends that while the process begins in adolescence, it continues into and is completed during emerging adulthood (Tanner, 2006). Given that the goal of separation-individuation is the ability to meet the demands of adulthood, adequate resolution of this task is



predictive of adjustment (Holmbeck & Wandrei, 1993; Levine et al., 1986). As with autonomy, if the process of separation-individuation progresses as it should, individuals will see themselves as separate, and their dependency on parents will decrease with the person's well-being intact (Miller, 1995). To prevent either enmeshment or complete disconnection, a balance must be achieved between independence and connectedness (Gavazzi & Sabatelli, 1990; Holmbeck & Wandrei, 1993; Lapsley & Edgerton, 2002). This is also necessary to facilitate commitment to adult roles and responsibilities (Gavazzi & Sabatelli, 1990). Traditionally, developmental theory assumed that increased psychological individuation was believed to be negatively correlated with depression (Levitz-Jones & Orlofsky, 1985); however, recent theory contradicts this and proposes that successful separation-individuation during adolescence is related to healthy functioning in adulthood, particularly in relation to depression (Lemma, 2004). Positive feelings about separation from one's parents are a strong predictor of adjustment in college (Lapsley & Edgerton, 2002; Quintana and Kerr, 1993). Individuals who are too enmeshed or detached from their parents are likely to experience a conflicted relationship with their parents and be less well-adjusted (Dubas & Petersen, 1996; Eberhart, &

Hammen, 2006; Quintana & Kerr, 1993). In other words, when needs of separateness and nurturance are met, people exhibit fewer depressive and anxious symptoms (Holmbeck & Leake, 1999; Quintana & Kerr, 1993). It may be, then, that internalizing symptoms are a reaction to developmental challenges or that difficulty with this process produces a negative view of oneself (Eberhart, & Hammen, 2006; Quintana & Kerr, 1993). Although separation-individuation has been proposed as a universal experience, the experience may be different for males and females. Theory indicates that this process is more complex for females than for males, because girls, unlike boys, must simultaneously separate from the object (i.e., their mother) with which they are also supposed to identify in the process of gender identity development (Chodorow, 1978; Gilligan, 1979). It is unclear whether these differences are associated with adjustment. While some studies suggest that there are no gender differences (Fuhrman & Holmbeck, 1995; Kroger, 1985; Lapsley et al., 1989), others have demonstrated that gender moderates the relation between development and maladjustment. For example, excessive connectedness to others, and the resulting absence of differentiation, has been associated with anxiety and self-doubt in females (Ollech & McCarthy, 1997). In contrast, other

studies have found that an absence of closeness to parents is predictive of poor outcomes in both males and females (Holmbeck & Wandrei, 1993; Quintana & Kerr, 1993). There are several explanations that may account for the differential influence of gender on separation-individuation relative to well-being. Historically, the study of human development has been based on males. The current concept of maturity, which is that of an individualized person, is based on males and may not reflect female development (Cooper & Grotevant, 1987; Gilligan, 1982). Due to socialization, personality development may be different for males and females (Gilligan, 1979). Female development occurs through connections with others, but from a psychoanalytic perspective, this is considered less individuated. Thus, theories of female growth emphasize the tendency towards relationships and interpersonal competence (Gurevitz Stern, 2004; Josselson, 1987). According to these theories, males and females are socialized differently. Mothers see their daughters as uniquely similar to themselves and, therefore, connectedness is emphasized in the mother-daughter relationship. This is distinct from the mother-son relationship in which individuation is encouraged. These relationships subsequently affect ego development (Gilligan, 1979). It may be, then, that different developmental pathways account for the

moderating effect of gender on the relation between separation-individuation and mental health (Holmbeck & Wandrei, 1993; Lapsley et al., 1989).

#### **24.5. DEVELOPING AN INDEPENDENT LIVING PLAN**

Minnesota Statute Section 260C.212 subdivision 1(c)(11) requires “an independent living plan for a child age 16 or older who is in placement as a result of a permanency disposition. The plan should include, but not be limited to, the following objectives:

- Educational, vocational, or employment planning
- Health care planning and medical coverage
- Transportation, including, where appropriate, assisting the child in obtaining a
- Driver’s license Money management
- Planning for housing
- Social and recreational skills
- Establishing and maintaining connections

The Independent Living Plan form that includes these objectives is in the Social Services Information System (SSIS) in the service plans folder. To create a new Independent Living Plan, choose “New Plan” from the action button and search for the Independent Living Plan in document templates. The Independent Living Plan should not necessarily be limited to the objectives listed in this publication. The plan provides for additional objectives to be added. The Independent Living Plan should be developed from information gathered from the Ansell-Casey Life Skills Assessment, and any other psychological, educational, or vocational testing the youth has undergone.

**Youth should steer the development of their Independent Living Plan.** Schedule a meeting which includes the youth and their current caregiver, and have a conversation about the results of their completed Ansell Casey Assessments. The youth and his/her caretaker might assess the youth’s life skills differently, which can lead to a productive discussion. Ask the youth to list additional supportive people in their life who can help them carry out an independent living plan. This list might include friends, parents, extended family members, teachers,

religious leaders, an employer, a neighbor, etc., and invite them to a meeting to participate in the planning.

**Focus the initial meeting on the youth's strengths and start with the skills area they are most interested in working on.**

The Independent Living Plan should be based on the youth's goals over one, two, or five years, addressing steps needed to accomplish the goals and overcome barriers. Goals and objectives should be specific to the youth's age, individual interests, culture; and the region in which they live. Include some long-term goals, as youth may not see, for example, why they should attend school regularly. The plan should be reviewed and updated every six months. The youth may think of additional supportive people in his/her life that should be invited to meetings that update the plan. New information should be added to the plan, and goals and objectives should be written specific to the changes in assessment data, age, experiences, previously mastered goals, and maturity.

**Everyone involved in the development of the Independent Living Plan, most notably the youth, should sign it. A signed copy should be kept in the case file.**

Family Group Decision Making providers statewide are trained on how to use this process to create Transition Plans for youth.

Contact a local provider for help with meeting arrangements and facilitation. Although statewide, availability of this option will vary by county. The following pages offer information and list resources for each of the Independent Living Plan objectives required by Minnesota Statute, as well as samples of goals and objectives that might be included in the Independent Living Plan. Each outcome in the Independent Living Plan becomes a goal by including the date by which the youth will master the goal.

#### **24.6. INDEPENDENT LIVING PROGRAMS**

Independent living programs can take many forms, from the use of foster parents who gradually help children take on adult living tasks to specialized workshops that teach life skills. To provide an understanding of the range of programs possible, three programs with published descriptions are presented below. This is followed by recommendations for features that should be included in transition programs. Project Stepping Out, a demonstration project in Baltimore County, uses six service components to meet the project's objectives. Project social workers use strengths-based needs assessments to

document youth strengths. The project includes task groups and support from volunteers. The project provides youth with apprenticeship opportunities and a 1-day workshop covering housing, vocational skills, and independent living skills. Project social workers also provide thinking, feeling, and doing exercises for youth to practice adult roles and social networking (Pasztor, et al., 1986). Important program elements of the Kaleidoscope independent living program in Chicago include matching the participant and the program carefully, helping youth gain access to the Department of Rehabilitation Services, providing job leads, and teaching youth to apply for jobs (Stehno, 1987). This program focuses on reconnection with biological families and disconnection from negative peer influences, such as gangs and drugs. The Kaleidoscope Program also emphasizes teaching participants advocacy skills so they learn to advocate for themselves and others (Stehno, 1987). Brickman, Dey, and Cuthbert (1991) describe the Supervised Independent Living Orientation program (SILO) of Huron Youth Services in Ann Arbor, Michigan. SILO includes a series of living skills classes. This program is a 3-stage process moving youth from more structured to less structured activities and supervision. The first stage includes finding a place to live, getting a job, observing a curfew, turning in a



schedule, and meeting with a caseworker on a daily basis. As youth in the SILO program move toward independence, therapy is made available to them to help them sort through some of their underlying emotional issues. The transition-out stage includes less formal contact with the staff, locating leisure activities, and finding community resources for support and daily living needs (Brickman, Dey, and Cuthbert, 1991). Transition programs need to help youth cope with emotional issues associated with emancipation (Beyer, 1986). Other elements that transition or independent living programs need to include are decision-making skills, how to accept responsibility, and how to make peace with biological families (Beyer, 1986).

Caseworkers, foster parents, and childcare workers can play a crucial role in helping adolescents to overcome emotional obstacles they face as they enter adult life (Beyer, 1986). Kools (1997) interviewed 17 adolescents from an urban area in California and found that they felt others belittled them for being in foster care. Their sense of being stigmatized was made worse by being socially isolated and missing family connections (Kools, 1997). To be able to cope with loneliness and bias, foster care youth need additional support such as patient instruction on how to predict their feelings, and they

need support to overcome chronic depression (Beyer, 1986). Independent living skills training must begin earlier than age 16 and be interwoven into the daily lives of foster care youth (Kools, 1997). Departure from foster care needs to be seen as a significant emancipation process rather than a termination event (Lammert and Timberlake, 1986). The emancipation process requires cognitive and behavioral problem-solving skills as well as development of feelings skills including the ability to cope with separation and loss (Lammert and Timberlake, 1986). It should be noted that most, if not all, of these independent living programs are urban programs with the resources and employment opportunities available in large metropolitan areas. Rural areas, where the majority of the tribal Indian child welfare programs exist, may present different challenges.

#### **24.7. EVALUATION OF INDEPENDENT LIVING PROGRAMS**

Mech (1994) found that the child welfare system is uncertain about how to best prepare youth for self-support and responsible adulthood, and most independent living programs, services, and interventions remain untested. Evaluations of

independent living programs have begun, and several evaluations indicate these programs have promise. Cook (1994), in a national evaluation, found that youth who received skills training did appear to have better outcomes in four areas: money management, credit, consumer education, and employment. Mallon (1998) used the Green Chimneys Life Skills Assessment Tool, case records, and interviews with former clients to evaluate the outcome of a New York City independent living program. Of the youth who participated in this program, 75% completed high school or obtained a GED, and 72% had fulltime employment at discharge. Sixty-five percent had savings accounts; this decreased to 39% at follow-up two to five years later (Mallon, 1998). Scannapieco et al. (1995) used case record analysis to compare 44 teens who went through an independent living program with 46 foster care teens who did not participate in the program. The youth who participated in the independent living program were more likely to complete high school, have employment history and employment at discharge, and were more likely to be self-supporting at the closing of their case.

McMillen et al. (1997) conducted focus groups with youth to get their views of participation in independent living programs. The youth found that skill classes and stipends for independent

living were helpful, that instruction in managing a budget was particularly valuable, and that independent living services lessened the stigmatization and isolation of being in care. Foster parents and specialized independent living workers eased the transition out of care, but regular public child welfare caseworkers were not helpful in this regard. The young people reported that being in care was difficult to tolerate and that the transition out of care was often abrupt and difficult to manage. Placements rated as low in restrictiveness (i.e., foster family homes and transitional apartments) are probably the most effective settings in which to prepare youth in foster care for independence (Mech and Fung, 1999). Two-thirds of the youth in less restrictive placements attended post-secondary education, compared to one-third who were placed in highly restrictive settings. Overall, nearly 85% of the enrollees in post-secondary education or training programs came from placements rated as low in restrictiveness (Mech and Fung, 1999). The family life experience associated with foster homes may be the most beneficial transition preparation for youth in foster care. Benedict, Zuravin, and Stallings (1996) found no statistically significant differences in education, current employment, physical and mental health, risk-taking behaviors, and stresses and supports between youth raised in family foster

homes and youth raised in family kinship care homes. Mech et al. (1994) believe there is a need to improve life skills abilities in all placement settings and to use subsidized transitional housing in addition to apartment placements to supplement foster home, group home, and institutional placements. Clark and Foster-Johnson (1996) recommend that transition plans for youth begin early and definitely include participation by youth ages 16 and older. Family involvement and family role resolution is important. Transition plans should include employment, education, and independent living. Transition programs should include flexible wraparound services as well as interagency collaboration (Clark and Foster-Johnson, 1996). Over the past two decades, practice and policy developments have described the qualities that should be included in transition services. Knowing what should be included leads to an understanding of what is being left out.

## 24.8. SAMPLE GOALS AND OBJECTIVES FOR INDEPENDENT LIVING PLAN

By June 2016, youth will complete and education plan that will include: **Skills/Behaviors:**

- Attend educational program regularly
- Follow academic and behavioral expectations at school
- Demonstrate acceptable attendance
- Master studies by maintaining a 2.0 grade point average each quarter
- Complete homework and class work on time
- Ask for help when needed
- Become involved in an extracurricular activity at school•  
Identify GED testing site
- Successfully master the GED assessment
- Use the Minnesota Career Information System to explore careers and post-secondary education Participate in school conferences

- Take the ACT Test
- Identify and apply to three post-secondary institutions
- Complete financial aid paperwork
- Establish long and short term employment goals
- Attend a job or career fair
- Identify and use many resources to locate employment, including newspapers, local employment agencies, yellow pages, etc. Complete a resume and cover letter
- Complete and return two job applications
- Learn about potential job interview questions by participating in a mock job interview
- Go to a job interview with appropriate dress, grooming and materials
- Spend one or more days job shadowing a person who works in that area or interest
- Demonstrate good attendance at work
- Get to work on time for scheduled shifts
- Demonstrate self-control, leadership skills, group cooperation, anger management, and ethical behavior at work

- Demonstrate appropriate appearance at work by following dress code and maintaining clean and professional work clothing.



## 24.9. INDEPENDENT LIVING CHECKLIST

While moving out on your own can be exciting, it requires a whole new level of responsibility. Being more independent means taking an active role in your health and wellness, personal care, job training, school work, and other areas of your life.

Below are some questions to ask yourself to see whether you are prepared to live more independently. You may not be able to answer “yes” (or “always”) to every question listed, but you should be familiar with where to go for assistance services.

- 
- Do you have any savings?  Yes  No
- Do you have a source of steady income?  Yes  No
- Are you contributing to the household income (e.g., paying rent, utilities, etc.)?  Yes  No
- Are you able to get from place to place independently?  Yes  No
- Do you have a place to live or have you begun looking for one?  Yes  No

### Social Supports and Staying Emotionally Healthy

- Do you have friends that you spend time with on a regular basis?  Yes  No
- Do you regularly communicate with family and friends?  Yes  No
- Is there at least one person you talk to when you feel sad, nervous, or things aren't going well?  Yes  No
- Are you familiar with the common symptoms of depression?  Yes  No
- Do you seek help from others when you experience those symptoms?  Yes  No
- What are your hobbies? Or, what do you enjoy doing?

- Do you regularly make time for these activities?  Yes  No

### Staying Physically Healthy

- If you take medications, do you know the name, dosage, reason, and potential side effects for each prescription?  Yes  No
- Do you take your medication as prescribed and without being prompted?  Yes  No

Have you taken time to learn about the options available for preventing pregnancy, HIV/AIDS, and sexually transmitted diseases?

Yes  No

Do you independently and effectively handle your personal hygiene?

Yes  No

Are you familiar with the risks associated with smoking, drinking, and using drugs?

Yes  No

Do you exercise regularly?

Yes  No

Are you satisfied with your current weight?

Yes  No

### School and Work

What type of things are you good at?

What topics or careers would you like to learn more about?

Do you have career goals?

Yes  No

Are you familiar with the options available to help cover the cost of job training or college?

Yes  No

Do you volunteer regularly?

Yes  No

Do you attend classes/work regularly?

Yes  No

Do you think that your school/work assignments are at the right level for you?

Yes  No

Are you doing well in school and/or at work?

Yes  No

### Accessing Health Care

How is your health care paid for?

Who is your family doctor (or, what is the name of the clinic you go to for care)?

- |   |                              |                             |
|---|------------------------------|-----------------------------|
| Do you regularly schedule and get to medical and dental appointments independently? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Are you independent in your health care decision making?                            | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Are you familiar with how to use your insurance or medical card?                    | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Are your immunizations current?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Have you found an adult health care provider?                                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Have you had your first appointment with your adult providers?                      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

## **24.10. HOW CULTURALLY APPROPRIATE INDEPENDENT LIVING SERVICES CAN MEET THE NEEDS OF INDIAN YOUTH**

For Indian children, “minority status, fewer economic and educational advantages, and cultural differences add to the difficulties and transition to adulthood” (Berlin, 1986). Additionally, Indian children need to learn living skills that are culturally sensitive and applicable in their tribal communities as well as in mainstream America. The U.S. Department of Health and Human Services has recommended that states address the needs of special populations that include “conduct assessments within states to identify the specific needs of various sub-populations of youth; increase outreach to mentors from the same racial/ethnic backgrounds as youth in care; provide training to ILP staff in cultural competency and integrate more formal cultural awareness activities in to ILP services; and continue to build substance abuse prevention/intervention activities as part of ILP services” (1999). Sub-populations of youth include minorities, teen parents, youth with substance abuse issues, and youth with disabilities (DHHS, 1999). Indian youth will often be included

in many of these special population categories. For example: Research has shown that, compared to the general population, Indian youth have higher rates of depression (U.S. Congress , Office of Technology Assessment, 1996); higher rates of suicide (Ma y, 1987); higher rates of anxiety disorders (U.S. Congress); and higher rates of alcohol and substance abuse (Beauvais, Oetting , Wolf, & Edwards, 1989; May 1989).

45 % of Indian mothers have their first child when they are under the age of 20, compared to 24% of mothers of all races (Indian Health Service, 1997). Indian youth drop out of school at higher rates than the general population (U.S. Congress, OTA, 1996). The urban dropout rate for Indian youth is 45 to 85%, with most youth leaving school between grades eight and nine (NADC). The dropout rate for reservation and boarding schools is close to 50% (NADC). Indian youth engage in moderate to heavy alcohol or drug use at a rate of 52% for urban Indian youth and 80% for reservation youth, as compared to 23% of their urban, non-Indian counterparts (U.S. Senate Select Committee on Indian Affairs, 1985). 12.5 out of every 1,000 Indian children are placed in substitute care, compared to 6.9 out of every 1,000 children from all races (Child Welfare League of America, 1996). The U.S.

Department of Health and Human Services has reported that data from states suggest that as many as one-third of all the youth eligible for independent living services from 1987–1996 did not receive services (DSHS, 1999). Although Indian youth, as evidenced above, face high risks of falling into multiple special needs categories that can be served by independent living programs, Indian children comprised less than one percent of youth served by independent living programs in fiscal year 1996 (U.S. DHHS, 1999). Because of inconsistencies in data reporting and non-standardized reporting formats under the former ILP (DHHS, 1999), it is not possible to determine the number of Indian youth eligible but not receiving services. However, it will be important for tribes to collaborate with states to develop ways to identify the numbers of eligible Indian youth and measure service delivery to Indian youth under the Chafee Independence Program. Tribes may also want to consider the development of internal data collection methods and methods for accessing state databases to measure the ongoing needs for serving their Indian youth in state and/or tribal independent living programs. Clearly, independent living services can benefit Indian youth as they transition from adolescence to adulthood. Tribes and other organizations serving Indian youth will need to identify what

services will best serve Indian youth, how they would like to see the services delivered and collaborates with states to insure positive outcomes for Indian youth.



## 24.11. SUMMARY

If your parenting goes as normally planned, your teen or young adult will at some point leave home and live independently. Life Skills will help your teen be independent and able to live on their own, which is the goal of a successful young adult and their parents. But it isn't easy. Older teens often feel they can take the big step towards independent living without possessing all of the life skills they will need to succeed in the world at large. Therefore, they start out at an disadvantage by not getting the confidence a person gains by learning an independent living skill and not having the ability to do the life skill. This makes the transition from a teen at home to their life as a young adult harder. Sometimes it's so hard, they come back home.

**24.12. Check Your Progress**

**8.**

**9.**

**10.**

**11.**















#### 4.15 References / Further Readings

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## UNIT 5

# Career Choices

### STRUCTURE

- 24.1. INTRODUCTION
- 24.2. OBJECTIVES
- 24.3. FACTORS INFLUENCING CAREER CHOICES OF ADOLESCENTS AND YOUNG ADULTS IN RURAL
  - 24.3.1. Interdependence of family, school, and community culture
  - 24.3.2. Different social and economic contextual factors
  - 24.3.3. "Ideal job"
  - 24.3.4. Barriers
  - 24.3.5. Out migration
- 24.4. CAREER DEVELOPMENT FROM ADOLESCENCE THROUGH EMERGING ADULTHOOD INSIGHTS FROM INFORMATION TECHNOLOGY OCCUPATIONS
  - 24.4.1. Socialization and career choices

24.4.2. How do educational experiences influence children's, adolescents', and emerging adults' progression toward or regression away from an it career?

24.5. **SUMMARY**

24.6. **CHECK YOUR PROGRESS**

24.7. **ASSIGNMENT/ACTIVITY**

24.8. **POINTS FOR DISCUSSION AND  
CLARIFICATION**

24.9. **REFERENCES / FURTHER READINGS**

## UNIT 5

# Career Choices

### 25.1. INTRODUCTION

Career development theories suggest that social-contextual experiences are influential in individuals' career interests, aspirations, and skill development and may be a source of gender and ethnic differences in certain career fields. In this mixed methods study, we examine the supportive and obstructive career-related experiences of 13 men and 13 women (modal age 25). Interviews focused primarily on the pathway toward or away from an information technology (IT) career. Thematic coding indicated that parents were mostly supportive, while experiences in school and work occasionally made individuals reconsider their career plans. Social influences often changed developmentally as participants entered full-time jobs. Gendered participation in IT was often attributed to women's perception that it is a male-oriented field.

Career development, for most people, is a lifelong process of engaging the work world through choosing among employment opportunities made available to them. Each individual undertaking the process is influenced by many factors, including the context in which they live, their personal aptitudes, and educational attainment (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001).

A major turning point in adolescents' lives involves the career choice that they make while in high school. Frequently, it is viewed by family and community as a mere start to workplace readiness; however, this decision plays a major role in establishing youth in a career path that opens as well as closes opportunities.

## 25.2. OBJECTIVES

- To study about different factors influencing career choices of adolescents and young adults
- To study of interdependence of family, school, and community culture/career
- To understanding of "ideal job"



- To study about career development from adolescence through emerging adulthood insights from information technology occupations
- Understand the conceptual differences between the terms
- Provide suitable examples to describe each term

### **25.3. FACTORS INFLUENCING CAREER CHOICES OF ADOLESCENTS AND YOUNG ADULTS IN RURAL**

Adolescent occupational choice is influenced by many factors, including life context, personal aptitudes, and educational attainment. Whether college-bound or work-bound, meeting the challenge of this developmental milestone is critical in adolescents' lives. The qualitative study reported here explored factors that play key roles in rural high school seniors and young adults career choice process. The cultural and social context of family and community were found to be instrumental in how youth learn about careers and influential in the choice process. Extension strategies that target parents and community to increase their involvement in youth career selection can promote sound career decisions.

### **25.3.1. INTERDEPENDENCE OF FAMILY, SCHOOL, AND COMMUNITY CULTURE**

Young adults, through interaction with the context of family, school, and community, learn about and explore careers that ultimately lead to career choice. The interdependence of family, school, and community culture played a critical role in shaping the youth's occupational choice. The economic and social circumstances of the broader community colored and influenced the youth's perceptions of appropriate career choices.

Youth in communities of more affluence appeared to have more family and school support in career exploration, which resulted in consideration of a wider range of career options. Parents, followed by other family members, provided valuable learning experiences through their own role models and supporting activities that assisted in exploring career interests. Work-bound youth's parents frequently taught skills that provided youth with a broader understanding of their own aptitudes contributing to career

choice. "My Dad works on big Caterpillar transmissions, and some my uncles do that kind of work. We would work together, and, you know, I learned a lot from him, how to do anything. This is why I'm a Diesel-Teck major."

### 25.3.2. DIFFERENT SOCIAL AND ECONOMIC CONTEXTUAL FACTORS

College-bound and work-bound young adults are influenced by vastly different social and economic contextual factors in their pursuit of markedly different occupational paths while transitioning from school to work. College-bound and work-bound youth exist side-by-side in high school, but face the transition to the workplace in different time frames and with different expectations for career opportunities available to them.

College-bound youth had career trajectories that were future oriented, with the first step being college participation. "College gives me a chance to test out what I want to do. I can always switch majors. It's most important to graduate."

Work-bound youth, high school and applied college, occupational goals were identified by a specific type of employment that drove their skill development and

educational attainment. "I had to know what I was going to do when I get out to choose a major for training. I knew what I was good at, so I choose welding." The transition for work-bound youth was more direct and dependent upon gaining employment that quickly shifted their roles from adolescent to adult, binding them to adult career expectations.

### **25.3.3. "IDEAL JOB"**

The career choice that young adults make is embedded in their perceptions of the "ideal job" and their career decision-making maturity. Occupational choice is not a mere matching process; rather, it is a choice made in a context of many influencing factors. The perception of the "ideal job" acts as a filter for job appropriateness and influences the choice process. "I think, like you have an idea of what the perfect job is in your head, exactly what you want to get up and go do every day."

Initial career decision-making is a cultural, developmental task that adolescents are expected to have accomplished by the end of their high school year (Super, Savicks, & Super,

1996). Within surveyed high schools, a wide range of difference existed in career choice maturity. In the most affluent schools, career decisions had been made, and students were preparing to enter college or advanced training. In the lower income schools, the lack of career decision-making was the norm.

The lack of family involvement in the career choice process appeared to be influencing these youth inability to make decisions. In these groups, youth perceived it was not their family's role to assist with their decision-making process. "We don't talk about it at home. Besides it's up to school to help me figure this out." It appeared that both the youth and their families were taking a passive role in making a future career decision and implementing a plan of action to achieve it.

#### **25.3.4. BARRIERS**

Young adults recognize that barriers exist to implementing their future career choices and seek ways to overcome these obstacles. All of the youth voiced that the lack of

financial resources to attend additional schooling or training was the major barrier. For college-bound youth, the second most identified barriers were college acceptance and being capable of graduating. Work-bound youth identified the lack of employment opportunities as their second barrier to achieving employment goals.

### **25.3.5. OUT MIGRATION**

The out migration of young adults from the rural area appears to be a function of its ruralness, which offers limited employment opportunities. Rural youth face a conflictual dilemma of wanting to remain close to family and friends while believing that employment in urban areas offer more opportunity and income. The majority of the study's youth planned to leave the rural area to seek employment. "I'd like to stay, but in this area the salary that is offered is not what a 4-year degree deserves. Everyone wants to pay peanuts. So show me where the money is, and I will go there." Some work-bound youth planned to stay if they could find work in the area. Employment was the key to the decision to stay or go.



#### **25.4. CAREER DEVELOPMENT FROM ADOLESCENCE THROUGH EMERGING ADULTHOOD INSIGHTS FROM INFORMATION TECHNOLOGY OCCUPATIONS**

Career development theories suggest that social-contextual experiences are influential in individuals' career interests, aspirations, and skill development and may be a source of gender and ethnic differences in certain career fields. In this mixed methods study, we examine the supportive and obstructive career-related experiences of 13 men and 13 women (modal age 25). Interviews focused primarily on the pathway toward or away from an information technology (IT) career. Thematic coding indicated that parents were mostly supportive, while experiences in school and work occasionally made individuals reconsider their career plans. Social influences often changed developmentally as participants entered full-time jobs. Gendered participation in IT was often attributed to women's perception that it is a male-oriented field.

Attracting new employees to science, technology, engineering, and mathematics (STEM) jobs, as well as increasing the diversity of this workforce, has been of great interest to researchers, policy makers, and employers in recent years (Meece, 2006). Despite efforts to increase the number of

women and minorities in STEM careers, they remain underrepresented in the STEM workforce (National Science Foundation, 1996). Career development theories suggest that individuals select career fields based on their self-perceptions, values, and beliefs and that individual differences in these cognitions can explain much of the gender and ethnic gaps in career field participation (Eccles et al., 1983; Gottfredson, 1981; Lent, Brown, & Hackett, 1994; Savickas, 2005). Although internal cognitions are the most proximal factors to career choice, career development theorists also suggest that these cognitions are developed through experiences in homes, schools, and other contexts and that these experiences may be more distal sources of imbalanced workforces.

In one particular STEM field, information technology (IT), the rapid creation of new jobs has led to a shortage of qualified employees (U.S. Department of Commerce, 2003). As with other STEM careers, the IT field currently attracts substantially more men than women and more European Americans and Asian Americans than members of other ethnic groups (National Science Foundation, 1996; U.S. Department of Commerce, 2003; Zarrett, Malanchuk, Davis-Kean, & Eccles, 2006). For instance, women hold less than 30% of the jobs in professional IT occupations (U.S. Department of Labor, 2005),

and African Americans receive approximately 11% of all bachelor's degrees, 6% of all master's, and 2% of all doctorates in computer science (U.S. Department of Commerce, 2003).

This article examines the career path of emerging adults who enter IT careers and those who could enter these careers but do not in order to highlight socialization influences that may contribute to occupational choices. Examining the IT field in particular has the unique potential to highlight both gender and racial differences in socialization toward (or away from) some occupations.

#### **25.4.1. SOCIALIZATION AND CAREER CHOICES**

The occupational choices made by emerging adults have their roots in earlier interactions and experiences (Eccles et al., 1983; Gottfredson, 1981; Lent et al., 1994; Savickas, 2005; Whiston & Keller, 2004). For instance, children begin to learn about possible future jobs through seeing adults in their communities and parents' social networks (Schultheiss, Palma, & Manzi, 2005; Super, 1990). Self-perceptions develop through experiences in school (Lent et al., 1994) and feedback from one's social network (Jacobs, Davis-Kean, Bleeker, Eccles, &

Malanchuk, 2005). During adolescence, individuals often engage in and value the same activities as their friends in order to fulfill a need for relatedness (Fredricks et al., 2002); such activity participation may lead them toward particular career paths. Part-time work during adolescence is also a key source of information about work and one's place in the workforce (Levine & Hoffner, 2006). Jacobs and Eccles (2000) suggested that parents influence their children's values in four main ways: developing a socioemotional climate, acting as role models, providing key experiences, and transmitting their perceptions and expectations. Thus, the proximal, internal influences on emerging adults' career have their roots in earlier experiences.

Given gender differences in the composition of some career fields (e.g., IT), researchers have theorized that career choices partially arise from gender role socialization throughout life (Eccles et al., 1993; Martin & Ruble, 2004). Children's awareness of their gender and social class influence their perceptions of appropriate career aspirations (Eccles, 1994; Gottfredson 1981, 2005). There is also evidence that parents' beliefs about gender differences in children's abilities are transmitted to and internalized by their children (Eccles Parsons, Adler, & Kaczala, 1982; Frome & Eccles, 1998) and that there are ethnic differences in the messages that children

internalize from their parents (Whiston & Keller, 2004). Opportunities for skill development vary considerably and may contribute to differences in career-related self-efficacies (Lent et al., 1994; Turner et al., 2004). Despite different socialization, the same career development and occupational choice processes seem to occur for men and women as well as European Americans and minorities (Lent et al., 2005).

Emerging adulthood is a particularly meaningful age period in which to study career development because of the unique experiences that emerging adults have regarding the world of work (Arnett, 2004; Hamilton & Hamilton, 2006). This is an age during which previous socialization combines with current experiences to shape career choices and long-term goals. Emerging adults are more independent than children and adolescents, but their parents and other important people still actively influence their career opportunities (Arnett, 2004; Whiston & Keller, 2004).

In addition, emerging adults are still engaged in identity exploration, of which one of the most salient aspects is occupational identity (Arnett, 2004; Hamilton & Hamilton, 2006). Many individuals also continue to explore potential paths and identities during postsecondary educational pursuits

and workplace experiences. However, not all emerging adults are able to construct their own careers to the same degree (Blustein, 2004). Thus, not only is the study of emerging adults useful for examining distal factors in career development, it is also useful for examining active occupational identity formation and contextual influences.

In this article, we examine the socialization processes and experiences that have influenced emerging adults' career development. Although previous research has examined many aspects of career development, we still do not fully understand the contextual and social influences on emerging adults' choices to reject one career path in favor of another. To examine potential causes for differential gender and ethnic representation in some careers, as well as to apply general career development theories to a single career field, we address three research questions. First, how might families influence emerging adults' career paths, specifically into IT careers? Second, how do educational experiences influence children's, adolescents', and emerging adults' progression toward or regression away from an IT career? Third, what other formative experiences do emerging adults mention when they recall their career paths? While addressing these questions we pay particular attention to instances in which the experiences of boys and girls, or women

and men, appear to differ substantially. This study has the advantage of examining statements from in-depth interviews as well as comparing the common experiences described in these interviews to survey data collected from a larger sample.

#### **25.4.2. HOW DO EDUCATIONAL EXPERIENCES INFLUENCE CHILDREN'S, ADOLESCENTS', AND EMERGING ADULTS' PROGRESSION TOWARD OR REGRESSION AWAY FROM AN IT CAREER?**

During the career interviews, participants were asked specifically about their memories of English classes, mathematics classes, and computer science or engineering classes during their entire educational history. From their responses, it was clear that their computer science and technology courses varied widely in content: Some participants were able to take advanced courses while in high school, whereas others only enrolled in very basic courses such as introduction to the Internet.

When describing their experiences in courses or in school, participants' comments revealed several distinct, but sometimes overlapping, themes. First, 6 individuals reported feeling

capable in computer classes or while completing coursework. These comments took the form of describing their good grades or feeling that computer activities were easy for them; such reports reflect the benefits of high feelings of self-efficacy or competence that are theorized to be driving forces in career choices (Eccles et al., 1983; Lent et al., 1994). Not surprisingly then, 4 of these 6 entered the IT field.

Of the participants, 2 individuals who did not enter IT, 1 who entered IT but left by the time of the interview, and 1 who was still in IT mentioned that challenging courses provided reinforcement of their career aspirations for the IT field. In contrast, 2 participants who entered IT and 2 who did not mentioned that their courses proved to be too difficult: They felt underprepared for the coursework or struggled to receive passing grades. For instance, when describing one of her college courses, Amy said,

*I took introduction to programming because for a while I thought I might want to make that switch [into an IT major]. [The class was] Programming in C[++]. That was terrible ... the projects built on each other ... sometimes I'd be so far behind on a previous project that I couldn't even get to the*



*second project because the second project goes from the first one.*

Despite her experience in this class, Amy did try to enter a major that required intensive computer use but was unable to do so because the program was too selective. Instead, she majored in a math-intensive field and pursued a non-IT career after graduating from college. Other research has shown that students make internal comparisons about their performance in multiple domains (Marsh & Hau, 2004) and likely prefer the content area in which they feel more capable (Eccles et al., 1983). Struggles doing well in difficult classes made these 4 participants question whether persistence in the IT field was worth the effort, and 2 of them chose a career field other than IT.

One theme that was always mentioned in a positive way was having a class-related opportunity to solve problems and make computers work. Of the participants who described their classroom experiences this way, 4 were in IT jobs at the time of the interview, 1 had entered IT and left, and 2 were not in IT. These 7 participants expressed this theme in several ways, such as working hands-on with computers, diagnosing and resolving problems, and seeing one's efforts pay off in a functional manner. These comments all involved working through a

problem (either a real problem or an assignment) and attempting to solve it; often participants reported appreciating feedback from the computer that the problem had indeed been solved. Comments about problem solving appeared in many areas of the interviews; only some of these instances involved talking about classes. Angela fondly recalled the problem solving in her early computer classes when she said the classes “were really fun. I mean, it was just learning about computer science and being able to get computers to do something.”

Of the participants, 6 seemed to have little or no exposure to computers before taking courses in middle school, high school, or after high school. In fact, 3 people described their first or only computer courses as being introductory, where they learned how to type or navigate the Internet. All of these individuals spoke of these basic courses in a positive way, but only 1 eventually entered an IT career.

For the students who did not have extensive previous exposure to computers, basic classes were useful and interesting. However, 4 other participants who were already experienced with computers felt that their courses were inadequate or outdated. For 3 participants (all of whom entered an IT job, though 1 left IT before the interview), coursework included

using programming languages that were not relevant to their eventual jobs. The 4th participant who was dissatisfied with her courses, Melissa, could tell that she had not learned adequate skills to be competitive on the job market. Melissa attended a technical institute to focus on programming and network administration. After not learning as much as she felt she should have and “wasting thousands and thousands of dollars,” she was so disappointed with the IT field that she decided to switch career paths. At the time of the interview, she was pursuing a career in the medical field instead.

In addition to difficult courses and inadequate course content, some participants reported negative encounters with teachers. In the case of 1 individual who was in IT and 1 who had already left the IT field, instructors presented the material in boring, ineffectual ways. In addition, 2 participants who never pursued IT-related jobs felt that their instructors were underprepared to teach the course material.

In sum, educational experiences were often positive in that they provided sources of self-efficacy and interest and they taught valuable computing skills. The qualities that made computer classes and educational experiences beneficial included being challenging (but not too difficult) and being applied and taught

in a way in which students could see their efforts pay off. Yet, educational experiences were frequently negative as well and appeared to be behind the decision of some participants to not enter the IT field. This occurred when courses were too difficult and students fell behind in their coursework, when teachers were underprepared to teach the class, and when the course content seemed outdated or out of touch with the IT workplace. Thus, although classes are one way to develop children's and adolescents' aspirations for an IT career, the quality of classes and fit of the course to students' skill level must be high to best encourage youth to enter or remain on the path to an IT career.

Since the value of educational experiences and the self-assessments drawn from them varied widely across participants, courses are a likely source of differential socialization by gender or ethnicity. Again, we turned to the larger, longitudinal sample from which these participants were selected to examine whether particular groups of youth were more likely to have positive or negative educational experiences. To do so, we performed cross-tabulations and ANOVAs. We found no gender or ethnic differences in whether youth had taken an IT course, Pearson  $\chi^2(3) = .369, p = .95$ . Among those youth who had taken at least one course related to IT, there were no significant gender or ethnic differences in their level of comfort

with classmates,  $F(3, 249) = 1.35, p = .26$ , or their level of comfort with professors in these courses,  $F(3, 248) = 1.41, p = .24$ . There were also no significant differences in their enjoyment of the courses,  $F(3, 389) = 2.58, p = .05$ , although there was a trend for African Americans to enjoy the classes more than European Americans. Therefore, although many youth reported negative experiences in their IT-related classes, these experiences did not appear to be systematically related to gender or ethnicity.

#### **25.4.3. What Other Formative Experiences Do Emerging Adults Mention When They Recall Their Career Paths?**

##### **Other important people**

Although participants did not mention people outside their families and schools as often as they mentioned their parents, a few participants did recall peers, counselors, relatives, and other adults as sources of formative experiences or assistance. For instance, before Dan entered an IT career, he became interested in computers after borrowing a programming book from his

friend. Also, 2 participants who eventually entered IT were told by respected adults (a school counselor and a professional in the private sector) that they should enter a computer- or technology-related career. Furthermore, 1 future IT employee was allowed to format the hard drive of a family friend's computer. In addition to these key opportunities, family friends and others often expressed support and encouragement that was similar to the kind provided by parents.

Although networking is not always discussed in the career development literature (though see Lin, 1999, and Try, 2005, for a social capital perspective), it was discussed by a number of participants, including those who were in and who were not in IT careers. For instance, Adam and Michael obtained IT jobs at the same company as a friend. Ben was given his first IT job by his uncle and remained in the IT field ever since. Thus, although other individuals were not often involved in participants' career development, they certainly played important roles when they were involved.

### **Activities**

To tap into experiences that occur outside of a traditional school setting, participants were asked if they were involved in activities that reinforced their interests or in which they

developed new skills or interests. Many participants mentioned something in response to this question, but not all of these responses were related to computers or technology. Of the 5 individuals who were involved in an IT-related activity outside of school or work, all eventually entered an IT career. In addition, 1 person mentioned that his first exposure to computers occurred in a computer programming club in which he was enrolled during primary school. Another individual was involved in a summer camp in which he programmed and controlled robots with a computer. Also, 2 individuals mentioned video games as a source of exposure or continued involvement in technology, and 1 also played with remote controlled cars and made alterations to them with his friends.

Edward participated in an extracurricular club involving electronic music and hosting social events for other students. When describing why he enjoyed electronic music he related the creation of music to the creation of screen savers, which was the activity that drove his early interest in computers. He said, "Sound is another pattern just like screen savers. There is light and sound and audio and it really has the same love for me." Although electronic music is not often discussed as being related to information technology, several individuals said that they were interested in the creation or production of music.

These individuals viewed music production as a creative outlet with which they could utilize their skills in computer technology.

Finally, 7 people, 6 of whom entered IT, mentioned early summer jobs or internships that used or developed their computer skills. In addition, 2 people taught schoolchildren basic information about computers and enjoyed both figuring out how to make computers interesting to others and having the opportunity to teach young children. Others learned new skills, such as graphic arts or how to install a computer network. Overall, extracurricular activities and part-time jobs served to expand the set of possible careers that participants considered and help individuals weigh various career options.

### **Workplace experiences**

Once youth enter career-track jobs, their experiences in the workplace can either solidify their commitment to the field or convince them to pursue an alternative occupation. To understand the situation of the IT job market, we focus here on the negative workplace experiences in IT jobs. Of the 10 participants who were employed in IT at the time of the interview, 7 reported negative workplace experiences, as did



both of the women who left the IT field before the interviews were conducted. In addition, 3 participants who at one time had a job in the IT field mentioned negative experiences with coworkers. Crystal found that her colleagues were too competitive; the other 2 participants were frustrated by the lack of enthusiasm or technical knowledge held by their coworkers. Edward was considering leaving his job (but staying in the IT field), partially because of his experiences with coworkers. In reference to his company and workplace experiences, he said,

*Their technical department is absolutely horrid. There's not a single person in there who does the computer trade with enthusiasm because they like it. It's all [just] a job to everybody ... I've been inherently struck that the only people I want to work with are those that love to do it [their job/work with computers].*

Beyond negative experiences with coworkers, 5 participants had difficulties with their supervisors in IT jobs. At times, supervisors were unsupportive of participants' growth and performance or were too rigid in the way they managed their employees. Although these experiences were not uncommon, no participants suggested that problems with supervisors led them to seek new jobs or careers. There were also several

individuals who mentioned positive experiences with their supervisors. Generally, experiences with supervisors in IT jobs did not appear to be systematically different from experiences with supervisors in non-IT fields.

The third kind of complaint about IT jobs was a negative working environment. For participants who worked in a negative environment, their jobs did not allow them to express their personalities or feel comfortable with their social identities. For instance, 1 woman felt as though she couldn't be as "goofy" or lighthearted as she would like to be when she was employed in an IT job. Another man wanted more opportunity to be creative in his tasks at work. Both women who left the IT field reported sexism in their workplaces; in addition, 1 experienced racism and 1 encountered ageism. As an example, when asked whether she enjoyed her previous job in IT, Rachel replied,

*Well, there wasn't a lot of gratification in the computer programming thing [job] because it was so natural to me that a lot of people felt I was arrogant. And I wound up getting fired because there were a lot of older people in the company and they didn't like some young woman with no college degree knowing more than they did.*

Unfortunately, ageism and racism also appeared in interviews with non-IT professionals, but sexism only appeared in relation to male-dominated careers such as law enforcement. Although only two occurrences of sexism were reported in relation to IT careers, it is important to remember that we interviewed few women who were ever in an IT career. Thus, although we found little evidence for racism and sexism in the IT field, we found enough evidence that it may present a significant hindrance for women and minorities who are employed in IT jobs. In fact, when asked why women are underrepresented in IT, 10 of the 26 participants mentioned that male-oriented classes or career fields (including the IT field) can be intimidating to women or can maintain biased hiring and promotion decisions. In the minds of many participants, women may choose careers in which they will be less likely to encounter sexism or barriers due to their gender.

## 25.5. SUMMARY

We considered the supportive and obstructive factors associated with entering and staying in an IT job in an attempt to determine how social supports and contexts continue to

influence emerging adults as they enter their career tracks. We found clear evidence that these external influences exist in childhood and adolescence. Furthermore, even though most participants had career aspirations or had made career-related choices by early adulthood, the influence of parents, peers, and others remained salient in their career pathways.

Most of the social influences found across interviews appeared to change in developmentally appropriate way as participants entered full-time jobs. For instance, parents' messages during childhood centered on general activities; as their children entered adulthood, parents spoke of their expectations and perceptions of specific jobs. Experiences provided by others also changed, from the opportunity to play with computers casually to the opportunity to interview at a particular company. These changes indicated that emerging adults' parents, peers, and significant others do not become less influential in the process of career development. Rather, they continue to play similar roles while adapting their communication and assistance to emerging adults' new circumstances (Arnett, 2004; Whiston & Keller, 2004).

When possible, emerging adults seek jobs and careers that provide self-fulfillment and expression of their identity, often

engaging in exploration of such careers through several jobs in a short period of time (Arnett, 2004; Hamilton & Hamilton, 2006). Therefore, it is not surprising that several of the participants in this study had already held multiple jobs in different fields. Experiences in the workplace allowed participants to continue exploring themselves and career fields in meaningful ways, leading to greater satisfaction with career choices (Blustein, Phillips, Jobin-Davis, Finkelberg, & Roake, 1997).

Although workforce experiences were very useful for the career development process, such experiences also appeared to be the one most likely related to underrepresentation of women in IT occupations. On the one hand, actual discrimination may be a cost that leads women and minorities, like Rachel and Crystal, away from IT jobs. On the other hand, anticipated discrimination may have an even larger impact on individuals' career trajectories (Gottfredson & Becker, 1981). Many individuals discussed the difficulty of choosing a male-oriented career field or the potential for discriminatory hiring and promotion practices in such fields. Workplace barriers and difficulties, either anticipated or actually experienced, are incorporated into emerging adults' career plans and may play a

subtle yet powerful role in women's and minorities' career choices.

Career development involves many choices throughout the life span. Unlike some occupations, entry into an IT career path appears to begin quite early, often with direct manipulation of computers and problem solving. Activities, educational experiences, and encouragement from one's social network can persuade individuals to remain on the IT path or in some cases to select another path that is more valued or in which one has more confidence. The study of retrospective accounts of career paths confirms and highlights important contextual aspects of developmental theories. As such, future research in career development might examine occupational changes made by adults and how these are related to life span development.

Children born in recent years are more likely to have computers both at home and at school than were the participants in this study (Bae, Choy, Geddes, Sable, & Snyder, 2000; Parsad & Jones, 2005). However, increased access to computers does not mean that children are engaging with computers in a meaningful way. Rather, children and adolescents often engage in "soft" computing activities (DeBell & Chapman, 2004). They work with user-friendly, preprogrammed software, browse the

Internet, and communicate with friends. Although many of the participants in this study (both in the qualitative sample and the larger sample from which it was drawn) had access to computers in their homes or schools during childhood, being exposed to computers was not enough to develop interest in entering a computer-related career. Thus, children who have access to computers may not be engaging with them in ways that will promote the skills needed by the future IT workforce or attract them to computer programming, engineering, or maintenance. Interest in computers and the IT field develops through processes similar to those of other occupational interests. Therefore, engaging educational programs, summer camps, and other opportunities are needed if the IT field seeks a large, diverse workforce in the future.

## **25.6. Check Your Progress**

**Q.1** What are the career/job goals you now are considering?

**Q.2** Who or what helped you learn about your choices?

**Q.3** Who or what has had the greatest influence on your employment decisions?

**Q.4** What are the barriers to achieving your employment goals?

**Q.5** Where in the future do you plan to work?

**25.7. Assignment/Activity**

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