

CHAPTER 1

Introduction: Studying Human Development

Learning Objectives:

1. Define what is meant by development and describe the nature of developmental change.
2. Describe the three domains of developmental psychology and indicate how they interact.
3. Describe Bronfenbrenner's ecological framework for understanding development.
4. Discuss the benefits of studying developmental psychology.
5. Sketch the history of lifespan developmental psychology and describe how certain historical situations contributed to the emergence of this field.
6. Identify and discuss the basic challenges of developmental psychology.
7. Describe the four features of the scientific method and explain how it is used in psychology.
8. Discuss the strengths and limitations of the cross-sectional approach.
9. Discuss the strengths and limitations of the longitudinal approach.
10. Describe sequential studies.
11. Differentiate between naturalistic and experimental studies.
12. Describe the experimental approach and be able to differentiate between experimental and control groups, and between independent and dependent variables.
13. Define correlation and explain its meaning.
14. Define and evaluate other methods for investigating developmental issues, including surveys, interviews, and case studies.
15. Discuss the ethical constraints on conducting research.
16. Define what is meant by informed consent and describe the special concerns that exist when children are involved as research participants.

Chapter Outline

- I. The nature of human development

Development refers to changes in a person's long-term growth, feelings, and patterns of thinking.
- A. Three domains of development

Domains refer to the type or form of change. There are three domains, and they interact in many ways with one another.

 1. **Physical development** includes bodily changes, the use of the body (e.g., motor skills, sexuality), and the effects of aging (e.g., eyesight, muscular strength).
 2. **Cognitive development** refers to changes in methods and style of thinking, language ability and use, and strategies for remembering and recalling information.

3. **Psychosocial development** relates to changes in feelings or emotions, relationships with others, and development of a sense of self
- B. An example of development: Jodi
Bronfenbrenner's theory on ecological systems provides a framework for understanding the many contexts of development.
1. The microsystem consists of situations in which the individual experiences face-to-face contact with important individuals.
 2. The mesosystem is the connections and relationships that exist between two or more microsystems.
 3. Settings in which the person does not participate but that still have an influence are called the exosystem.
 4. The macrosystem is the overall society, with its overarching institutions, practices, and patterns of belief
- II. Why study development?
- A. Knowledge about development can lead to realistic expectations for children, adolescents, and adults.
 - B. Knowledge about development can aid appropriate responses to a person's actual behavior.
 - C. Developmental knowledge can increase recognition when departures from the normal are significant.
 - D. Developmental knowledge can enhance understanding of one's own development.
 - E. Knowledge about development can facilitate advocacy for the needs and rights of people of all ages.
- III. The Life Course of Times Past
- A. Early precursors to developmental study
 1. Prior to the 19th century, children were expected to assume responsibilities and contribute to the household in important ways as soon as they were able.
 2. From the 19th century to the present. Childhood has increasingly been viewed as a time for play and the acquisition of skills and knowledge that will serve them later in life.
 - B. The emergence of modern developmental study
 1. Baby biographies were one of the earliest attempts to study development.
 2. Gesell developed norms, or standards of normal development, by observing children at precise ages doing specific tasks.
 3. Piaget observed behavior that illustrated cognitive skills.
- IV. Lifespan Perspectives on Human Development
- A. Continuity within Change
One challenge of lifespan psychology is to identify the factors that underlie developmental changes that happen over the very long periods of the lifespan. The field looks for continuities hidden within long-term changes.
 - B. Lifelong Growth
This theme highlights the potential for growth at all ages.
 - C. Changing Meanings and Vantage Points
The key events and themes of life can be viewed from several perspectives.
- A Multicultural View: Street Children: comparing Paraguay and North America

D. Developmental Diversity

Lifespan psychology is interested in differences in patterns of development created both by individual experiences and by social and cultural circumstances.

V. Methods of studying developmental psychology

A. Scientific methods

The **scientific method** refers to systematic procedures for objective observations and interpretations of observations.

1. Research begins with the formulation of research questions.
2. Each question is stated as a **hypothesis**—a statement that precisely expresses the research question.
3. After formulating hypotheses, researchers test them by conducting an actual study.
4. Following the study, researchers analyze and report their results. Then they make reasonable interpretations and conclusions about these results.

B. Variations in time frame

Psychologists can study people of different ages at one point in time. In addition, the same people can be studied at several points in time.

1. A **cross-sectional study** compares people of different ages at a single point in time.
 2. A **longitudinal study** observes the same subjects periodically over a relatively long period, often years.
 3. Both types of studies have advantages and limitations. For instance, **cohorts** cannot be distinguished in cross-sectional studies. Subjects in longitudinal studies may drop out or move away.
 4. **Sequential studies** combine elements of cross-sectional and longitudinal studies.
- Working with Marsha Bennington, speech-language pathologist: Communication difficulties across the lifespan

C. Variations in control: Naturalistic and experimental studies

Developmental studies vary in how much they attempt to control the circumstances in which individuals are observed.

1. **Naturalistic studies** observe behavior as it normally occurs in natural settings.
2. **Experimental studies** arrange circumstances so that only one or two factors or influences vary at a time.
 - a. In experimental research, groups are arranged so that factors can be manipulated or held constant. A deliberately varied factor is called the **independent variable**. A factor that varies as a result of the independent variable is called the **dependent variable**.
 - b. The population refers to the group being studied. When every member of the population has an equal chance of being chosen for the study, the individuals selected form a **random sample**. If any person does not have an equal chance of being selected, the sample is biased.
 - c. Experimental studies use a number of precautions to ensure that their findings have **validity**, meaning that they measure or observe what they are intended to measure or observe.

- d. One way to improve validity is to observe two sample groups, one an **experimental group**, or treatment group, and the other a **control group**. The experimental group receives the treatment or intervention related to the purposes of the experiment. The control group experiences conditions that are as similar as possible to the conditions of the experimental group but does not experience the crucial experimental treatment.
3. Most research studies look for correlations among variables.
 - a. A **correlation** is a systematic relationship.
 - b. When the behaviors or characteristics change in the same direction, the relationship is a positive correlation; when they change in opposite directions, it is a negative correlation.
 - c. The correlation coefficient, which falls between +1.00 and –1.00, summarizes the degree of relationship between two characteristics.
- D. Variations in sample size

Developmental studies vary as to how many people are observed or interviewed.

 1. **Surveys** are large-scale, specific, focused interviews of large numbers of people. Surveys have advantages and limitations.
 2. **Interviews** are face-to-face directed conversations. Because interview studies take time, they usually focus on a smaller number of individuals than surveys do.
 3. A **case study** examines one or a few individuals. In general, case studies try to pull together a wide variety of information about an individual case and then present the information as a unified whole. Case studies emphasize the relationships among specific behaviors, thoughts, and attitudes in the life of the subject.
- VI. Ethical constraints on studying development

Sometimes ethical concerns limit the methods that can be used to study particular questions about development. Generally, researchers face four major ethical issues:

 - A. Confidentiality

If researchers collect information that might damage individuals' reputations or self-esteem, they should take care to protect the identities of the participants. .
 - B. Full disclosure of purposes

Research subjects are entitled to know the true purpose of any research study in which they participate. Sometimes, however, telling subjects the truth about the study will make them distort their behavior. When this is the case, researchers need to balance dishonesty with making research more scientific. Purposeful deception may be permissible—but only when no other method is possible and when participants are fully informed of the deception and its reasons following the study.
 - C. Respect for individuals' freedom to participate

As much as possible, research studies should avoid pressuring individuals to participate.
 - D. Informed consent

With **informed consent**, each person shows that he or she understands the nature of the research, believes that his or her rights are protected, and feels free to either volunteer or refuse to participate.
- VII. Strengths and limitations of developmental knowledge

Key Concepts

Directions: Identify each of the key concepts discussed in this chapter.

1. Long-term changes in a person's growth, feelings, patterns of thinking, social relationships, and motor skills are called _____.
2. The broad changes and continuities that constitute a person's identity and growth from birth to death are called _____.
3. A(n) _____ is a realm of psychological functioning.
4. Growth and changes in motor skills are examples of _____. Changes in thinking and reasoning skills are called _____. Changes in personality and social and emotional skills are called _____.
5. Bronfenbrenner describes the contexts of development as _____. He outlines the _____, _____, _____, and _____ as various sets of people, settings, and recurring events that are related to one another, have stability, and influence the person over time.
6. During medieval times, children took on adult roles at about age _____ or _____. Consequently, the period we recognize as _____ today was unknown.
7. _____ are behaviors typical at certain ages and of certain groups.
8. The textbook identifies four lifespan perspectives on human development; these are _____, _____, _____, _____, and _____.
9. Scientific research methods have common qualities. These are: _____, _____, _____, and _____.
10. A(n) _____ is a precise prediction based on scientific theory; usually it can be tested by scientific research.
11. In a(n) _____ study individuals of different ages are tested at one point in time. In a _____ study the same individuals are followed over a period of weeks, months, or years and tested multiple times.
12. A(n) _____ is a group of people born in the same historical time. In _____ studies at least two cohorts are compared to each other and at different times.
13. When behavior is observed in its natural setting without interference from the experimenter, a(n) _____ study is being conducted.
14. In experimental research, the _____ variable is manipulated by the experimenter and the effect of this manipulation on the _____ variable is measured.
15. If each member of a particular population has an equal chance of being selected into a sample, then the sample was chosen _____.

16. To the extent that research findings measure or observe what is intended, they are said to be _____.
17. In experimental research, the group that receives the experimental treatment is called the _____ group. The group that does not receive the experimental treatment is called the _____.
18. In _____ research the values of two variables move and change together.
19. In a(n) _____, large numbers of people are asked to report their specific knowledge or opinions.
20. A(n) _____ is intended to gather in-depth information through a face-to-face conversation.
21. A research study that uses one or a few individuals is called a(n) _____ study.
22. A(n) _____ is an agreement signed by research participants prior to making a decision about their participation.

Multiple-Choice Self-Test

Factual Questions

1. Which domain of development is primarily concerned with changes in feelings and relationships with others?
 - a. Physical
 - b. Cognitive
 - c. Psychosocial
 - d. Emotional
2. The interaction between the family and the workplace is an example of a(n)
 - a. microsystem.
 - b. mesosystem.
 - c. exosystem.
 - d. macrosystem.
3. Contemporary society views children as innocent and in need of protection. This view leads to
 - a. child abuse.
 - b. respect from the community.
 - c. insensitivity to the diversity of childhood experiences.
 - d. nonuniform views about the nature of childhood.

4. In research, a precise testable prediction is called a
 - a. norm.
 - b. theory.
 - c. study.
 - d. hypothesis.

5. Which of the following is true of the longitudinal study?
 - a. It tests the same participants repeatedly.
 - b. Its participants are people who belong to several different cohorts.
 - c. It takes a relatively short time to complete.
 - d. It always involves the manipulation of multiple independent variables.

6. A questionnaire that includes specific questions about political attitudes, opinions and behaviors will most likely be used in
 - a. experimental research.
 - b. a naturalistic study.
 - c. a survey.
 - d. a correlational study.

7. An in-depth face-to-face conversation with a participant constitutes a(n)
 - a. survey.
 - b. naturalistic study.
 - c. case study.
 - d. interview.

8. In a negative correlation, as the values of one variable increase, the values of the other variable
 - a. increase.
 - b. decrease.
 - c. remain the same.
 - d. change randomly.

9. In an experimental study, the variable that is measured is called the _____ variable.
 - a. independent
 - b. dependent
 - c. control
 - d. experimental

10. An informed consent must include information about all of the following *except*
 - a. confidentiality.
 - b. full disclosure of the purpose of the study.
 - c. respect for individuals' freedom to participate in the study.
 - d. compensation for participation.

Conceptual Questions

1. Which of the following is the best illustration of cognitive development?
 - a. Betsy is now able to tie her own shoelaces.
 - b. Jamie is considering whether or not his friend intended to break his, Jamie's, Nintendo before he blames the friend.
 - c. Trisha has learned to swim.
 - d. Bobby has recently joined the school basketball team.

2. Dan's father has been transferred to another state. Dan must move with his family and leave behind his friends. Which level of Bronfenbrenner's ecological systems is influencing Dan?
 - a. Microsystem
 - b. Mesosystem
 - c. Exosystem
 - d. Macrosystem

3. Dr. Errol, a psychologist, is recording detailed descriptions of his son's behaviors, opinions, accomplishments, and so forth. Whose method of studying children is Dr. Errol using?
 - a. Uri Bronfenbrenner's
 - b. Jacqueline Goodnow's
 - c. Arnold Gessell's
 - d. Bernice Neugarten's

4. A lifespan developmental psychologist argues that traditions and customs of different cultures influence the experience of childhood differently. Which perspective of lifespan development is he referring to?
 - a. Continuity within change
 - b. Lifelong growth
 - c. Changing vantage points
 - d. Developmental diversity

5. A researcher hypothesizes that increased alcohol consumption reduces recall ability. What is the dependent variable in this hypothesis?
 - a. Amount of alcohol consumed
 - b. Ability to recall
 - c. This is a correlational study; it does not have a dependent variable
 - d. This is a correlational study; both amount of alcohol consumed and ability to recall are dependent variables.

6. Assume that ability to recall and alcohol consumption are correlated variables. Which of the following statements is true?
 - a. Alcohol consumption causes a decline in recall ability.
 - b. Alcohol consumption causes an increase in recall ability.
 - c. As alcohol consumption increases, there is a corresponding decline in recall ability.
 - d. As alcohol consumption increases, there is a random change in recall ability.

7. A researcher has been collecting data from the same one hundred subjects for the past five years. Twice a year he contacts them and they complete various questionnaires and are interviewed on their political attitudes and behaviors. This researcher is conducting which type of study?
 - a. Longitudinal
 - b. Cross-sectional
 - c. Naturalistic
 - d. Case

8. A neuropsychologist is studying the effects of a new drug on depressive symptoms. He divides his thirty participants into three groups of ten each. The first group receives 10 milligrams of the new drug. The second group receives 15 milligrams of the new drug. The third group receives a sugar pill. Which is (are) the experimental groups of this study?
 - a. The first
 - b. The second
 - c. The third
 - d. The first and the second

9. Which of the following represents the strongest correlation?
 - a. $r = +1.90$
 - b. $r = +0.75$
 - c. $r = -0.95$
 - d. $r = -0.50$

10. If a scientist were conducting a study on aggressive behaviors with ten-year-old participants, she would have to get informed consent from
 - a. the child participants.
 - b. the parents of the child participants.
 - c. the child participants and their parents.
 - d. neither the parents nor the child participants.

Answer Key

Key Concepts

1. development
2. lifespan development
3. domain
4. physical development; cognitive development; psychosocial development
5. ecological systems; microsystem; mesosystem; exosystem; macrosystem
6. seven; eight; adolescence
7. Norms
8. continuity within change; lifelong growth; changing vantage points; developmental diversity
9. formulating the research question; stating questions as a hypothesis; testing the hypothesis; interpreting and publicizing the results

10. hypothesis
11. cross-sectional; longitudinal
12. cohort; sequential
13. naturalistic
14. independent; dependent
15. randomly
16. valid
17. experimental; control
18. correlational
19. survey
20. interview
21. case
22. informed consent

Multiple-Choice Self-Test / Factual Questions

1. Choice (c) is correct; the psychosocial domain covers emotions, personality, and social knowledge and skills. Choice (a), physical development, examines physical and biological changes. Choice (b), cognitive development, is concerned with thinking and reasoning skills, collectively called cognition. Choice (d), emotional development, is not one of the domains.
2. Choice (b) is correct; the mesosystem examines relationships between microsystems. Choice (a), the microsystem, refers to one-on-one and small-group interactions. Choice (c), the exosystem, refers to settings in the larger society that influence the individual, such as institutions. Choice (d), the macrosystem, examines social, cultural, and institutional patterns and assumptions that influence the individual.
3. Choice (c) is correct; viewing children in a uniform manner leads to an ignorance of the diversity of children with respect to race and ethnicity, economic resources, and so forth. Therefore, choice (d) is incorrect. This view does not lead to child abuse, choice (a), or respect for children, choice (b).
4. Choice (d) is correct; a hypothesis is a specific prediction based on theory. Choice (a), norms, are behaviors typical of particular ages and groups. Choice (b), a theory, is a broad and general explanation of a phenomenon. Choice (c), a study; is synonymous with the concept of conducting research.
5. Choice (a) is correct; longitudinal studies follow participants over weeks, months, and years and involve repeated testing. Choices (b) and (c) are characteristics of cross-sectional designs. One or more variables, choice (d), may be involved in longitudinal research.

6. Choice (c) is correct; in survey research, participants are questioned directly about their opinions, attitudes, and behaviors. Choice (a), experimental research, involves manipulating an independent variable and measuring the impact of the manipulation on the dependent/variable. In naturalistic studies, choice (b), participants are tested in their natural environments, without any interference from experimenters. Choice (d), correlational research, examines the relationship between two variables.
7. Choice (d) is correct; interviews are in-depth face-to-face conversations intended to gather specific information. In survey research, choice (a), participants are questioned directly about their opinions, behaviors, and attitudes. In naturalistic studies, choice (b), participants are tested in their natural environments, without any interference from the experimenters. Choice (c), a case study, is a research method that uses only one or just a few subjects.
8. Choice (b) is correct; in a negative correlation, as the values of one variable increase, the values of the other variable decrease. Choice (a), is incorrect in that the values of both variables increase if they are positively correlated. If variables are not correlated, as the values of one increase, the values of the other may remain the same, choice (c), or change randomly, choice (d).
9. Choice (b) is correct; the dependent variable is the outcome variable. Choice (a), the independent variable, is manipulated. Choices (c) and (d) are not recognized as variables in research.
10. Choice (d) is correct; although some research participants are compensated, compensation of participants is not required. Choices (a), (b), and (c) are all major parts of an informed consent.

Multiple-Choice Self-Test / Conceptual Questions

1. Choice (b) is correct; cognitive development includes the growth of thinking and reasoning skills, and these encompass decision-making ability. Choices (a), (c), and (d) are examples of physical development.
2. Choice (c) is correct; the exosystem includes the impact of institutions in which the person affected does not participate; in this case, the father's workplace. Choice (a), the microsystem, refers to one-on-one or small group interaction. Choice (b), the mesosystem, is the interaction of multiple microsystems. Choice (d), the macrosystem, is the influence of the larger society.
3. Choice (c) is correct; Gessell made extensive use of baby biographies. Choice (a), Bronfenbrenner, described the concept of ecological systems. Choice (b), Goodnow, examined the changing meaning of key life events and roles as one ages using household chores as an example. Choice (d), Neugarten, studied middle-aged and elderly adults.

4. Choice (d) is correct; a consideration of developmental diversity involves examining the factors that create differences in individuals' developmental patterns. Choice (a), refers to how we account for continuity as well as change in developmental patterns over time. Examining lifelong growth, choice (b), involves potential for growth throughout the lifespan. Choice (c) refers to the change and stability of meanings of key life events and roles across the lifespan.
5. Choice (b) is correct; the dependent variable is measured - it is the outcome variable. In this case, the researcher would vary (manipulate) alcohol consumption, choice (a) (independent variable), and assess the effects of this variation on recall ability. Choices (c) and (d) are incorrect because the described study is not correlational.
6. Choice (c) is correct; it refers to a negative association between the variables. Choices (a) and (b) are incorrect because correlation does not imply causation. Choice (d) is incorrect because it represents the absence of a correlation.
7. Choice (a) is correct; the researcher is conducting a longitudinal study. In a cross-sectional study, choice (b), participants are tested only once. In naturalistic study, choice (c), data is collected without any interference from the experimenter, as the participants behave in their natural environments. Choice (d), a case study employs only one or a few participants.
8. Choice (d) is correct; groups that receive the independent variable (the drug) are the experimental groups. Therefore, choices (a) and (b) are only part of the answer. Choice (c), the third group, receives the sugar pill instead of the independent variable and is the control group.
9. Choice (c) is correct: correlation coefficients above +0.70 and below -0.70 are considered strong, and -0.95 is the strongest listed. Choices (b) and (d) are smaller and therefore weaker. Choice (a) is incorrect because correlation coefficients range between +1.00 and -1.00.
10. Choice (c) is correct; both parents and children between ages five and nineteen need to be fully informed about the purposes, risks, procedures, and so forth of a research study. Choice (a) is incorrect in that children must be over nineteen years old to participate without the consent of their parents. If the child is under five years of age, the parent can consent; however, the child must be informed of the procedures of the study and must verbally assent to participate. Therefore, choice (b) is incorrect. Choice (d) is incorrect in that all human research participants must consent prior to participation.