CHAPTER 5

CHAPTER OUTLINE

Module 5.1: Cognitive Development in Infancy and Childhood
Humans are born virtually helpless but quickly and dramatically gain (if healthy and often even if physically challenged to some degree) numerous impressive cognitive skills and a wide array of emotions and behaviors. This first section explores how we study those changes, and presents models of the progression from simple but crucial reflexes at birth to complex thought processes present in later childhood, adolescence and adulthood.

1) Research Designs for Studying Development: There are research designs that are commonly found in developmental research.
   a) A cross-sectional study is a comparison of groups of individuals of different ages who are studied simultaneously. A longitudinal study follows a group of individuals over some period of the lifespan. Longitudinal studies face a number of practical difficulties. Selective attrition, or differential survival, is the tendency for some subjects to be more likely than others to drop out of a study. If there is a systematic reason for this attrition, it can bias the results of the research. Also, longitudinal studies present the challenge of distinguishing the effects of age from the effects of changes in society. For certain types of developmental research questions, a longitudinal design is the only logical choice.
   b) Sequential or cross-sequential designs start with groups of people of different ages. The researcher studies them at the same time, and then studies them again at one or more later times. If cross-sectional and longitudinal designs produce different results, psychologists analyze cohort effects to determine whether a difference among people of different ages is due to age or to a difference among cohorts. A cohort is a group of people born at a particular time or a group of people who enter a system, process, or environment at the same time.

2) The Fetus and the Newborn: Everyone starts life as a fertilized egg cell. Prenatal development refers to development before birth. The fertilized egg cell is known as a zygote, and then proceeds through the stages of blastula, gastrula, and embryo (at 2 to 8 weeks post conception). It is referred to as a fetus from 8 weeks after conception up until birth. A growing body receives nutrition from the mother; an undernourished mother gives birth to small babies, and these babies have a much greater risk of later health and behavioral problems. Low birth weight is related to impaired brain development, but the relationship is complex. Twin studies indicate that low birth weight is not necessarily a serious problem per se.

3) If a mother drinks alcohol during pregnancy, fetal alcohol syndrome (FAS) may result. FAS is a pattern of birth defects, usually including stunted growth of the head and body; malformations of the face, heart, and ears; and nervous system damage, possibly including seizures, hyperactivity, learning disabilities, and mental retardation.

4) Women who smoke during pregnancy have an increased probability of having children with conduct disorder. These children exhibit discipline problems both at
school and home. Babies born to mothers who smoke also tend to be low birth weight and have an increased risk of SIDS.

5) Young children can be resilient. High-risk children sometimes overcome the odds and grow up healthy nonetheless.

6) Infancy: Because infants can tell us little about their sensory and cognitive processes, it is difficult to study them. We can only measure the responses that infants can control.
   a) Infants’ Vision: By studying infant response patterns, it has been shown that infants prefer to look at human faces over other stimuli. Also, in the first years of life, children do not perceive faces the way adults do. Infants develop depth perception around the time they begin to crawl.
   b) Infants’ Hearing: One way to study infant hearing is to measure the sucking response infants make to various sounds. A novel sound will generally elicit a greater frequency of sucking. Once the infant becomes used to the sound, sucking rates decrease. The infant has become habituated. If a new sound is introduced, the infant becomes dishabituated and the rate of sucking increases. This method has been used to study infants’ responses to differences in sounds such as ba- and pa-. Such differences help us to understand the first stages of language learning.
   c) Infants’ Learning and Memory: The sucking response can be used to measure infant memory. Infants produce a greater rate of sucking in response to the voices of their mothers. They prefer their mothers’ voices, and the preference emerges so early it’s possible that they remember the voice from before birth. Infants as young as 2 months, having been allowed to move a mobile by kicking a ribbon attached to their legs, will demonstrate an increased kicking rate when the ribbon is attached to their legs days later.

7) Jean Piaget’s View of Cognitive Development: Piaget’s theory is based on certain assumptions. He believed that children’s thought processes are fundamentally different from those of adults, and that a child formulates new mental processes as he or she interacts with the environment.
   a) A child constructs new mental processes as he/she interacts with the environment. Behavior is based on schemata (singular: schema). These are organized ways of interacting with objects in the world. Assimilation occurs when the child applies an old schema to new objects. Accommodation is when the child changes old schema to fit a new object. Children shift back and forth between the two as their thinking evolves. This is a process of establishing harmony between the two called equilibration. These processes occur throughout the life cycle.
   b) Piaget’s Stages of Intellectual Development: Piaget proposed a progression through four stages of cognitive development. The ages are culture dependent and Piaget gave more importance to the sequence than the ages of the transitions.

8) Infancy: Piaget’s Sensorimotor Stage: In the sensorimotor stage (birth to 1½ years) behavior consists primarily of simple motor responses to sensory stimuli. Infants are capable of noticing relationships between stimuli. As children progress through this stage, they gain some sense of self as evidenced by the “rouge test.”
   a) Research using staring time as a measure of infant surprise have demonstrated a sense of object permanence in infants as young as 3½ months old. The precise age at which the skill appears to emerge depends on the manner of testing.
b) Staring time research has revealed that as early as five months, infants have some sense that adding should make a total bigger, and subtracting should make it less.

c) Sense of Self: At about 15 to 18 months of age, babies’ reactions and attempts to remove a dot of rouge from their faces when they see it in the mirror suggest that they recognize themselves.

9) Early Childhood: Piaget’s Preoperational Stage: In the preoperational stage, the child lacks the capacity to perform logical operations. Operations are reversible mental processes. Lack of the Concept of Conservation in the Preoperational Period: According to Piaget, preoperational children lack the concept of conservation. They do not understand that objects conserve such properties as number, length, volume, area, and mass after the shape or arrangement of the objects has changed. Thinking during this stage also tends to be egocentric, meaning that a child cannot easily take another person’s perspective. Gradually as the preoperational stage draws to a close, children develop a theory of mind, which is an understanding that each person knows some things that other people don’t know.

10) Later Childhood and Adolescence: Piaget’s Stages of Concrete Operations and Formal Operations:

a) Later Childhood: Around age 7, children begin to understand the conservation of physical properties. During the stage of concrete operations children can perform logical operations using symbols (numbers for example) and concrete objects, but they still have some trouble with abstract or hypothetical ideas.

b) Adolescence and Adulthood: Formal operations are the mental processes used in dealing with abstract, hypothetical situations. Logical, deductive reasoning and systematic planning are usually involved in formal operational problem solving. According to Piaget, children reach this stage at around age 11. Research suggests that some people reach this stage later in life and others never attain it.

c) Are Piaget’s Stages Distinct? Later research cast doubt upon Piaget’s idea of radical reorganization of thinking as a child progresses through stages of thinking. Children’s performance fluctuates within a given stage, and the fluctuation can be increased changing the difficulty of a task. The progression from one stage to another is more gradual than sudden.

d) Difficulties of Inferring Children’s Concepts: In testing children’s thought processes using the assumptions of the Piagetian model, it becomes evident that concepts appear gradually and may or may not be revealed depending on how a child is tested. Cognitive abilities that may appear under some testing conditions, but not others, are the ability to distinguish appearance from reality, symbolic thinking, and variations of conservation tasks.

e) How Grown Up Are We? Piaget and Lev Vygotsky: Vygotsky de-emphasized natural progression of children through different stages of thinking and emphasized that children must be taught in order to develop. Instruction should stay within the zone of proximal development. This is the distance between what a child can do independently and what the child can do with the help of others.

Module 5.3: Social and Emotional Development

1) Erikson’s Description of Human Development: Erikson divided the lifespan into eight ages, each with its own emotional/social conflicts.
a) Infants struggle between basic trust and a feeling of mistrust.
b) A toddler (1-3) faces the conflict over establishing a rudimentary sense of autonomy instead of a feeling of shame and doubt.
c) The preschool child works to achieve initiative and avoid guilt by learning to respect the rights of others.
d) During middle childhood industry versus inferiority is the major conflict, as the child works to feel competent and productive in the eyes of peers, teachers, and family.
e) During adolescence, teens must establish a sense of identity instead of an ongoing experience of role confusion.
f) In young adulthood, the major conflict is about establishing intimacy with others instead of increasing isolation.
g) Middle adulthood is characterized by the conflict generativity instead of stagnation—the middle-aged adult needs to contribute to the world in some way.
h) During old age the conflict experienced is ego integrity versus despair as we ask ourselves if we really made good use of our time and we struggle with any regrets we may have.
i) Psychologists find Erikson’s model of development descriptively useful but limited in its power to explain how people change over the life cycle.

2) Infancy and Childhood: Attachment is the long-term feeling of closeness between a child and a caregiver. It is based on both biological and emotional needs.
a) Attachment is measured using the Strange Situation, an experiment designed by Mary Ainsworth, in which an infant and mother come into a room with toys and are joined by a stranger; the mother leaves and returns. Then the mother and stranger leave; then the stranger returns, and finally, the mother returns. Infants respond in one of four ways: securely attached, anxiously attached, anxious and avoidant, and disorganized. Behavior in this situation correlates strongly with behavior at home.
b) The quality of attachment depends on infant temperament, and differs cross-culturally. Infants with a disorganized attachment are at risk for later deviant behaviors.

3) Social Development in Childhood and Adolescence:
a) The success that a child has in forming friendships can have a lasting impact on social and emotional development. In middle childhood some children are popular, some are rejected, and others are “controversial.” These statuses tend to be stable over childhood.
b) Adolescence is the time of transition from childhood to adulthood. Relationships with parents are changing, often resulting in serious conflict. In Western cultures, adolescence is often associated with disruptive behavior.
c) Identity Development: Many Western adolescents, facing conflicting pressures, experiment with several possible identities before they decide the type of person they want to be. Although adolescence can be a time of stress, the “storm and stress” concept of adolescence is by no means the rule. Adolescents vary in how much turmoil they experience, and some experience very little. The focus on decisions concerning the future is referred to as the adolescent’s identity crisis. James Marcia devised a four-status model of adolescent identity development.
The statuses are: identity diffusion (no clear sense of identity); identity moratorium (actively considering choices); identity foreclosure (commitment without exploration); and identity achievement (commitment after exploration).

d) The “Personal Fable” of Teenagers: Teenagers often subscribe to what has been termed the “personal fable” that “I am special; what is true for everyone else is not true for me.” Belief in the fable often leads adolescents to make foolish choices. Adults are also susceptible to this belief.

4) Adulthood: Around age 40, some adults experience a midlife transition, a time during which they re-evaluate their life goals. Many middle-aged adults go through a minor readjustment when they review their life’s direction. This readjustment can be resolved in many ways.

5) Old Age: The percentage of those living into their 70s and 80s has grown steadily throughout the century. A common concern of old age is maintaining self-esteem and a sense of dignity. People must deal with physical changes, as well as changes in social status. People vary in how they adjust to retirement. It is helpful for old people to maintain some control over their lives, even if they are faced with failing health.

6) The Psychology of Facing Death: The course of bereavement differs greatly between individuals. Most people tell themselves that death is in the distant future. Terror-management theory proposes that we tend to avoid thinking about our own mortality and frame the world in a positive way. Religious beliefs are often used as part of this defense system.

Module 5.3: Diversity: Gender, Culture, and Family

1) Gender Influences: Gender differences with regard to most major aspects of personality and psychological functioning are near zero.
   a) From an early age, females display greater language fluency. Males perform better on mathematical and spatial tasks. Boys are generally larger and more active than girls and more aggressive. Girls are more likely to provide long-term nurturance. Males prefer to use distances and directions in finding their way; females prefer to use landmarks.
   b) Sex Roles and Androgyny: Androgyny is the ability to display both male and female characteristics. Due to problems with defining and measuring the concept as well as masculine and feminine traits, it is unclear whether there is any benefit to an individual who is psychologically androgynous.
   c) Reasons behind Gender Differences: Physical differences between the sexes may predispose them to behavioral differences. It is very likely that biological influences combine with early socialization to perpetuate these differences and it is very hard to untangle the influences or change the behaviors. It is well documented that parents interact differently with male and female children from infancy and throughout childhood.

2) Cultural and Ethnic Influences: Ethnicity has effects on personality and identity development. Immigrants to the United States undergo a period of acculturation, a transition between their culture of origin and the new culture. Some become almost fully members of the new cultures; others adopt a bicultural identity and alternate easily between the two cultures. This increases the bicultural person’s cognitive
flexibility in some ways. All of us need to learn to function in “subcultures”—school, work, home. It is in a sense a normal part of our life experience.

3) The Family: In early childhood our parents and other relatives are the most important people in our lives. How do these relationships affect us in the long-term?
   a) Birth Order and Family Size: Despite the popularity of the concept, birth order research has been unconvincing in its conclusions and of generally poor quality. The apparent effects of birth order can be convincingly explained by other factors. The qualities ascribed to being a first, middle, or youngest child are usually only seen consistently in the family environment.
   b) Effects of Parenting Styles: Different cultures have different expectations of children’s behavior and different standards for parenting. There are four basic forms of parenting. Authoritative parents are characterized by warmth and responsiveness, but exercise firm control and limit-setting. Authoritarian parents set firm controls, but with less explanation; they tend to be less close to the child. Permissive parents are warm and loving, but not demanding. Indifferent or uninvolved parents spend little time with their children. The effects of different parenting styles may differ among different ethnic groups. The work of Judith Harris reviewing a large amount of research on parenting style supports the idea that although parents have influence on their children’s personalities and behavior, that influence may not be nearly as crucial as was once believed. Peers and heredity may be more significant influences over the long run.
   c) Parental Employment and Child Care: Child-rearing customs vary greatly between cultures. Recent research in Western cultures has focused on the effects of day care on a child’s psychological adjustment. Research indicates that adequate quality day care is associated with satisfactory intellectual and social development. Day care can be a superior alternative for children from disadvantaged homes. The most controversial issue has been the effects of beginning day care before a child reaches the age of 1 year. Many psychologists are now convinced that even very early day care is not harmful to a child’s development, as long as the day care is of good quality.
   d) Nontraditional Families: A large number of children grow up in families significantly different from the traditional model. What appears to matter most is that the child has at least one stable and positive relationship with an adult over the course of childhood.
   e) Parental Conflict and Divorce: Attitudes towards divorce have changed dramatically over the past few generations. Children whose parents divorce before the child is 16 often show a variety of adjustment problems, relative to children in two-parent households. The main reason seems to be the prolonged conflict and hostility between the parents. Longitudinal studies of divorce’s effects demonstrate considerable post-divorce upheaval, especially in the first year. The degree of distress differed from one child to another. These results vary across racial and ethnic groups. Many children are relatively unaffected. Some research suggests that divorce per se is not as harmful as prolonged exposure to conflict, whatever the marital status of the parents happens to be.