

4

Developing Through the Life Span

CHAPTER OVERVIEW

Developmental psychologists study the life cycle, from conception to death, examining how we develop physically, mentally, and socially. Chapter 4 covers physical, cognitive, and social development over the life span and introduces two major issues in developmental psychology: (1) whether development is best described as gradual and continuous or as a discontinuous sequence of stages and (2) whether the individual's personality remains stable or changes over the life span. The issue of the relative impact of genes and experience on behavior is the subject of Chapter 3.

Although there are not too many terms to learn in this chapter, there are a number of important research findings to remember. Pay particular attention to the stage theories of Piaget, Kohlberg, and Erikson, as well as to the discussion regarding intellectual stability during adulthood. Writing carefully prepared answers to the section preview items should be especially helpful in mastering the material in this chapter.

NOTE: Answer guidelines for all Chapter 4 questions begin on page 115.

CHAPTER REVIEW

First, skim this section, noting headings and boldface items. After you have read the section, review each objective by completing the sentences and answering the questions that follow it. As you proceed, evaluate your performance by consulting the answers beginning on page 115. Do not continue with the next section until you understand each answer. If you need to, review or reread the section in the textbook before continuing.

Introduction (p. 139)

David Myers at times uses idioms that are unfamiliar to some readers. If you do not know the meaning of the following expression in the context in which it appears in the text, refer to page 124 for an explanation: . . . *journey through life—from womb to tomb*.

Objective 1: State the three areas of change that developmental psychologists study, and identify the three major issues in developmental psychology.

1. Scientists who study physical, cognitive, and social changes throughout the life cycle are called _____.
2. One of the major issues in developmental psychology concerns the relative importance of genes and experience in determining behavior; this is called the _____ / _____ issue.
3. A second developmental issue, _____ / _____, concerns whether developmental changes are gradual or abrupt.
4. A third controversial issue concerns the consistency of personality and whether development is characterized more by _____ over time or by change.

Prenatal Development and the Newborn
(pp. 139–144)

Objective 2: Describe the union of sperm and egg at conception.

1. Conception begins when a woman's _____ releases a mature _____.
2. The few _____ from the man that reach the egg release digestive _____ that eat away the egg's protective covering. As soon as one sperm penetrates the egg, the egg's surface _____ all other sperm.
3. The egg and sperm _____ fuse and become one.

Objective 3: Define *zygote*, *embryo*, and *fetus*, and explain how teratogens can affect development.

4. Fertilized human eggs are called _____. During the first week, the cells in this cluster begin to specialize in structure and function, that is, they begin to _____. The outer part of the fertilized egg attaches to the _____ wall, forming the _____.
5. From about 2 until 8 weeks of age the developing human, formed from the inner cells of the fertilized egg, is called a(n) _____. During the final stage of prenatal development, the developing human is called a(n) _____.
6. Along with nutrients, a range of harmful substances known as _____ can pass through the placenta.
7. Moderate consumption of alcohol during pregnancy _____ (usually does not affect/can affect) the fetal brain. If a mother drinks heavily, her baby is at risk for the birth defects and mental retardation that accompany _____.

Objective 4: Describe some abilities of the newborn, and explain how researchers use habituation to assess infant sensory and cognitive abilities.

8. When an infant's cheek is touched, it will vigorously search for a nipple, a response known as the _____.
9. American psychologist _____ believed that the newborn experiences a "blooming, buzzing confusion." This belief is _____ (correct/incorrect).

Give some evidence supporting the claim that a newborn's sensory equipment is biologically prewired to facilitate social responsiveness.

10. (Close-Up) To study infants' thinking, developmental researchers have focused on a simple form of learning called _____, which involves a _____ in responding with repeated stimulation. Using this procedure, researchers have found that infants can discriminate _____, _____, and _____; they also understand some basic concepts of _____ and _____.

Infancy and Childhood (pp. 144–164)

If you do not know the meaning of any of the following words, phrases, or expressions in the context in which they appear in the text, refer to pages 124–126 for an explanation: *toddler*; *wild growth spurt*; *formatted*; *fruitless*; *flop his beret*; *double take*; *realizes her "grandmother" is really a wolf*; *it gets high marks*; *cognitive milestones*; *concrete demonstrations . . . think for themselves*; *pit the drawing power*; *gosling*; *"Mere exposure"*; *mobile sperm banks*; *footprints on the brain*; *sneakily dabbed rouge*; *parenting styles . . . lax*; *heed this caution*.

Objective 5: Describe some developmental changes in a child's brain, and explain why maturation accounts for many of our similarities.

1. The developing brain _____ (over/under)produces neurons, with the number peaking at _____ (what age?). At birth the human nervous system _____ (is/is not) fully mature.
2. Between 3 and 6 years of age, the brain is developing most rapidly in the _____ lobes, which enable _____.
3. After puberty, a process of _____ shuts down some neural connections and strengthens others.
4. Biological growth processes that enable orderly changes in behavior are called _____.

Objective 6: Outline four events in the motor development sequence from birth to toddlerhood, and evaluate the effects of maturation and experience on that sequence.

5. Infants pass the milestones of _____ development at different rates, but the basic _____ of stages is fixed. They sit before they _____ and walk before they _____.
6. Genes play a _____ (major/minor) role in motor development.
7. Until the necessary muscular and neural maturation is complete, including the rapid development of the brain's _____, experience has a _____ (large/small) effect on behavior.

Objective 7: Explain why we have few memories of experiences during our first three years of life.

8. Our earliest memories generally do not occur before age _____.
9. This phenomenon has been called "_____".

10. Memories of the preschool years are very few because infants' _____ memories do not easily translate into their later _____.

Objective 8: State Piaget's understanding of how the mind develops, and discuss the importance of assimilation and accommodation in this process.

11. The first researcher to show that the thought processes of adults and children are very different was _____.
12. To organize and interpret his or her experiences, the developing child constructs cognitive concepts called _____.
13. The interpretation of new experiences in terms of existing ideas is called _____. The adaptation of existing ideas to fit new experiences is called _____.

Objective 9: Outline Piaget's four main stages of cognitive development, and comment on how children's thinking changes during these four stages.

14. The term for all the mental activities associated with thinking, remembering, communicating, and knowing is _____.
15. In Piaget's first stage of development, the _____ stage, children experience the world through their motor and sensory interactions with objects. This stage occurs between infancy and nearly age _____.
16. The awareness that things continue to exist even when they are removed from view is called _____. This awareness begins to develop at about _____ months of age.
17. Developmental researchers have found that Piaget and his followers _____ (overestimated/underestimated) young children's competence. For instance, babies have an understanding of _____, as Karen Wynn demonstrated.

18. According to Piaget, during the preschool years and up to age _____, children are in the _____ stage.
19. The principle that the quantity of a substance remains the same even when the shape of its container changes is called _____. Piaget believed that preschoolers _____ (have/have not) developed this concept.
20. Preschoolers have difficulty perceiving things from another person's point of view. This inability is called _____.
21. The child's growing ability to take another's perspective is evidence that the child is acquiring a _____. Between 3½ and 4, children come to realize that others may hold _____. Between 5 and 8, they learn that self-produced thoughts can create _____.
22. (Close-Up) The disorder characterized by deficient _____ and _____ interaction and an impaired _____ is _____. This disorder is related to malfunctions of brain areas that enable _____ to others. The "high functioning" form of this disorder is called _____.
23. (Close-Up) A new theory proposes that autism represents an "extreme _____ brain." According to this theory, girls tend to be _____, who are better than boys at reading facial expressions and gestures. Boys tend to be _____, who understand things in terms of rules or laws.
24. In contrast to Piaget's findings, researchers have more recently discovered that the ability to perform mental _____, to think _____, and to take another's _____ develops _____ (abruptly/gradually) during the preschool years.

25. Russian psychologist _____ noted that by age _____ children stop thinking aloud and instead rely on _____. When parents give children words, they provide, according to this theorist, a _____ upon which the child can build higher-level thinking.
26. Piaget believed that children acquire the mental abilities needed to comprehend mathematical transformations and conservation by about _____ years of age. At this time, they enter the _____ stage.
27. In Piaget's final stage, the _____ stage, reasoning expands from the purely concrete to encompass _____ thinking. Piaget believed most children begin to enter this stage by age _____.

Objective 10: Discuss psychologists' current views on Piaget's theory of cognitive development.

Explain briefly how contemporary researchers view Piaget's theory.

Objective 11: Define *stranger anxiety*.

28. Soon after _____ emerges and children become mobile, a new fear, called _____, emerges.
29. This fear emerges at age _____.

Objective 12: Discuss the effects of nourishment, body contact, and familiarity on infant social attachment.

- 30. The development of a strong emotional bond between infant and parent is called _____.
- 31. Harlow's studies of monkeys have shown that mother-infant attachment does not depend on the mother providing nourishment as much as it does on her providing the comfort of _____ . Another key to attachment is _____ .
- 32. Human attachment involves one person providing another with a _____ when distressed and a _____ from _____ which to explore.
- 33. In some animals, attachment will occur only during a restricted time called a _____ .
Konrad Lorenz discovered that young birds would follow almost any object if it were the first moving thing they observed. This phenomenon is called _____ .
- 34. Human infants _____ (do/do not) have a precise critical period for becoming attached.

Objective 13: Contrast secure and insecure attachment, and discuss the roles of parents and infants in the development of attachment and an infant's feelings of basic trust.

- 35. Placed in a research setting called the _____ , children show one of two patterns of attachment: _____ attachment or _____ attachment.

Contrast the responses of securely and insecurely attached infants to strange situations.

Discuss the impact of responsive parenting on infant attachment.

- 36. A father's love and acceptance for his children are _____ (comparable to/less important than) a mother's love in predicting their children's health and well-being.
- 37. Separation anxiety peaks in infants around _____ months, then _____ (gradually declines/remains constant for about a year). This is true of children _____ (in North America/throughout the world).
- 38. According to Erikson, securely attached infants approach life with a sense of _____ .

Objective 14: Assess the impact of parental neglect, family disruption, and day care on attachment patterns and development.

- 39. Harlow found that when monkeys reared in social isolation are placed with other monkeys, they reacted with either fear or _____ .
- 40. Most abused children _____ (do/do not) later become abusive parents.
- 41. Although most children who grow up under adversity are _____ and become normal adults, early abuse and excessive exposure to _____ may alter the development of the brain's chemical _____ .

42. When placed in a more positive and stable environment, most infants _____ (recover/do not recover) from disruptions in attachment.
43. Experts agree that child care per se _____ (does/does not) constitute a risk factor in children's development. High-quality child care consists of warm, supportive interactions with adults in an environment that is _____, _____, and _____. More important than time spent in day care in influencing a child's development are _____.

Objective 15: Trace the onset and development of children's self-concept.

44. The primary social achievement of childhood is the development of a _____, which occurs in most children by age _____.
45. A child's self-image generally becomes stable between the ages of _____ and _____, when children begin to describe themselves in terms of gender, group memberships, and psychological _____.

Identify several characteristics of children who have formed a positive self-image.

Objective 16: Describe three parenting styles, and offer three potential explanations for the link between authoritative parenting and social competence.

46. Parents who impose rules and expect obedience are exhibiting a(n) _____ style of parenting.
47. Parents who make few demands of their children and tend to submit to their children's desires are identified as _____ parents.
48. Setting and enforcing standards after discussion

with their children is the approach taken by _____ parents.

49. Studies have shown that there tends to be a correlation between high self-esteem on the part of the child and the _____ style of parenting. This may be because this parenting style gives children the greatest sense of _____ over their lives.

Explain why the correlation between authoritative parenting and social competence does not necessarily reveal cause and effect.

Adolescence (pp. 164–175)

If you do not know the meaning of any of the following words, phrases, or expressions in the context in which they appear in the text, refer to pages 126–127 for an explanation: *pays dividends; out of sync; intellectual summit; character—the psychological muscles for controlling impulses; moral ladder; throw a switch; talk is cheap; slack; psychosocial task; forge their identity; emotional ties with parents loosen; gap . . . morphing.*

Objective 17: Define *adolescence*.

- Adolescence is defined as the transition period between _____ and _____.
- The "storm and stress" view of adolescence is credited to _____, one of the first American psychologists to describe adolescence.

Objective 18: Identify the major physical changes during adolescence.

- Adolescence begins with the time of developing sexual maturity known as _____. A two-year period of rapid physical development begins in girls at about the age of _____.

and in boys at about the age of _____ . This growth spurt is marked by the development of the reproductive organs and external genitalia, or _____ characteristics, as well as by the development of traits such as pubic hair and enlarged breasts in females and facial hair in males. These nonreproductive traits are known as _____ characteristics.

4. The first menstrual period is called _____. In boys, the first ejaculation is called _____ .
5. The _____ (timing/sequence) of pubertal changes is more predictable than their _____ (timing/sequence).
6. Boys who mature _____ (early/late) tend to be more popular, self-assured, and independent; they also are at increased risk for _____ .
For girls, _____ (early/late) maturation can be stressful, especially when their bodies are out of sync with their _____. This reminds us that _____ and _____ interact.
7. The adolescent brain undergoes a selective _____ of unused connections. Also, teens' occasional impulsiveness and risky behaviors may be due, in part, to the fact that development in the brain's _____ lags behind that of the _____ .

Objective 19: Describe the changes in reasoning abilities that Piaget called formal operations.

8. Adolescents' developing ability to reason gives them a new level of _____ awareness and _____ judgment.
9. During the early teen years, reasoning is often _____ , as adolescents often feel their experiences are unique.

10. Piaget's final stage of cognitive development is the stage of _____. The adolescent in this stage is capable of thinking logically about _____ as well as concrete propositions. This enables them to detect _____ in others' reasoning and to spot hypocrisy.

Objective 20: Discuss moral development from the perspectives of moral thinking, moral feeling, and moral action.

11. The theorist who proposed that moral thought progresses through stages is _____. These stages are divided into three basic levels: _____ , _____ , and _____ .
12. In the preconventional stages of morality, characteristic of children, the emphasis is on obeying rules in order to avoid _____ or gain _____ .
13. Conventional morality usually emerges by early _____. The emphasis is on gaining social _____ or upholding the social _____ .
14. Individuals who base moral judgments on their own perceptions of basic ethical principles are said by Kohlberg to employ _____ morality.

Summarize the criticisms of Kohlberg's theory of moral development.

15. The idea that moral feelings precede moral reasoning is expressed in the _____ explanation of morality. Research studies using _____ support the idea that moral

judgment involves more than merely thinking; it is also gut-level feeling.

- 16. Morality involves doing the right thing, and what we do depends on _____ influences. Today's _____ focus on moral issues and doing the right thing.
- 17. Children who learn to delay _____ become more socially responsible, often engaging in responsible action through _____ learning. They also become more _____ successful and productive.
- 18. Moral ideas grow _____ (stronger/weaker) when acted on.

Objective 21: Identify Erikson's eight stages of psychosocial development and their accompanying issues.

Complete the missing information in the following table of Erikson's stages of psychosocial development.

Group Age	Psychosocial Stage
Infancy _____	_____
_____	Autonomy vs. shame and doubt
Preschooler _____	_____
_____	Competence vs. inferiority
Adolescence _____	_____
_____	Intimacy vs. isolation
Middle adulthood _____	_____
_____	Integrity vs. despair

Objective 22: Explain how the search for identity affects us during adolescence, and discuss how forming an identity prepares us for intimacy.

- 19. To refine their sense of identity, adolescents in Western cultures experiment with different _____ in different situations. The result may be role _____, which is resolved by forming a self-definition, or _____.

- 20. Cultures that place less value on _____ inform adolescents about who they are, rather than letting them decide on their own. Some adolescents may form a _____ identity in opposition to parents and society.
- 21. During the early to mid-teen years, self-esteem generally _____ (rises/falls/remains stable). During the late teens and twenties, self-esteem generally _____ (rises/falls/remains stable) and identity becomes more _____.
- 22. Erikson saw the formation of identity as a prerequisite for the development of _____ in young adulthood.

Objective 23: Contrast parental and peer influences during adolescence.

- 23. Adolescence is typically a time of increasing influence from one's _____ and decreasing influence from _____.
- 24. Most adolescents report that they _____ (do/do not) get along with their parents.
- 25. When rejected adolescents withdraw, they are vulnerable to _____, low _____, and _____.

Objective 24: Discuss the characteristics of emerging adulthood.

- 26. As a result of increased _____ and weakened _____ bonds, sexual maturity is beginning _____ (earlier/later) than in the past.
- 27. Because the time from 18 to the mid-twenties is increasingly a not-yet-settled phase of life, some psychologists refer to this period as a time of _____.

Adulthood (pp. 175–192)

If you do not know the meaning of any of the following words, phrases, or expressions in the context in which they appear in the text, refer to pages 127–128 for an explanation: *misconceptions about aging exploded by recent research; stairs get steeper, the print gets smaller, and people seem to mumble more; levies a tax; "Use it or lose it"; myth . . . laid to rest; hold their own; "Pair-bonding is a trademark of the human animal"; test-driving life together; shower one another with affection; Highs become less high.*

1. During adulthood, age _____ (is/is not) a very good predictor of people's traits.
2. The mid-twenties are the peak years for _____, _____, _____, and _____. Because they mature earlier, _____ (women/men) also peak earlier.

Objective 25: Identify the major physical changes that occur in middle adulthood.

3. During early and middle adulthood, physical vigor has less to do with _____ than with a person's _____ and _____ habits.
4. The cessation of the menstrual cycle, known as _____, occurs within a few years of _____. This biological change results from lowered levels of the hormone _____. A woman's experience during this time depends largely on her _____ and _____.
5. Although men experience no equivalent to menopause, they do experience a more gradual decline in _____ count, level of the hormone _____, and speed of erection and ejaculation during later life.

Objective 26: Compare life expectancy in the mid-twentieth and early twenty-first centuries, and discuss changes in sensory abilities and health (including frequency of dementia) in older adults.

6. Worldwide, life expectancy at birth increased from 49 years in 1950 to _____ years and beyond in 2004 in some developed countries. Women outlive men by nearly _____ years worldwide and by _____ years in Canada, the United States, and Australia.
7. According to one evolutionary theory, our bodies age and wear out because once we've completed our _____ task by raising our young, there are no _____ pressures against genes that cause degeneration in later life.
8. With age, the eye's pupil _____ (shrinks/enlarges) and its lens becomes _____ (more/less) transparent. As a result, the amount of light that reaches the retina is _____ (increased/reduced).
9. Although older adults are _____ (more/less) susceptible to life-threatening ailments, they suffer from short-term ailments such as flu _____ (more/less) often than younger adults.
10. Aging _____ (slows/speeds/has no effect on) neural processing and causes a gradual loss of _____.
11. Physical exercise stimulates _____ development, thanks to increased _____ and nutrient flow.
12. The mental erosion that results from progressive damage to the brain is called _____.
13. The irreversible disorder that causes progressive brain deterioration is _____ disease. This disease has been linked to a deterioration of neurons that produce the neurotransmitter _____.

Objective 27: Assess the impact of aging on recall and recognition in adulthood.

14. Studies of developmental changes in learning and memory show that during adulthood there is a decline in the ability to _____ (recall/recognize) new information but not in the ability to _____ (recall/recognize) such information. One factor that influences memory in the elderly is the _____ of material.
15. Adults' _____ memory remains strong when events help trigger recall.
16. Cognitive abilities among 70-year-olds are _____ (less/more) varied than among 20-year-olds.

Objective 28: Summarize the contributions of cross-sectional and longitudinal studies to our understanding of the normal effects of aging on adult intelligence.

17. A research study in which people of various ages are compared with one another is called a _____ study. This kind of study found evidence of intellectual _____ during adulthood.
18. A research study in which the same people are retested over a period of years is called a _____ study. This kind of study found evidence of intellectual _____ during adulthood.

Explain why studies of intellectual decline and aging yielded conflicting results.

19. The accumulation of stored information that comes with education and experience is called _____ intelligence, which tends to _____ with age.
20. The ability to reason abstractly is referred to as _____ intelligence, which tends to _____ with age.

Objective 29: Explain why the path of adult development need not be tightly linked to one's chronological age.

21. Contrary to popular opinion, job and marital dissatisfaction do not surge during the forties, thus suggesting that a midlife _____ need not occur.
22. The term used to refer to the culturally preferred timing for leaving home, getting a job, marrying, and so on is the _____.
23. Today, the timing of such life events is becoming _____ (more/less) predictable. More important than age are _____ and chance encounters.

Objective 30: Discuss the importance of love, marriage, and children in adulthood, and comment on the contribution of one's work to feelings of self-satisfaction.

24. According to Erikson, the two basic tasks of adulthood are achieving _____ and _____. According to Freud, the healthy adult is one who can _____ and _____.
25. Human societies have nearly always included a relatively _____ bond. Marriage bonds are usually lasting when couples marry after age _____ and are _____.

26. Marriages today are _____ (half/twice) as likely to end in divorce as they were in the 1960s. Couples who live together before marrying have a _____ (higher/ lower) divorce rate than those who do not.
27. Of those who divorce, _____ percent eventually remarry. Marriage is a predictor of _____, _____, and _____. Lesbian couples report _____ (greater/less) well-being than those who are alone.
28. As children begin to absorb time and energy, satisfaction with the marriage itself _____ (increases/decreases). This is particularly true among _____ women, who shoulder most of the burden.
29. For most couples, the children's leaving home produces a(n) _____ (increase/decrease) in marital satisfaction.
30. Research studies of women who are or are not employed have found that a woman's satisfaction in life depends on the _____ of her experience in her life's role.

Objective 31: Describe trends in people's life satisfaction across the life span.

31. From early adulthood to midlife, people typically experience a strengthening sense of _____, _____, and _____.
32. According to studies, older people _____ (do/do not) report as much happiness and satisfaction with life as younger people do. In addition, their feelings _____ (do/do not) mellow.
33. As we age, the brain area called the _____ shows _____ (increased/decreased) activity in response to negative events.

Objective 32: Describe the range of reactions to the death of a loved one.

34. Grief over a loved one's death is especially severe when it comes _____.
35. Reactions to a loved one's death _____ (do/do not) vary according to cultural norms. Those who express the strongest grief immediately _____ (do/do not) purge their grief more quickly.
36. Terminally ill and bereaved people _____ (do/do not) go through predictable stages.
37. According to Erikson, the final task of adulthood is to achieve a sense of _____.

Reflections on Two Major Developmental Issues (pp. 193-194)

If you do not know the meaning of any of the following words, phrases, or expressions in the context in which they appear in the text, refer to page 128 for an explanation: *as a giant redwood differs from its seedling; goof-off.*

Objective 33: Summarize current views on continuity versus stages and stability versus change in lifelong development.

1. Stage theories that have been considered include the theory of cognitive development proposed by _____, the theory of moral development proposed by _____, and the theory of psychosocial development proposed by _____.
2. Although research casts doubt on the idea that life proceeds through age-linked _____, there are spurts of _____ growth during childhood and puberty that correspond roughly to the stages proposed by _____.
3. The first two years of life _____ (do/do not) provide a good basis for predicting a person's eventual traits.