

CHAPTER 1: INTRODUCTION

INTRODUCTION

What makes adolescents tick? The answer to that question has changed considerably since the fourth century B.C., when early Greek philosophers Plato and Aristotle identified two qualities that distinguish adolescents from children—reasoning ability and self-determination. In the Middle Ages, children and adolescents were viewed as miniature adults and were subjected to harsh discipline. During the eighteenth century, Rousseau believed infants, children, adolescents, and young adults demonstrated unique behavior during distinct developmental phases. G. Stanley Hall began the process of scientifically studying adolescence in the 1800s. Strongly influenced by Darwinian thought, Hall proposed that adolescent development is controlled primarily by biological factors. Hall’s **storm-and-stress view** concept is that adolescence is a turbulent time charged with conflict and mood swings. Unlike Darwin and Hall, Margaret Mead concluded that sociocultural influences affect the adolescent experience to a greater extent than genetics.

Although adolescence has a biological base, as G. Stanley Hall argued, it also has a sociocultural base, as Mead maintained. Sociohistorical circumstances may be considered the most influential aspect of change for adolescents. The **inventionist view** posits that adolescence resulted from:

- declines in adolescent apprenticeships;
- increases in skill and educational requirements;
- urbanization and separation of work and home life;
- creation of age-segregated systems for education and socialization; and
- the writings of G. Stanley Hall.

Historians call the period between 1890 and 1920 the “age of adolescence,” when lawmakers enacted a great deal of compulsory legislation aimed at youth. Discussing historical changes in the way individuals have experienced adolescence involves focusing on changes in generations, such as a cohort, a group of people who are born at a similar point in history and share similar experiences as a result. The term **cohort effects** refers to influences attributed to a person’s year of birth, era, or generation rather than their actual chronological age.

By 1950, the developmental period of adolescence had not only physical and social identities but a legal identity as well. The voices of adolescents were heard loud and clear during the political protests in the 1960s and 1970s. The women’s movement of the 1970s changed how research on adolescents was conducted; research now included female as well as male adolescents.

The label **millennials** applies to the generation born between 1981 and 1996—the first to come of age and enter emerging adulthood in the new millennium. Two characteristics of millennials that stand out are their connection to technology and their ethnicity. Because their ethnic diversity is greater than that of prior generations, many millennial adolescents and emerging adults are more tolerant and open-minded than their counterparts in previous generations. People born in 1997 or later are sometimes considered part of a new generation, dubbed generation Z, and are even more technologically sophisticated and ethnically diverse than millennials. Members of generation Z are more likely to attend college than millennials.

Although most adolescents proceed from adolescence to adulthood competently, too many do not. U.S. adolescents' achievement in a number of academic areas, such as math and science, is far lower than that of their counterparts in many other countries, especially those in Asia. Approximately 20 percent of U.S. high school seniors engage in alcohol abuse; almost one-third of U.S. adolescent girls become pregnant by the age of 20; and adolescent obesity has increased threefold in recent decades.

Groups tend to gather stereotypical descriptions, and **stereotypes** of adolescents are plentiful. During most of the twentieth century and the first few decades of the twenty-first century, adolescents have been portrayed as abnormal and deviant rather than normal and nondeviant. The media portray adolescents as rebellious, conflicted, faddish, delinquent, and self-centered. The focus on highly visible members of the adolescent age group led Joseph Adelson to coin the term **adolescent generalization gap**, which refers to generalizations that are based on information about a limited, often highly visible group of adolescents.

The negative stereotyping of adolescents is overdrawn. Studies assessing self-images of adolescents around the world found that the majority of the adolescents had positive self-images. Another study of non-Latinx White and African American 12 to 20 years old in the United States found that they were characterized much more by positive than problematic development, even in their most vulnerable times, and were engaged in healthy behaviors and had supportive relationships with parents and friends, and their positive self-perceptions were much stronger than their angry and depressed feelings.

Adults' perceptions of adolescents emerge from a combination of personal experience and media portrayals, neither of which produces an objective picture of how adolescents typically develop. In matters of taste and manners, the youth of every generation have seemed radical, unnerving, and different from adults—different in how they look, how they behave, the music they enjoy, their hairstyles, and the clothing they choose. Acting out and boundary testing, however, are time-honored ways in which adolescents move toward accepting, rather than rejecting, parental values.

Positive youth development (PYD) emphasizes the strengths of youth and the positive qualities and developmental trajectories that are desired for youth. Positive youth development has especially been promoted by Jacqueline Lerner, Richard Lerner, and their colleagues, who have recently described the “Five Cs” of PYD: competence, confidence, connection, character, and caring/compassion.

What are youths in the United States like? Socioeconomic, ethnic, cultural, gender, age, and lifestyle differences influence the developmental trajectory of each adolescent. Of special interest to researchers is how social contexts influence adolescent development. **Contexts** are the settings in which development occurs; they are influenced by historical, economic, social, and cultural factors. **Culture** encompasses the behavior patterns, beliefs, and all other products of a particular group of people that are passed on from generation to generation. Culture results from the interaction of people over many years. **Cross-cultural research** compares aspects of two or more cultures. **Ethnicity** is rooted in cultural heritage, nationality, race, religion, and language. The sociocultural context of the United States has become increasingly diverse in recent years. **Socioeconomic status (SES)** refers to a person’s position within society based on occupational, educational, and economic characteristics and implies certain inequalities. **Gender** refers to the characteristics of people as males and females. *Transgender* is a broad term that refers to individuals who adopt a gender identity that differs from the one assigned to them at birth.

Social policy is the course of action designed by the national government to influence the welfare of its citizens. Currently, many researchers in adolescent development are attempting to design studies that will facilitate wise and effective social policy decision making. According to researchers, what the United States needs is a developmentally *attentive* youth policy. Adolescents who do not reach their full potential, who make fewer contributions to society than it needs, and who do not take their place in society as productive adults diminish our society’s future.

Although most of the research on adolescence has been done in Europe and North America, cultural differences among adolescents do occur. Overall health and well-being among adolescents around the world has improved, although some behaviors that compromise adolescent health, such as drug use, have increased. Gender differences in the way adolescence is experienced continue, but they are narrowing. Changes in family factors are occurring worldwide and include increased family mobility. The number of adolescents in developed countries that go to school is increasing, although in some underdeveloped countries many adolescents do not have access to education. Peers seem to be more important in the lives of adolescents living in Western countries.

In certain ways, each of us develops like all other individuals; in other ways, each of us is unique. **Development** is the pattern of change that begins at conception and continues throughout the life span. Human development is determined by the combined influences of **biological**

processes, cognitive processes, and socioemotional processes. The connection across biological, cognitive, and socioemotional processes is obvious in two rapidly emerging fields: *developmental cognitive neuroscience*, which explores links between development, cognitive processes, and the brain, and *developmental social neuroscience*, which examines connections between socioemotional processes, development, and the brain.

Human development is commonly described in terms of periods. Childhood includes the **prenatal period, infancy, early childhood, and middle and late childhood.** Adolescence includes **early adolescence and late adolescence.** Adulthood involves three periods: **early adulthood, middle adulthood, and late adulthood.**

Developmental transitions are often important junctures in people's lives. For our purposes, two important transitions are from childhood to adolescence and from adolescence to adulthood.

The transition from childhood to adolescence involves biological changes, such as growth spurts, hormonal changes, and sexual maturation, and changes in the brain that cause shifts in abstract, idealistic, and logical thinking. Among the socioemotional changes adolescents undergo are a quest for independence, increased conflict with parents, and a desire to spend more time with peers.

The transition from adolescence to adulthood, which has recently been referred to as **emerging adulthood**, is determined by cultural standards and experiences; it has been described by five key characteristics:

- Identity exploration
- Instability
- Self-focused
- Feeling in-between
- The age of possibilities

Determining just when an individual becomes an adult is difficult. In the United States, the most widely recognized marker of entry into adulthood is holding a more or less permanent, full-time job. At some point in the late teens through the early twenties, individuals reach adulthood. In becoming an adult, they accept responsibility for themselves, become capable of making independent decisions, and gain financial independence from their parents.

Resilience refers to adapting positively and achieving successful outcomes in the face of significant risks and adverse circumstances. Currently, individuals are taking much longer to reach the developmental milestones of finishing college, obtaining a full-time job, and establishing their own household.

Three developmental issues that dominate investigations of human growth are:

- **Nature-nurture issue**—the influence of biological inheritance or environmental experience.

- **Continuity-discontinuity issue**—development as gradual, cumulative change, or distinct stages.
- **Early-later experience issue**—whether early or later experiences dominate development.

Debates about the influence of each stance have shifted from an either/or argument to one that discusses their relative impact on observable outcomes. The importance of these developmental issues will become clearer throughout the text.

Scientific knowledge depends on the rigorous implementation of the *scientific method* to conceptualize the problem, collect information, and draw conclusions. When formulating a problem to study, researchers draw on theories to develop **hypotheses**. A **theory** is a coherent set of ideas that helps to explain and predict behavior. Hypotheses are specific assumptions and predictions that can be tested. A theory of adolescent development can usually be attributed to one of four major fundamental schemes: psychoanalytic theory, cognitive theory, learning theory, or ecological, contextual theory.

Psychoanalytic theories emphasize the importance of emotion, unconscious mental processes, the symbolic meaning of behavior, and enduring effects of early experience on later development.

- Freud's theory articulates personality structure as the *id*, *ego*, and *superego*; *defense mechanisms* for resolving conflict; and characteristics of five *psychosexual stages*.
- **Erikson's theory** consists of *psychosocial stages*, explaining that both instincts and experience influence development, that each stage characterizes distinctly different crises, and that degree of resolution within each stage influences success in development.

Psychoanalytic theories recognize early experiences, family relationships, and the unconscious mind. Criticism includes lack of scientific foundation, sexual underpinnings, and negative image of humans.

Cognitive theory focuses on conscious operations that change during childhood and adolescence.

- **Piaget's theory** states that children and adolescents demonstrate qualitative change by systematically exploring and manipulating the environment to understand it. He described four stages of distinctly different thinking processes: *sensorimotor stage*, *preoperational stage*, *concrete operational stage*, and *formal operational stage*.
- **Vygotsky's theory** emphasizes how culture and social interaction guide cognitive development.
- **Information-processing theory** focuses on the development of cognitive ability, specifically language and thinking, by measuring storage, retrieval, and speed of processing.

Cognitive theories emphasize the individual's active role in understanding the environment. They are criticized for not explaining individual variations in either timing or content of thought processes.

Behavioral and social cognitive theories emphasize observable behavior and consequences.

- Skinner's theory of operant conditioning emphasizes environmental stimuli and learned consequences.
- Bandura's **social cognitive theory** considers behavior, environment, cognitive factors, observational learning, and personal consequences as key factors in learning.

Behavioral theories emphasize scientific research, environmental influences, and learning processes. Yet, they are criticized for not emphasizing cognitive processes or developmental changes.

Ecological theory examines environmental influence on child development.

- **Bronfenbrenner's ecological theory** proposes layers of environmental influence.

Ecological theory supports systematic assessments of interconnected, environmental systems in contemporary and historical contexts. Critics argue that there is inadequate consideration given to biology or cognition.

No single theory explains adolescent development. An **eclectic theoretical orientation**, using aspects of all four major theories, allows a complete narration.

Developmental theories and research methods serve complementary functions in the scientific explanation of adolescent development. Research methods involve numerous approaches for collecting and analyzing information.

- Observation may be completed in a controlled **laboratory** setting or in a **naturalistic observation** setting.
- Surveys and interviews sample information about personal feelings or private behavior.
- **Standardized tests** help researchers systematically compare the individual to a typical group.
- Physiological measures gauge hormones, body composition, and brain activity.
- The **experience sampling method (ESM)** uses electronic pagers to "beep" subjects at random times. Subjects report their behavior or situation at that time.
- **Case studies** are used to collect historical data to complete an in-depth investigation.

Basic research designs include the following:

- **Descriptive research**—Researchers use descriptive research methods to observe and record behavior.

- **Correlational research**—Researchers use correlational research to identify the relationship between two variables and to explain the relative importance of several variables in predicting the occurrence of others. The data are analyzed to yield a numerical measure called a **correlation coefficient**.
- **Experimental research**—Experimental research can explain how one variable affects another, such as instructional strategies affecting student learning.
- The **independent variable** is the variable that the experimenter manipulates directly in order to influence a **dependent variable(s)**, or a variable that is influenced by the independent variable.
- The *experimental group* is the group that gets the manipulation of the independent variable. The *control group* is treated the same as the experimental group except for the manipulation of the independent variable.

The *time span of research* is a special concern of developmentalists. The **cross-sectional research** design compares groups of individuals of different ages at the same point in time to identify developmental differences. The **longitudinal research** design identifies a group of adolescents and observes the same individuals at consistent time intervals to identify developmental changes.

Challenges to good research are numerous. Here are some important ones to consider:

- The American Psychological Association enforces a code of ethics to protect participants.
- **Gender bias** may influence the accuracy of the conclusions drawn about females and males.
- Ethnicity and culture often have not been accurately identified and their effects may be overlooked. **Ethnic gloss** (using an ethnic label in a superficial way that portrays an ethnic group as being more homogeneous than it really is) may play a factor.

Apparently, many things make adolescents tick. Santrock presents key topics throughout the text that clarify this answer. The information falls into the areas of (1) biological processes, (2) cognitive processes, (3) the contexts in which developmental tasks occur, (4) social and personality development (socioemotional processes), (5) problems and disorders adolescents encounter, (6) science that allows us to distinguish truth from fiction, and (7) critical thinking to put the information into a cohesive and usable package.

Total Teaching Package Outline

Chapter 1: Introduction

HEADING	RESOURCE
I. THE HISTORICAL PERSPECTIVE	Learning Goal: 1
Early History	Internet Activity: 1.1
The Twentieth and Twenty-First Centuries	Short Scenarios: 1.1

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<i>G. Stanley Hall's Storm-and-Stress View</i> <i>Margaret Mead's Sociocultural View of Adolescence</i> <i>The Inventionist View</i> <i>Further Changes in the Twentieth Century and the Twenty-First Century</i> 1950s to 1970s Millennials	Essay Questions: 1
Stereotyping of Adolescents	Research Project: 1.1; 1.2
A Positive View of Adolescence <i>Old Centuries and New Centuries</i> <i>Generational Perceptions and Misperceptions</i> <i>Positive Youth Development</i>	Lecture Topic: 1.1 Discussion Topic: 1.1
II. TODAY'S ADOLESCENTS IN THE UNITED STATES AND AROUND THE WORLD Adolescents in the United States <i>Social Contexts</i> <i>Social Policy and Adolescents' Development</i>	Learning Goal: 2 Critical-Thinking Exercise: 1.1 Research Articles: 1.1, 1.2 WWW: Administration for Children & Families newsroom; https://www.acf.hhs.gov/ Connecting with Careers: Gustavo Medrano, Clinical Psychologist Essay Question: 2
The Global Perspective	Connecting with Adolescents: Doly Akter, Improving the Lives of Adolescent Girls in the Slums of Bangladesh
III. THE NATURE OF DEVELOPMENT Processes and Periods <i>Biological, Cognitive, and Socioemotional Processes</i> <i>Periods of Development</i> Childhood Adolescence Adulthood	Learning Goal: 3 Figure : 1, 2 Essay Question: 3 Critical-Thinking Exercises: 1.1
Developmental Transitions <i>Childhood to Adolescence</i> <i>Adolescence to Adulthood</i> Emerging Adulthood Becoming an Adult Resilience The Changing Landscape of Emerging and Early Adulthood Is Adolescence Taking Too Long? A Longer Emerging Adulthood and Established Adulthood	Figure: 3 Short Scenarios: 1.1 Connecting with Emerging Adults: Chris Barnard Connecting with Health and Well-Being: Do Health and Well-Being Change in Emerging Adulthood?
Developmental Issues	Figure: 4

Nature and Nurture
Continuity and Discontinuity
Early and Later Experience
Evaluating the Developmental Issues

In-Class Activity: 1.1
 Short Scenarios: 1.1, 1.2
 Research Articles: 1.1, 1.2
 Essay Question: 4

IV. THE SCIENCE OF ADOLESCENT DEVELOPMENT Science and the Scientific Method

Learning Goal: 4
 Lecture Topic: 1.2
 Discussion Topic: 1.2
 In-Class Activity: 1.4
 Internet Activity: 1.2

Theories of Adolescent Development
Psychoanalytic Theories
 Freud's Theory
 Erikson's Psychosocial Theory
 Evaluating Psychoanalytic
 Theories
Cognitive Theories
 Piaget's Cognitive
 Developmental Theory
 Vygotsky's Sociocultural
 Cognitive Theory
 Information-Processing Theory
 Evaluating Cognitive Theories
Behavioral and Social Cognitive Theories
 Skinner's Operant
 Conditioning
 Bandura's Social Cognitive
 Theory
 Evaluating Behavioral and
 Social Cognitive Theories
Ecological Theory
 An Eclectic Theoretical Orientation

Figure: 5, 6, 7, 8, 9
 Critical-Thinking Exercise: 1.2
 Essay Question: 5; 6; 7; 8; 9
 Critical-Thinking Exercise: 1.3
 Short Scenario: 1.3; 1.4
 Research Article: 1.3
 In-Class Activity: 1.2

Research in Adolescent Development
Methods for Collecting Data
 Observation
 Survey and Interview
 Standardized Test
 Physiological Measures
 Experience Sampling
 Case Study
 Descriptive Research
 Correlational Research
 Experimental Research
Time Span of Research
 Cross-Sectional Research
 Longitudinal Research
Conducting Ethical Research
Minimizing Bias
 Gender Bias
 Cultural and Ethnic Bias

Figure: 11, 12, 13, 14
 Lecture Topic: 1.3; 1.4
 Discussion Topic: 1.3
 Research Project: 1.3
 Essay Question: 11; 12
 Internet Activity: 1.3
 Connecting with Careers: Pamela Trotman
 Reid, Educational and Developmental Psychologist

LEARNING GOALS

1. Describe historical perspectives on adolescence.
2. Discuss the experiences of adolescents in the United States and around the world.
3. Summarize the developmental processes, periods, transitions, and issues related to adolescence.
4. Characterize the science of adolescent development.

SUGGESTED LECTURE TOPICS

Topic 1.1—Positive Youth Development

Reed Larson supports the argument that initiative is necessary for agency and for independent action by adults. As a core element of positive development, adolescents must acquire the ability to demonstrate initiative. Our culture does not offer a systematic means of establishing initiative, as it does not present a clear path from the dependence of childhood to the autonomy of adulthood. Larson suggests that two mechanisms might be used to encourage initiative: (1) adult models that motivate positive development through enticing images of adulthood and (2) adolescent experiences that support the development of competence and the use of initiative.

Larson proposes that initiative stems from intrinsic motivation, involves application in the complexities of daily life, and occurs across time. Adolescents require sophisticated environments offering suitable daily experiences to develop it. Schools typically have environments that elicit high levels of concentration and challenge but low levels of initiative. Leisure activities, such as watching TV or hanging out with friends, promote higher levels of intrinsic motivation and easier concentration than academic work but offer little challenge. Furthermore, neither TV nor peers present the realities of daily life. Thus, academic and leisure contexts in which adolescents spend most of their time do not provide the opportunities adolescents require to establish initiative. Students report that during participation in sports, arts, hobbies, and organizations, they experience both high levels of intrinsic motivation and concentration. The complex nature of experiences that elicit motivation and attention are characterized by statements such as, “You change, you forget everything around you” (p. 174).

Research documents that organized youth activities support the development of sophisticated cognitive and social responses. For example, Markstrom, Li, Blackshire, and Wilfong (2005) found that high school students who were involved in sports, student government, or volunteerism benefited developmentally in terms of ego strength. Similarly, Morrissey and Werner-Wilson (2005) investigated the role of the community and family in positive youth development. Communities that have opportunities available for adolescents and adolescents’ attitudes toward

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their community and family were predictive of activity involvement. According to Larson, adolescents must employ initiative to succeed at tasks such as selling cookies in Girl Scouts, completing an adventure in Outward Bound, or engaging in civic activities. Successful programs incorporate four characteristics. First, adult participation and guidance are essential to originate groups, but adults facilitate initiative by participants, they do not take it themselves. Second, organizational activities take place in real-world environments. Third, each group supports a variety of activities over time. Participants demonstrate changes in language use and structure that suggest marked changes in their ability to think about cause-and-effect relationships, to get clarification from others, and to adapt their language to the requirements of outside people and circumstances. Larson concludes that voluntary youth activities are an essential component of adolescence leading to personal initiative and positive youth development.

References

- Larson, R.W. (2000). Toward a psychology of positive youth development. *American Psychologist*, 55, 170–183.
- Markstrom, C.A., Li, X., Blackshire, S.L., & Wilfong, J.J. (2005). Ego strength development of adolescents in adult-sponsored structured activities. *Journal of Youth & Adolescence*, 34(2), 85–95.
- Morrissey, K.M., & Werner-Wilson, R.J. (2005). The relationship between out-of-school activities and positive youth development: An investigation of the influences of communities and families. *Adolescence*, 40(157), 67–85.

Topic 1.2—Quantitative Versus Qualitative Development

Explanations of developmental theories depend on clarifications that help the student distinguish one from another. The terms *qualitative* and *quantitative* are often incorporated into discussions of continuity and discontinuity and are useful in explaining differences between cognitive theories such as Piagetian stages or information-processing approaches. As straightforward as the terms *quantity* and *quality* seem to be, identifying adolescent descriptions that may be assigned to each category appears to be a perplexing task for students.

Begin the exercise by discussing items with which they may be more familiar and interested. *Consumer Reports* regularly provides product evaluations that include both quantitative and qualitative measures. For example, coffee may be described in the following ways:

Quantitative Analysis of Coffee	Qualitative Analysis of Coffee
- the altitude at which the coffee grows - the hardness of the bean (temperature and insect tolerance) - the amount of caffeine the beans	- dark roast notes - floral or fruity notes - cereal or cooked notes

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contain	
- the country in which the bean grows - the type of beans in a blended coffee	- mellow or full bodied - pungent flavor or smokiness

Beer or champagne may be discussed similarly. Finally, discuss the quantitative and qualitative aspects of adolescent development.

Quantitative Measures of Adolescents	Qualitative Measures of Adolescence
- age, height, weight, or brain size - short- and long-term memory recall - number of words in vocabulary - frequency of Internet usage - occurrence of social contact - duration of television viewing	- mental processes - problem-solving style - imagination - libidinal energy - intimacy - identity

At the conclusion of this discussion, remind students that developmental continuity is based on incremental progress that we identify *quantitatively*. Distinct differences in behavior characterized within each stage of development or *discontinuity* are explained in qualitative measures.

References

- “Cheers!” *Consumer Reports*, 64(11), November 1999, 18–21.
- “Which Beer for You?” *Consumer Reports*, 66(8), August 2001, 10–16.
- “Which Brew for You?” *Consumer Reports*, 65(1), January 2000, 29–33.

Topic 1.3—Basic Versus Applied Research Studies

Two purposes may be served by addressing conflicts between basic and applied researchers in adolescent development. First, students often appear skeptical about research in general, and particularly when it supports expected conclusions (for example, the conclusions were obvious) or when the conclusions contradict strong personal beliefs (for example, the sample was not well chosen). Unfortunately, many people view research as a waste of taxpayers’ money, demanding that legislators require federally funded agencies to obtain quantifiable outcomes to justify funding. Second, students may benefit from information about this area as a potential career option. Some will find that basic research fits their level of curiosity, whereas others will want to investigate strategies to solve the problems they see in their own communities.

Edward Zigler (1998) discussed the long-standing arguments on both sides. Over the past 20 years, people have discussed the applicability of research more than during the previous 50 years.

The trend has brought developmental psychology full circle, back to the belief that knowledge should benefit children. Zigler (1998) explained that G. Stanley Hall began to study children because at least six constituencies needed the information: “scientists, college administrators, child savers and social workers, mental health workers, teachers, and parents” (p. 533). Hall regretted that research was becoming too technical and inaccessible to those working with children, that a stigma was placed on the discussion of applied work, and that a pronounced schism existed between researchers and providers.

The conflict between proponents of basic versus applied research suggests the following important questions:

- What are the purposes and limitations of research investigations?
- What are the implicit and explicit outcomes from basic and applied research?
- What are reasonable expectations for short- and long-term benefits of each?
- What are acceptable limitations of individual investigations?
- How can a balance be struck between complementary strategies and topics?

Basic and applied research proceeds with different visions but ultimately serves the same purpose. Scientists conducting basic research maintain a limited focus and remain unconcerned with long-term benefits, seeking knowledge in the purest sense. Applied researchers attempt to use information gained through basic research to solve specific problems to benefit constituents. Applied research can hardly exist without basic research. Nevertheless, basic research, until more recently, has tried to avoid the stigma of applied sciences. Consumer groups have pressured federally funded researchers to modify that scenario (Matthews, 1997). As research becomes more complicated, it becomes increasingly important to find financial resources from the federal government and large companies. Will it be possible to continue to conduct necessary basic research or even valid research with the underlying influence of funding bodies?

References

- Matthews, A. (1997). *Bright college years: Inside the American campus today*. Simon & Schuster.
- Zigler, E. (1998). A place of value for applied and policy studies. *Child Development*, 69(2), 532–542.

Topic 1.4—Schaie’s Most Efficient Sequential Design

Quasi-experimental designs are like other research designs with the exception of one element—random assignment of participants. Time span developmental research deviates from true experiments as the selection and assignment of subjects is based on their age. As a result, questions arise about the validity of the results, particularly the external validity that allows us to accurately

determine the relationship between age and behavior. Schaie and Willis (2002) describe four research designs to overcome the confounds associated with developmental research.

- Cross-sectional designs compare groups of individuals of diverse ages or cohort groups by measuring age-based distinctions; advantages are low cost and time; the point of confusion or *confound* is between age and cohort differences or generational effects.
- Longitudinal designs measure changes in the same people across two or more times; the advantage is control for age and cohort effects; disadvantages are cost and subject dropout due to death, moving, or refusing to participate; the *confound* is between age and time-of-measurement effects (for example, practice effects and social-historical events).
- Time-lag designs measure people in different cohort groups at the same age, but obviously at different times, to assess historical influences on cohorts; the *confound* is time of measurement.
- Sequential designs repeat the measurement of two or more groups of participants on repeated occasions; Schaie's design embeds the cross-sectional and longitudinal sequential designs:
 - The cross-sectional sequence is accomplished by measuring independent groups of individuals within a specified range two or more times, thus functionally combining the cross-sectional and time-lag designs.
 - The longitudinal sequence entails two or more longitudinal studies, requiring at least two cohort groups, thus functionally combining the longitudinal and time-lag design.
 - Numerous strategies for analysis include the *cohort-sequential analysis*, the *cross-sequential analysis*, and the *time-sequential analysis*.

Developmental psychologists accept the challenge to identify and clarify characteristics of children and adolescents with quasi-experimental research. The cross-sectional design is more likely to be accurate with younger subjects than with adults due to shorter time spans of investigation. Remarkable differences may be identified, however, in cognitive and social-emotional development because of changes in the educational curriculum, **social policy**, or historical events. Thus, sequential designs are likely to be necessary in fewer areas of research than with adults but are valuable, nonetheless.

Reference

Schaie, K.W., & Willis, S.L. (2002). *Adult development and aging* (5th ed.). Prentice Hall.

CLASSROOM DISCUSSIONS AND ACTIVITIES

Discussion

Topics

Discussion 1.1—A First Time for Everything

As discussed throughout the text, theorists from a wide variety of research perspectives have scientifically examined the phenomenon of adolescence. Siegel and Shaughnessy (1995) argue that theorists have identified only the tip of the iceberg in relation to the emotional upheaval that occurs during adolescence. Adolescence is a time when many things happen for the first time: the first crush, dance, date, kiss, job, and the first love. The authors argue that the newly experienced cognitive growth enhances the emotional experience, and the combined new experiences easily overwhelm an adolescent.

As a result of the enhanced salience of adolescence, exaggerated perceptions lead adolescents to place a great deal of emphasis on a few key aspects of their lives. Friendships are a critical component of the emotional stability of adolescence. Heightened emotions foster an unrealistic perspective of time, with adolescents believing that they will continue to experience the same strong beliefs indefinitely. As friendships become exceedingly rewarding, and as personal experiences are shared with others bearing the same degree of conviction, rejection from peer groups seems to have an equally intense but opposite effect. Inconsistent care and love from parents followed by an inability to establish friendships with peers may result in an overwhelming sense of loss. Impulsiveness and feelings of invincibility often result in risk-taking in matters of love and premarital sex, extreme problem-solving strategies such as suicidal ideation, and anguish over everyday situations. The stress associated with “firsts” appears to others as excessive. It is important to recognize the magnificent importance of each experience.

Reference

Siegel, J., & Shaughnessy, M.F. (1995). There's a first time for everything: Understanding adolescence. *Adolescence*, 30(117), 217–221.

Discussion 1.2—Supporting Research with a Theoretical Foundation

After summarizing the theories presented in Chapter 1, ask students to identify issues of interest in adolescent development (for example, sports, peer groups, drinking, sex education, eating disorders, or moral development). You will need to categorize the issues into topic areas for the students as they make suggestions. Try to organize the issues as they appear in the text (by chapter) or according to the theoretical orientation most likely to be used to investigate the topics. Discuss the categories students have chosen and the appropriateness of one or two theories over others in facilitating lines of research for each issue. Describe the usefulness of the scientific research approach in conceptualizing the problem, guiding data collection, analyzing the data and drawing

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conclusions, and finally, revising previous conclusions and theories. If time and interest permit, continue the discussion by identifying specific research strategies one might follow to complete data collection and analysis through systematic and valid observations, correlational or experimental methods, multiple measures, and group, single-subject, cross-sectional, and/or longitudinal designs.

Discussion 1.3—Research Designs in Developmental Investigations

Discuss the issue of quasi-experimental research in developmental psychology. It is not possible to randomly assign adolescents to groups if the purpose is to identify the age-based characteristics of those groups. As a result, the combined use of cross-sectional methods that identify age differences and longitudinal methods that identify age change are important design strategies. Present the cross-sectional and longitudinal strategies of data collection. List some developmental topics in which adolescents are likely to demonstrate marked differences between ages 11 and 19. Examples of issues for which a great deal of change may be identified are peer affiliations, choice of leisure activities, hours of work, substance use, and sleep or study habits. Discuss what one might observe in a cross-sectional analysis versus a longitudinal analysis of those behaviors. Think also about characteristics that might be influenced by time-of-measurement effects (for example, collecting data in the spring versus the fall) and cohort membership. Determine the strengths and weaknesses of each approach for accurately identifying developmental patterns. For example, if one were to collect information about adolescents' television viewing habits and time spent with peers, a cross-sectional analysis could reveal marked differences between age groups. The time of year—spring, summer, fall, or winter—might influence these behaviors as well. Thus, it is important to determine whether results accurately reflect differences and age change or cohort differences and artifacts of time of measurement. Present the sequential design approach as a solution for the weaknesses of the other two alone. Discuss Schaie's chapter on sequential design.

References

- Pinon, M.F., Huston, A.C., & Wright, J.C. (1989). Family ecology and child characteristics that predict young children's educational television viewing. *Child Development*, 60(4), 846–856.
- Schaie, K.W. (1994). Developmental designs revisited. In S.H. Cohen & H.W. Reese (Eds.), *Life-span developmental psychology: Methodological contributions* (pp. 45–64). Erlbaum.

Discussion 1.4—A Comparison of Correlational and Experimental Research Designs

Students often find it difficult to discern the differences between experimental and correlational research designs. It may help to reduce their confusion by having a discussion in which you ask students how to apply each strategy to answer a specific question.

Begin the lecture by asking the class to figure out how they would determine whether exposure to violence on television (including streaming) is related to aggressive behavior in adolescents. Suggest to them that there are two or three ways to answer this question and indicate that you want them to think of more than one way. Solicit solutions.

Once you have an example, ask the class to categorize it. If the solution is a correlational research design, see if the class knows how to use a correlation coefficient in the solution. Note that doing so may not be appropriate, even though the design is essentially correlational. For example, the class may have suggested that a comparison be made between groups of teenagers who watch much violence on television and those who do not. Discuss the kinds of between-group comparisons that are appropriate in this case. Also be careful to discover whether people who offer this solution believe that they are suggesting an experiment and gently correct them if they are!

If the solution is an experiment, have the individual or individuals who propose it explore their solution. For example, have them identify independent, dependent, and control variables. Get them to discuss and classify their measures and to indicate how they will assign participants to conditions. Then discuss the ethical implications.

The effects of television viewing on children and adolescents continue to be a heavily researched topic. You should be able to supplement class discussion with media material as well as a wealth of information from the literature. You may want to review the references listed here that describe experimental and correlational investigations and their results on this topic.

References

- Paik, H., & Comstock, G. (1994). The effects of television violence on antisocial behavior: A meta-analysis. *Communication Research*, 21(4), 516–546.
- Zillmann, D., Bryant, J., & Huston, A.C. (Eds.). (1994). *Media, children, and the family: Social scientific, psychodynamic, and clinical perspectives*. Erlbaum.

In-Class Activities

Activity 1.1—Investigating Class Members' Beliefs About Major Developmental Issues

It is often assumed that the developmental issues related to (a) nature and nurture, (b) continuity and discontinuity, and (c) early and later experience are “intuitively obvious” and that students quickly grasp the concepts. The following exercise encourages students to systematically identify personal experiences that exemplify the relative impact of each perspective. The class data set may also be used to demonstrate some simple statistical analyses.

The purpose of this project is (a) to have students think about their own experience in order to clarify the influence of family and community experience versus heredity on their own

development and (b) to have students develop a hypothesis about the influence of each developmental issue.

In class, provide an overview of the three developmental issues explained in *Adolescence*. Discuss that there is still disagreement about the relative impact of each perspective in spite of the information that we have from behavioral genetics research. Ask what questions students might formulate to determine which aspects of development are more influential for young adults. Show them the initial questions on the following questionnaire to exemplify the types of questions that they might ask. Then have students contribute, discuss, and choose questions they would like to include on the questionnaire. The following questionnaire suggests a format that may be followed to complete the demonstration. Note: This project is not intended to investigate students' understanding of the research literature but to clarify their beliefs based on personal experience and information.

QUESTIONNAIRE

Beliefs About Childhood and Adolescent Experience

The information from this survey will be used for this class as a demonstration and for no other purpose. The data will be gathered and analyzed for two reasons: (1) to provide a real set of data for statistical analysis and (2) to assess assumptions about three developmental issues—nature-nurture, continuity-discontinuity, and early-later experiences. The hypothesis, personal experiences of class members are reflected in beliefs about the influence of nature-nurture, continuity-discontinuity, and early-later experiences. Your name is not requested, and questionnaires will not be coded or numbered.

Demographic Information

Gender: Male ____ Female ____ Age: ____

Number of college credits completed: ____ Parents' Occupations:

Population of town where you attended high school: ____ Mother's

Number of bedrooms in your family home: ____ Father's

Questions About Your Experience During Puberty

For women only: Age at first menstruation ____

For men only: Adolescent age at most noticeable voice change ____

For both genders: Age at which you went through the adolescent "growth spurt" ____

What age do you think is normal for going through puberty: For girls? ____ For boys? ____

Was your own puberty:

____ much earlier than your peers

____ somewhat earlier than your peers

____ about the same as your peers
some good times

____ somewhat later than your peers

____ much later than your peers

Do you remember your adolescence as:

____ a very stressful time psychologically

____ somewhat negative, but not entirely so

____ both good and bad; some difficult times and

____ usually positive

____ a very happy time

Questions About the Influence of Heredity Versus Experience

If you were to conduct a research survey to find out how adolescents feel about these issues in their own lives, what questions would you ask? (Students supply questions.)

Examples:

What is your height in relation to your same-sex parent?

Much taller		No Difference/Very similar		Much shorter
2	1	0	-1	-2

Did heredity or experience influence your childhood and adolescent development?

- ☐ Heredity was much more influential than environment.
- ☐ Environment was somewhat more influential than heredity.
- ☐ Heredity was somewhat more influential than environment.
- ☐ Environment was much more influential than heredity.
- ☐ Heredity and environment were equally influential.

Questions About Continuity Versus Discontinuity in Childhood and Adolescent Development

If you were to conduct a research survey to find out how adolescents feel about these issues in their own lives, what questions would you ask? (Students supply.)

Examples:

Was the community in which you grew up economically stable throughout your childhood and adolescence?

Very stable		\$ ups and downs		Very unpredictable
2	1	0	-1	-2

Did continuity or discontinuity influence your childhood and adolescent development?

- ☐ Continuity was much more influential than discontinuity.
- ☐ Discontinuity was somewhat more influential than continuity.
- ☐ Continuity was somewhat more influential than discontinuity.
- ☐ Discontinuity was much more influential than continuity.
- ☐ Continuity and discontinuity were equally influential.

Questions About Early Versus Later Experience

If you were to conduct a research survey to find out how adolescents feel about these issues in their own lives, what questions would you ask? (Students supply questions.)

Examples:

Did reading with a parent when you were young have an influence on your interests?

Very influential		Somewhat influential		Not influential
2	1	0	-1	-2

Did early or later experience influence your adolescent development?

- ☐ Early experience was much more influential than later experience.
- ☐ Early experience was somewhat more influential than later experience.
- ☐ Early and later experiences were equally influential.
- ☐ Later experience was somewhat more influential than early experience.
- ☐ Later experience was much more influential than early experience.

Activity 1.2—Key Terms and Developmental Issues Reflected in Theories

This project introduces the various theoretical perspectives discussed in Chapter 1 and allows students to realize how much of the material they already know. On a board or overhead, list each of the following perspectives and distinguishing characteristics of the theories across the top. Ask students to indicate where each theorist or theory stands on each of the perspectives and characteristics. You may use fewer, or modify labels, to fit your preferences, leaving room below each to add comments.

Then have students suggest terms, ideas, and “great psychologists” associated with each. With life-span developmental psychology, there are many choices of theorists and many choices for distinguishing characteristics. Other characteristics that could be used to discriminate between the theories include nature-nurture, continuity-discontinuity, stability-change, determinism (yes or no), critical periods (yes or no), and the role of the participant (active or passive). Students find the activity difficult; however, answers to essay questions about the theories show that they seem to learn a lot from the exercise. Depending on the amount of time available, the class can be divided into groups; each group given one or two theorists, then share the answers. If there is a limited amount of time, use a lecture/discussion format that encourages interaction but moves the discussion along. By the end of the exercise, they will be able to see some similarities and dissimilarities for each group. Here is an example of this exercise from one class.

- *Psychoanalytic*: Freud, Jung, Adler, Horney, Erikson, id, ego, superego, sex, early childhood, psychosexual stages, “mom’s fault,” unconscious, defense mechanisms, dreams, Oedipal complex, birth order, sibling rivalry, inferiority, libido, nature, discontinuity, stability.
- *Behavioral*: Watson, Skinner, Bandura, Pavlov, behavior modification, reinforcement, extinction, shaping, fading, imitation, operant conditioning, modeling, intermittent reinforcement, token economy, classical conditioning, unconditioned stimulus and response, conditioned stimulus and response, systematic desensitization, mechanistic, nurture, continuity.
- *Cognitive*: Piaget, Ellis, memory, information processing, Binet, Terman, intelligence tests, accommodation, assimilation, language, development, moral development, Kohlberg, gender development.
- *Ecological*: Bronfenbrenner, elder, environment, culture, ethnicity, nurture, continuity.

Students’ ability to offer suggestions will depend on how many psychology courses they have had previous to this course. As an instructor, you will learn which theoretical perspectives need the most class coverage, what misconceptions the students have, and what strengths they have coming into the course.

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Irwin, D.B., & Simons, J.A. (1984). *Theoretical perspectives class activity*. Des Moines Area Community College.

Activity 1.3—A Sampling Experiment Using M&M's

This exercise will give students hands-on experience with a manageable sampling problem. Students may have counted a packaged product such as animal crackers or multicolored candy such as M&M's in their youth. This activity will take childhood sampling experiences a few steps further to demonstrate how size of sample influences bias and to demonstrate that there is a way to determine whether or not a sample is biased—by tallying the frequency and calculating the percentages of the entire group of items.

Begin by distributing one small fun-size package of plain M&M's to each student from one or more large sacks of smaller packages. Each fun-size package represents a sample of the larger sack(s) of samples. Ask students to establish the frequency distribution of the M&M's colors in the fun-size package using paper and pencil to record their findings. Have students calculate the percentages of occurrence of each of the colors based on the raw data within their own sample. Then have students make predictions about the total population based on their data and percentages.

After students have advanced a hypothesis about the total population based on their own sample, have students work in pairs. They should combine their population data and generate a new joint hypothesis about the distribution of the M&M's colors. Finally, have the entire class pool their data to determine the distribution of colors from the total population available in the classroom.

How well did the samples predict the results from the entire population? If time permits, repeat the experiment using regular individual size or larger packages of M&M's. Compare the accuracy of larger sample sizes to the smaller ones.

References

- Smith, R.A. (1999). A tasty sample(r): Teaching about sampling using M&M's. In L.T. Benjamin, B.F. Nodine, R.M. Ernst, & C.B. Broeker (Eds.). *Activities handbook for the teaching of psychology* (vol. 4, pp. 66–68). American Psychological Association.
- Wicklin, R. (2017, February 20). The distribution of colors for plain M&M candies. SAS. <https://blogs.sas.com/content/iml/2017/02/20/proportion-of-colors-mandms.html>

Activity 1.4—Demonstrating the Scientific Method with “Telepathy”

Douglas Bernstein, professor emeritus of the University of South Florida, uses a “telepathy” activity to demonstrate the principles of conducting research. To conduct this activity all you need is a clean wastebasket or bucket, a pad of paper, and a pen. While standing in front of the class with paper and pen in hand, ask the students to name some European cities. Eventually someone will say “Paris.” As the students call out cities, act as if you are writing the name of each city on a piece of paper, wadding the paper up, and throwing it in the wastebasket. What you are actually doing is writing “Paris” on every slip of paper. Once you have a bucket full of paper, ask a student to choose one of the pieces of paper from the bucket, open the paper and concentrate on the city printed on the paper. Act as if you are trying to read the student’s mind and after a minute call out “Paris.”

Although the students will think you have telepathy, tell them you really just did a simple magic trick and you want them to figure out how you did it. Students will suggest possible solutions, hypotheses. List the hypotheses on the board and ask students how they would go about testing these hypotheses. As they come up with ways to test their hypotheses, you can discuss other concepts such as independent and dependent variables.

Although the students will want to know how you did your trick, don’t tell them. If you do tell them, you won’t be able to use this trick in future classes. Bernstein suggests telling the students that some of their hypotheses came close, “However, scientists never know for sure when they have found the truth; they can only eliminate plausible alternative hypotheses and reach a conclusion with a statistically significant, but not absolutely certain, likelihood of being correct.”

Reference

Bernstein, D.A. (2002). Sharing ideas on the teaching of psychology. Presented at the National Institute on the Teaching of Psychology (NITOP), St. Petersburg, Florida.

Critical-Thinking Exercises

Exercise 1.1—Today’s Adolescents in the United States and Around the World

The section “Today’s Adolescents in the United States and Around the World” describes the status of adolescents. This section of the chapter reflects a larger emphasis on one of the following determinants of development than on the others. Which one is it? Circle the letter of the best answer, explain why it is the best answer, and explain why each of the other answers is not as appropriate.

- A. cognitive processes
- B. nurture
- C. maturation
- D. discontinuity
- E. change

Exercise 1.2—Theories of Adolescent Development

Several theoretical perspectives that explain strategies for investigating adolescent development are presented. The author of the following quote was most likely a proponent of which of the following perspectives?

“The psychological development of children in the family is affected not only by what happens in the other environments in which children spend their time, but also by what occurs in the other settings in which their parents live their lives, especially in a place that children seldom enter—the parents’ world of work. Another domain to which children tend to have limited access is the parent’s circle of friends and acquaintances—their social network.” Circle the letter of the best answer, explain why it is the best answer, and why each of the other answers is not as appropriate.

- A. cognitive
- B. behavioral
- C. eclectic
- D. psychoanalytic
- E. ecological

Exercise 1.3—Jess and His Teachers

Read the following passage about Jess and his teachers. Which of the following statements is most likely to have been Graubard and Rosenberg’s assumption about difficult students rather than an inference or an observation? Circle the letter of the best answer, explain why it is the best answer, and why each of the other answers is not as appropriate.

Jess and His Teachers

Jess is an eighth grader at a junior high school in California. At 14 years of age, he already weighs 185 pounds. He is the school’s best athlete, but he used to get a thrill out of fighting. Jess knocked out several fellow students and once hit the principal with a stick, resulting in a 40-day school suspension.

Jess’s teachers unanimously agreed that he was an impossible case. But 1 week later, they began to notice a complete turnabout in Jess’s behavior. His math teacher was the first to notice the unusual but improved behavior. Jess looked at her one day and said, “When you are nice, you help me learn a lot.” The teacher was shocked. Confused, she finally smiled. Jess continued, “I feel really good when you praise me.” Jess continued to consistently praise teachers, came to class early, or stayed after class to chat.

What was responsible for Jess’s turnabout? Some teachers said he attended a mysterious class every day that might provide some clues to his behavior change. In that

“mysterious” class, a teacher was training students in behavior modification, which emphasizes that behavior is determined by its consequences. Those consequences weaken some behaviors and strengthen others.

In an experiment, Paul Graubard and Henry Rosenberg (1974) selected seven of the most incorrigible students at a junior high school—Jess was one of them—and had a teacher give them instruction and practice in behavior modification in a 43-minute class period each day. The students were taught numerous pleasant responses to use to increase teachers’ positive attention. Pleasant responses included eye contact, smiling, sitting up straight, and being attentive. They also practiced praising their teachers, saying such things as, “I like working in this class where there is a good teacher.” And they worked on ways to discourage certain teacher behaviors by saying, “I just have a rough time working well when you get mad at me.” Jess had the hardest time learning how to smile. He was shown a videotape of his behavior and observed that he actually leered at people when he was told to smile. Although it was somewhat hilarious, Jess practiced in front of a camera until he eventually developed a charming smile.

Observations indicated that teacher-student interchanges were becoming much more positive during the 5-week behavior-change program for students. Informal observations and comments after the program ended suggested that positive student-teacher interchanges were continuing. But what happened in the end? In the case of this experiment, we do not know.

Circle the letter of the best answer, explain why it is the best answer, and why each of the other answers is not as appropriate.

- A. Difficult students’ behavior was not caused entirely by disturbed personalities or mental abnormalities.
- B. The reactions of teachers reinforced the disruptive or harmful behavior of difficult students.
- C. Students exerted control over their teachers’ behavior by giving them positive and negative feedback.
- D. Students changed the way that they interacted with their teachers.
- E. The improved interaction between students and teachers continued for at least a while after the students finished their behavior modification class.

Exercise 1.4—Methods for Collecting Data

The text describes six approaches for measuring adolescent behavior and then characterizes the nature of each. Listed below are measurement approaches paired with brief procedural descriptions. Which measurement approach/procedural description pair is correct? Circle the letter

of the best answer, explain why it is the best answer, and why each of the other answers is not as appropriate.

- A. Observation: Adolescents reported the degree of stress they experienced during the previous week.
- B. Interview and surveys: Researchers collected data about mother-son and father-son interaction during 20-minute sessions.
- C. Standardized tests: The investigator gathered educational and medical records, reports from the psychologist and family service center, and conducted interviews with parents and teachers.
- D. Physiological measures: Neural responses were measured during conditions of changing stimuli.
- E. Experience sampling: Electronic pagers were used to relay instructions to study participants.
- F. Case studies: Performance was assessed using nonverbal ability subtests, and scores were compared to a sample that included representative percentages of majority and minority students.

Answer Key for Critical-Thinking Exercises

Exercise 1.1

- A. *Cognitive processes* are not the best answer. If this were so, the issues the text raised would have concerned how changes in thought, intelligence, or language influence the lives of adolescents or the quality of an adolescent's adaptation to the environment. But the contemporary concerns—status, idealized images, sociocultural contexts, and social policies—are aspects of the adolescent's environment and how they potentially influence adolescent development.
- B. *Nurture* is the best answer. As indicated in “A,” the focus of the contemporary concerns is adolescents' environments and how they affect adolescents. These are explicitly discussed in the text as examples of the “nurture” side of the nature-nurture controversy.
- C. *Maturation* is not the best answer. Maturation refers to genetic and biological developmental influences on behavior. This would entail a focus on heredity and, perhaps, genetic engineering as a means of enhancing child development outcomes. Instead, the focus is on improving adolescents' environments to enhance developmental outcomes.
- D. *Discontinuity* is not the best answer. If this were the concern, much would be said about the value of describing adolescent development as stages or about developing the notion of adolescence as a distinct stage from adulthood. This is not the sense of the contemporary focus at all.
- E. *Change* is not the best answer. If it were, the issue would be that patterns of behavior expressed early in an adolescent's life are not especially predictive of later developmental

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outcomes. Again, the emphasis is on environmental conditions that promote optimal developmental outcomes.

Exercise 1.2

- A. *Cognitive* is not the best answer. The main reasons are: (a) the speaker is mainly interested in children and families, whereas cognitivists typically (though not exclusively) are interested in individual people, combined with (b) a focus on observing behavior. Cognitivists are interested in making inferences about the mind and studying conscious mental activity.
- B. *Behavioral* is not the best answer. The speaker indicates an interest in the system that influences the child. Behavioral theory focuses first on the study of behavior, and second, on environmental conditions that influence behavior. This parallels the development of Skinner's behaviorism.
- C. *Eclectic* is not the best answer. This researcher focused on the immediate and extended context that influences the child, not mentioning any interest in alternative behavior or strategies for studying it. This focus does not indicate that he believes all established approaches have something to contribute to his understanding of psychology.
- D. *Psychoanalytic* is not the best answer. Psychoanalysts are interested in people and the inner workings of their thoughts. They also do not typically look beyond the immediate family to find things out, preferring instead various forms of clinical interviews or clinical devices for revealing the nature of personality and personality function.
- E. *Ecological* is the best answer. Bronfenbrenner's ecological theory is based on an analysis of systems of human behavior. This statement is from Bronfenbrenner (1986, cited in Allison & others, 1999).

Exercise 1.3

- A. This answer is the best because it is an assumption. This appears to be a key belief of the researchers who worked with students like Jess. If they had not believed this, they would not have focused on specific behaviors that students could change which, in turn, might change the way teachers treated them. The statement is not made explicitly in the inset, nor does it seem to be a conclusion of the research, nor is it an observation.
- B. This is not the best answer because it is an inference based on the following reasoning: The article demonstrated that a change in the students' behavior produced a change in the teachers' behavior and that, in fact, the changes reinforced each other's. The suggestion is that in "normal" day-to-day interactions the specific patterns of behavior that people demonstrate toward others reinforces and maintains each other. For example, the students report things like "I have a rough time working well when you get mad at me." In order to bring about behavioral change, one has to intervene in this self-maintaining pattern.
- C. This is not the best answer because it is an inference or a conclusion that one might derive from the research. The teachers' behavior changed when the students changed their own

behavior. Because no other factors appear to have generated this change, the inference is that what the students did actually caused the change (controlled it).

- D. This is not the best answer because it is an observation. This is a “fact”—something deliberately done and directly observable. A teacher/trainer taught students to smile, make pleasant comments, and so on. Students’ teachers in other classes then noticed these changed behaviors.
- E. This is not the best answer because it is an observation. Teachers reported after the study that they continued to see pleasant interactions between the so-called problem students and their teachers.

Exercise 1.4

- A. This is not the best answer. The procedure describes an interview or questionnaire approach to getting information about adolescent feelings.
- B. This is not the best answer. Researchers collect interaction data not only through direct observation, usually in real-world settings, but also in contrived laboratory environments.
- C. This is not the best answer. The process of completing an in-depth look at an individual includes gathering historical information through interviews, getting a medical or clinical history from the individual or parent, and reviewing standardized assessment information that may be available.
- D. This is the best answer. Emotional responses can be measured through MRI, a physiological measure of neurological function.
- E. This is not the best answer. Use of the pager is for soliciting feedback from participants, not to relay instructions.
- F. This is not the best answer. The procedure describes a standardized test for performance skill and comparison of the results to the normal curve.

Short Scenarios

Scenario 1.1

Dave and his friends are hanging out at the pizza shop—the only one in town. They are discussing their futures. They must choose to go to college or fight in the war. Neither choice is pleasing to most of them, but a student deferment is the only way to avoid being drafted—that or run away to Canada. Their parents manage the family farms. Dave thinks it is an interesting conundrum. They are old enough to go to war but not old enough to vote, drink, or manage a business. The conversation drifts to recent new episodes of *Andy Griffith*, *The Beverly Hillbillies*, and *Green Acres*. Finally, the group disperses as one of the guys goes to his job at the gas station and another jumps in his dad’s truck to drive the 10 miles home to do chores. Dave heads back to school to check the schedule for science lab cleanup and then goes home to work on his physics assignment.

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Dave thinks about the other guys' reluctance to go to college. Since grade school, Dave has planned to attend medical school. Although his parents would like him to stay at home and run the farm, he has absolutely no interest in that option. If Dave's dad had received a well-rounded education, read more books when he was younger, or even had exposure to other ideas through television, he might understand Dave's perspective. Fortunately, his mother recognizes his interest and capability in academics. At this point, Dave is using college textbooks for independent study in calculus and physics, and his friends refer to him as a walking encyclopedia of state and presidential history. If he doesn't get into medical school, he'll become a college professor.

- The context is the mid-1960s in a small town in the Midwest, with a mixed social group of adolescents.
- The boys are experiencing both optimism and concern about their futures, demonstrating the storm-and-stress of late adolescence.
- Dave recognizes the conflict between expectations to go to war or to school, stereotyping adolescents, and promoting the adolescent generalization gap.
- The cognitive processes of the boys differ greatly as Dave is much further ahead than his peers, both academically and in identifying reasonable future alternatives.
- All of the boys demonstrate well-developed socioemotional processes with their diverse friendship network.
- The boys demonstrate patterns of identity exploration characteristic of late adolescence.
- Nature influenced Dave's high cognitive ability and exposure to ideas through books and experience; nurture influenced his career choice.
- Dave's ability to amass large quantities of information reflects continuity in knowledge acquisition; differences in stages of cognitive development reflect discontinuity.

Scenario 1.2

Jennifer is getting ready for basketball practice and looking forward to sharing a cake afterward that one of her teammates brought for her 14th birthday. Jennifer enjoys playing on the team even though she is a little small for a basketball player. She is built just like her mom but makes up for it by being quick just like her dad. She also runs and does resistance exercises to maximize her strength and endurance. Jennifer's dad, Jim, encouraged her interest in the sport when she was much younger. They have played a substantial amount of basketball in the driveway, maybe because she doesn't have any brothers.

Basketball practice is a mixed blessing. It gets her out of some after-school responsibilities but is an awful lot of work. She still has to run home to help with dinner and do her schoolwork. But she doesn't have to take care of her younger sisters because they attend the after-school program at the church across the street.

Her mother, Janet, has been loaded down with her own schoolwork since Jennifer was old enough to help at home. Janet, 34, is trying to finish a degree in teaching so she can put all of the

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kids through college. Jennifer will be the first child to go to college, and everyone expects it because she has done so well on achievement tests and in classes.

During Jennifer's childhood, her dad, a seasonal construction worker, occasionally drank too much when he was out of work and her mom was working two jobs—one at a day care center and another at a restaurant. Jennifer knows she does not want to have children until she is ready and doesn't plan to work for ungrateful employers. Things aren't great now, but if she can keep it all together, she'll get into a good school and have a real career at a flexible, dependable job.

- Inherited biological characteristics, or nature, are evident from each parent.
- Jennifer's basketball skill is based on practice and experience with her father, nurture and continuity in skill development.
- Jennifer has school, sport, and home responsibilities that are based on expectations for academic and family involvement, influences of context.
- Janet, Jennifer's mother, had Jennifer when she was quite young, resulting in an influential later experience. Now she is in college as an older-than-average student.
- Jennifer remembers difficult times when she was younger, as her mother worked two jobs, her father drank, and economic conditions were inconsistent, examples of early experience.

Scenario 1.3

Gene and Lev have lived next door to each other for their entire childhood and adolescence. They developed and maintained a strong friendship in spite of their differences in personal style. Gene has always been interested in science. Since he was nine, he has shown an interest in trying new chemistry experiments, testing magic that uses chemistry, and studying math and science. Lev, on the other hand, has always enjoyed being around people, young and old. He likes to tell stories, to play the guitar and other instruments, and to perform some of Gene's magic tricks. Gene and Lev get together with some older blues band members to work on their musical style. Lev often makes plans for Gene and the rest of their friends to meet at the coffeehouse to talk about music, current and old films, and on occasion, to play their guitars. Gene plans to attend a liberal arts college to get a degree in chemistry or theater. He is not sure what he would rather do to make a living. Lev will probably go to school to major in fine arts and he, too, may choose a career in performance. But for now, they are having a good time with a recent development—some girls have started joining their group at the coffeehouse, and they are placing bets on who will score first.

- Gene is demonstrating what Piaget described as the individual scientist, or an individual actively constructing his understanding of the world.
- Gene and Lev are demonstrating behavior characteristic of the formal operational stage as they prepare for and think about the possibilities for their future.

- Lev illustrates Vygotsky's sociocultural cognitive theory emphasizing language and social relations as dominant components of the learning process.
- The various learning environments with the older blues band members and their peers provide opportunities for the adolescents to interact cooperatively and gain diverse knowledge.
- From a psychoanalytic perspective, Gene and Lev are seeking or anticipating sexual pleasure from someone outside the family, characteristic of the genital stage.

Scenario 1.4

Crystal is the youngest of three children. Her oldest sister will finish high school this year and her brother is a first-year student in high school. Crystal will continue in middle school for a couple more years. Crystal is very interested in school and easily solves all of the logic problems her math teacher gives her to do while other students are finishing their regular class assignments. She watches her brother and sister study and organize their time and has learned from them that it pays off. Crystal admires them because they are earning awards for their success in debate, speech, and sports. She knows that she has a lot of say around home. Crystal almost always gets the things she asks for from her parents and gets her sister to help her by asking her repeatedly. Crystal can always count on her immediate family to encourage her, and even the kids who tease her are motivating. She likes the idea that the schools in Maitown are known for winning statewide events. Even though she doesn't know what she'll major in when she goes to college, she is pleased with what she has accomplished so far and expects to be successful in the future.

- The behavior can be explained by behavioral and social cognitive theories.
- Crystal has two older siblings that serve as important models for her; the reinforcement that her brother and sister receive for their effort influences her decisions in her own life.
- Crystal's interest in school is reinforced directly by her success in school and extra attention given to her by her teacher(s).
- Crystal has been reinforced in asking for help. Her sister responds to negative reinforcement (Crystal stops making annoying requests for help after help is provided).
- Her family and friends are important cues for working hard because they give her positive feedback when she succeeds.
- An important source of reinforcement for Crystal is her knowing that she has made good decisions and already has accomplished some important things. She expects the trend to continue as it has for her siblings.

RESEARCH ARTICLES

Article 1.1—Life Experiences Among Urban Adolescents

Previous research has suggested that daily life events are important factors in the stress experienced by adolescents. The ecological framework suggested by Bronfenbrenner (1986, cited in Allison & others, 1999) can enhance our understanding of stress. Allison et al. argued that to better understand adolescent stress, we must understand that the specific types of stressors, the context and perception of life experiences, and the process by which context and events occur all impact perception of stress. This research examined the influence of stress experienced by adolescents in a neighborhood context.

Recruited students were from two high schools in Capital City, an eastern U.S. city of approximately 50,000, and part of a metropolitan area of about a half-million people. The high schools, each offering vocational and college preparation courses, enrolled about 1,100 ninth- and tenth-grade students. About 10%, or 114 students, agreed to participate and returned consent forms and parental ratings (Child Behavior Checklist, Achenbach and Edelbrock, 1983). Subjects were 14–17 years of age, averaging 15; 78% were females. The sample included African Americans (71.9%), European Americans (14.9%), Latinx (7.9%), and Asian Americans (0.9%).

The Urban Adolescent Life Experiences Scale (UALES) was developed following a series of item generation and validation procedures: directing focus groups, reviewing filmed focus groups, and sorting 1,614 identified life events into a manageable set of items. The measure contained 127 items in the categories: School (17 items), Family/Community (37 items), Peer (22 items), and Personal (51 items). A panel of adolescent “experts” reviewed the scale for word clarity in the instructions and content.

Both positive and negative events were included on the scale. Breadth of negative impact was established by weighting items based on the number of respondents reporting an event to be negative, the degree of negativity, and the personal frequency of the event. Youths also reported (a) participation in the school lunch program as an indication of SES (eligibility based on income and household dependents), (b) parental education, (c) parental employment, and (d) neighborhood and street address.

The UALES was administered during the school day along with a general information sheet requesting information about ethnicity, residential address, and parental education and employment. Respondents were assembled into small groups to complete the measures.

The broadest contextual events resulting in negative impact on adolescent respondents were family and personal events. The top four items included: (1) family members getting on your nerves, (2) having chores at home, (3) feeling tired, and (4) not having enough money. The fifth item related to peers with the life event identified as “people lying about you.” The sixth most

negative event was “having bad teachers.” There were no significant correlations between life stress and SES.

A categorical analysis of neighborhoods was completed by comparing two with dissimilar characteristics, although respondents from them ($n = 88$) showed no differences in SES. The first neighborhood, Sugar Hill, consisted of single and attached family houses of poor quality. There were five disreputable bars in the neighborhood. Residents were described as working poor (40%), on welfare (30%), and a single female headed the majority of families. The second neighborhood, Northeast New Town, was a transitional working-class neighborhood becoming a growing center for drug trade. Although the neighborhood did not have a main effect on adolescents, a univariate analysis of variance (ANOVA) found that negative peer events had a greater negative impact on New Town respondents.

Census variables believed to indicate economic viability of the neighborhood (rates of poverty for children under 17, male unemployment, vacant housing units, and public assistance receipt) were selected for dimensional analyses. Factors related to the community that were considered as potential protective factors included high school dropout rate, percentage of employed male and female senior citizens, and the percentage of owner-occupied homes. Bivariate correlations between impact of life experiences and neighborhood indices indicated levels of high school dropout were associated with negative impact of school stress; personal and peer stress were associated with welfare receipt; male unemployment, welfare receipt, childhood poverty, high school dropout, and owner-occupied homes were associated with family/community stress ($p = .1023$). Topical analyses showed differences in neighborhood type in relation to the impact of school events; lower quality neighborhoods resulted in higher levels of school stress.

To summarize, three strategies for examining the association of adolescent life stress with neighborhood context showed that categorical, dimensional, and typological approaches are informative in examining types of adolescent life stress. Although the communities included in the present work had some similarities, the area with residents of slightly higher SES reported a higher level of negative peer stress. Apparently, ongoing neighborhood transitions associated with the drug traffic were associated with higher peer stress and possibly greater peer violence and pressure to avoid or sell drugs.

The examinations of high- and low-quality neighborhood types indicated that the perception of school stress tended to vary by type, with an indirect relationship demonstrated between neighborhood quality and levels of stress. Finally, students in the pilot study indicated several events related to family as having a broad negative impact including family members getting on your nerves and parents being worried or upset. These items emphasize the underlying importance of the family to adolescents.

Reference

Allison, K.W., & others (1999). Life experiences among urban adolescents: Examining the role of context. *Child Development*, 70(4), 1017–1029.

Article 1.2—Urban/Rural Differences in Adolescent Leisure-Time Usage

Outdoor athletics, home-based activities, and community arts represent important choices for leisure and recreational activities available to youths. Previously, Australia identified high youth involvement in physical activities. Participation in active leisure tasks during adolescence predicts social involvement and better health than for uninvolved youth. This study investigated adolescent involvement in leisure activities by evaluating (a) the relationship between leisure opportunities and leisure satisfaction, (b) participation in different types of leisure activities in relation to self-esteem, sensation seeking, and boredom, and (c) the relationship between self-esteem, leisure control, and leisure satisfaction.

Students from two Australian communities participated in the survey research. A total of 140 randomly selected students participated in the study. Students were enrolled in Grades 8, 10, and 12 and ranged in age from 12 to 19 years. Cairns had a population of 44,000 with four high schools. Cairns participants included 35 male and 40 female subjects. In the Atherton community, the population was 10,000 and contained only one public school. Atherton subjects included 31 males and 34 females.

The students completed a questionnaire containing the following four sections:

- *Self-Rating Scale (SRS)*. The SRS contained 36 items to measure self-esteem on a Likert-type scale. The instrument measured self-regard, school abilities, physical appearance, and abilities. The total score was inversely related to depression, anxiety, and anomie.
- *Sensation-Seeking Scale Form II (SSS-II)*. The SSS-II contained 34 forced-choice questions designed to measure motivation for sensation-seeking behavior. The types of activities queried included sexual activity, drug use, and unusual, risky activities.
- *Leisure Boredom Scale (LBS)*. Designed to measure differences in an individual's perception of boredom, it measured specific correlates to boredom including, from most to least influential, intrinsic leisure motivation; self-as-entertainment; self-esteem; perceived social competence and leisure ethic; leisure participation; physical health; leisure satisfaction; and mental health.
- *Adolescent Leisure-Time Use Inventory*. Quantitative and qualitative items were compiled to determine leisure-time use, choices and rationale for choices, relevant contextual factors, and overall satisfaction with time use. Leisure activities included the following: passive leisure, active leisure, social leisure, work-related activity, organizations, hobbies, substance use, and crime.

Questionnaires were administered during school with two different strategies. In Atherton, several small sessions were held with students in a structured setting with all seats facing forward.

Students in Cairns were in larger groups seated at round tables and, inadvertently, were able to interact during the session. Students completed the questionnaire in 20–60 minutes.

The results showed that, on average, students spent about 55 hours per week on leisure activity. Activity occurred most often in passive leisure (15.1 hours), and least often in active leisure (11.5 hours). Social leisure (14.8 hours) and work leisure (12.5 hours) occurred at intermediate levels. Students watched television or videos most often. They spent the least amount of time at church.

Differences were found between the two locations: Atherton (rural) students chose passive leisure whereas Cairns (urban) adolescents most often participated in social leisure. Cairns students participated in more active leisure activities, possibly due to the availability of the beach. Differences were observed in each section of the questionnaire with urban subjects reporting lower overall levels of leisure satisfaction.

Self-esteem differences showed students in Cairns with higher self-esteem overall, and a positive correlation shown between age and total SRS score. Atherton subjects showed a negative correlation. Males consistently showed higher self-esteem than did female students. Sensation-seeking results indicated that Cairns students scored higher than Atherton students. Age and SSS scores were positively correlated in both settings. Leisure boredom tended to result from lack of satisfaction with leisure activity arousal, thus leading to deviant activities. Age and total LBS scores were positively correlated for Cairns students and negatively correlated among Atherton students (in both settings, older students experienced less boredom). The relationships between self-esteem, sensation seeking, and leisure boredom showed that self-esteem and sensation seeking were positively correlated and that self-esteem and boredom were negatively correlated. The results suggest that students with high self-esteem sought high levels of sensation and experienced low levels of boredom.

More Cairns than Atherton students reported substance use, with alcohol used by 57% and 45% of the students, respectively. Cigarettes were used by almost five times as many students in Cairns (28% vs. 6%). Drugs were used by almost six times as many students in Cairns (35% vs. 6%) than in Atherton. The heaviest users were adolescents with low self-esteem, high sensation-seeking, and low leisure boredom. Substance use was mainly recreational.

Overall, a majority of adolescents were satisfied with personal leisure-time use. More Atherton (rural) students were satisfied with their activities (81.5%) than were Cairns (urban) students (77%). However, more than half of students at both locations (Atherton—62%; Cairns—51%) reported that there was not enough to do. Negative relationships were reported between age and satisfaction with leisure activities. Cairns students identified parents as barriers to leisure activity. In summary, leisure experiences may reflect attitudes toward choices more than the choices themselves.

Reference

Gordon, W.R., & Caltabiano, M.L. (1996). Urban-rural differences in adolescent self-esteem, leisure boredom, and sensation-seeking as predictors of leisure-time usage and satisfaction. *Adolescence*, 31(124), 883–901.

Article 1.3—Comparison of the Development of Formal Thought in Adolescents

Cross-sectional comparisons of cohort groups with cohort sequential designs have shown an increase in the mean score of several intelligence tests including the Raven Progressive Matrices, Stanford-Binet Intelligence Scale, and Wechsler Intelligence Scale (Flieller, 1999). Identified as the Flynn effect, increases in scores have averaged three points per decade for the previous six decades. The results occurred in 20 countries including France, where pertinent previous research led to this investigation. Environmental explanations include such things as better nutrition, increased availability of education, and/or the complexity of the environment. The fact that scholastic achievement did not improve, however, suggests that the increased IQ scores do not reflect improvement in real-life outcomes.

Flieller argued that these results suggested a clear need for further research to investigate explanations for the observed changes in performance. He proposed that Piagetian tasks depending heavily on nonverbal factors provide measures of fluid intelligence and provide the following properties:

- Performance depends on reasoning ability, not speed of execution.
- Correct performance is accepted if the respondent is able to justify it.
- A hierarchical order of tasks has been previously validated.
- Piagetian tasks measure concept acquisition and reasoning strategies.

The questions for this paper included: What differences might exist between two same-age adolescent cohort groups (a time-sequential analysis) 20 years apart? If differences between the cohorts occur, what factors might explain them?

This research used data collected from 1972 to 1976 (10 to 12 years old) and compared it to data collected from same-age adolescents in 1993 to 1996 (13 to 15 years old).

Longeot's Logical Thought Development Scale was used to measure the cognitive development of the adolescent subjects. Five tests are included in the scale, and each test used a four-tier cognitive-level score: concrete (C), intermediate (I), formal A (Fa), or formal B (Fb). The level of performance was based on the accuracy of the answer, the respondent's ability to explain the answer, and the respondent's reaction to the experimenter's objections and counter suggestions.

Conservation. Materials include two clay balls and one metal ball of the same size and two containers of water. Test items include (1) dissociation of weight and volume (Explain why the water rises; predict the height of the water); (2) conservation of volume (How will sausage shaped clay and a ball of clay influence water level? What weight is a round ball of clay versus a flattened ball? What weight is clay broken into many pieces?)

Permutation. Multicolor tokens are given to the participant, and the participant predicts the number of different ways that yellow, red, and blue tokens can be lined up. Then the participant is asked to line up the tokens in as many ways as possible. Then four additional colored tokens are added one at a time. The execution phase is scored along with explanations for the numerical response.

Quantification of Probabilities. Two types of tokens, plain yellow tokens and yellow tokens with a large black X on one side, are used for this test. Collections of tokens are presented to the participant (for example, four tokens of which one has an X, five tokens of which two have an X). The participant is asked to decide and explain in which collection a token with an X has a better chance of being chosen.

Pendulum Oscillations. Materials consist of a stand, a string for hanging weights, and five weights (50 g, 100 g, 150 g, 200 g, and 250 g) that may be hung on the string. The experimenter hangs a weight, puts it in motion, and then explains that string length, weight of the pendulum, the force of the push, and the height of release may influence the pendulum period. The participant then is asked to investigate the influence of each variable. Experimenter watches the participant and asks for the participant's conclusions.

Mechanical Curves. The mechanism required is a cylinder fastened to a stand that can be rotated around its horizontal axis using a crank. An 8.5- × 11-inch piece of paper is attached to the cylinder. A pencil on a bar allows a horizontal line to be drawn from one end of the cylinder to the other. The tasks require completing two movements: the horizontal motion of the pencil and the rotation of the cylinder. There are six movements: pencil movement without cylinder rotation, the cylinder rotates without pencil movement, the cylinder rotates and the pencil moves from one end to the other, cylinder moves and pencil goes to the end and back, the cylinder does two full rotations with the pencil going and coming back, and the cylinder does two full rotations without the pencil coming back to the starting point.

Study 1 compared 510 participants of 10 to 12 years old from 1972 to 1990 same-age children in 1993. Study 2 compared 90 participants of 13 to 15 years old from 1967 to 1990 children of the same ages in 1996. All participants took all of the tests in their schools. The percentages of students at each level demonstrated clear shifts from concrete to intermediate and formal A levels for both age groups. The cross-sectional comparison showed Study 1 group of 10- to 12-year-olds Santrock, *Adolescence*, 2025R

performed consistently better across all five tests in 1993 than had the same aged children in 1972. Study 2 showed some variation in performance, with a drop in performance on the weight-volume test between the years 1967–1996. Improvement between cohorts was noted on the other four tests by 13 to 15 years old, but scores on the probability, pendulum, and mechanical curves tests did not change as much as the permutation tests.

The study showed that the Piagetian test supported previous findings using traditional IQ-type tests and is subject to the Flynn effect. The studies suggested that problem solving using diverse reasoning skills has improved for both age groups. Improved performance may be attributed to the accelerated introduction of problems and solutions presented in classes. It may be that learning has a greater impact on development than recognized previously and is hastening the pace of cognitive development.

Reference

Flieller, A. (1999). Comparison of the development of formal thought in adolescent cohorts aged 10 to 15 years (1967–1996 and 1972–1993). *Developmental Psychology*, 35(4), 1048–1058.

STUDENT RESEARCH PROJECTS

Research Project 1.1—The Nature of Adolescents

Objective. To identify societal stereotypes that cross decades and that characterize specific generations.

Type/Length of Activity. In- or out-of-class project; time to complete is highly dependent on the structure of the analysis and detail of report required, from 2 to 16 hours.

Directions. Throughout the course, discussion on adolescence focuses on the nature of adolescents who are not children, yet not adults. Obtain copies of noteworthy films from three to five decades. Examples include the James Dean film *Rebel without a Cause* or *The Last Picture Show* (1950s), *Diner* or *American Graffiti* (1960s), *Woodstock* (1970s), *Risky Business* or *The Breakfast Club* (1980s), *Boyz N the Hood* (1990s), *Mean Girls* (2000s), and *The Perks of Being a Wallflower* (2010s). Have students view a film from each decade, collecting the following data:

1. Identify and define stereotypes about adolescents. Examples:

2. Identify historical events that influenced cohort groups to demonstrate distinguishing characteristics (for example, decade-specific characteristics depicted in each film). Examples:

-
-
3. Identify and give examples of social, emotional, and personality development in adolescents common across decades. Examples:
-
-

After viewing the films, develop a set of definitions for categories of behavior depicted in each film. Then observe a portion of each film or all of them in their entirety again, collecting data to determine the frequency or occurrence of behavior in each category. As a means of introducing the importance of rigorous, systematic inquiry to establish an understanding of adolescence, you may find it useful to contrast the film presentations with reports about adolescents in the community from newspapers, social service organizations, or by college students themselves. Have students compare and contrast topics they have found in the films with adolescent reports and identify differences in the information. This should help set the stage for analyzing subsequent media portrayals of any group.

Wrap-Up. Write a research paper or give an oral presentation that explains the methods and results of the project.

Research Project 1.2—Media Images of Adolescence

Objective. The myth that adolescence is a time of storm and stress gets perpetuated in part because of the way media portrays adolescence. Students can observe different forms of media to investigate the ways in which adolescence is portrayed.

Type/Length of Activity. Out-of-class assignment; time to complete approximately 1.5–3 hours, depending on the type of media; then observe.

Directions. Do ONE of the following (either A or B):

- A. Watch three television programs that have adolescents as part of the cast of the show. They can be dramas, situation comedies, or reality shows. If possible, watch an older program, perhaps a show that aired in the 1960s.
- B. Read three articles about adolescents. Pay attention to the issues and concerns presented in the article.

Complete the following questions:

1. List the show you watched and indicate whether it is a current show or older show. Or, list the titles of the articles you read and give their sources.

2. Describe the ways in which the adolescents were portrayed in the programs you watched. Were there common themes? What sorts of issues did these adolescents deal with? Did the portrayals of adolescents match the stereotypes we have for adolescents? If you read articles, what were the issues in the articles? How were adolescents portrayed in the article you read?
3. If you watched an older program, did you find that the adolescents in the older program faced different sorts of issues compared to more contemporary programs? What other differences did you find between the older show and the newer shows?
4. What is the role of the media in perpetuating stereotypes about adolescents?

Wrap-Up. Have students discuss what they found in class. Did most everyone in class find the same thing, or was there a lot of variability in the way adolescents were portrayed?

Research Project 1.3—Ethical Guidelines for Professionals

Objective. Students will understand the universality of ethical guidelines in scientific research and human services programs.

Type/Length of Activity. Out-of-class activity; approximately 2–3 hours

Directions. Reputable professional organizations establish ethical guidelines for the treatment of animal and human subjects and the acceptable behavior of researchers and providers. This project is designed to encourage you to investigate ethical guidelines across professional organizations and to identify the common themes that the guidelines present.

Identify common ethical guidelines across professional organizations. You will find that ethical guidelines have specific sections at some sites and that you must search within the section's titled publications or research topics at others. Read the ethical information presented at each site to identify universal principles.

These sites present important fundamental information:

- *Declaration of Helsinki.* Adopted by the 18th World Medical Assembly, Helsinki, 1964; amended several times by subsequent World Medical Assemblies.

<https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>

- *Federal Policy for the Protection of Human Subjects.* Federal Register, Volume 56, No. 117, June 18, 1991, pp. 28011–28018. Effective August 19, 1991.

<https://www.hhs.gov/ohrp/sites/default/files/ohrp/policy/frcomrul.pdf>

These websites provide ethics guidelines and discussions for professionals.

- American Psychological Association
<https://www.apa.org/>
 - American Medical Association
<https://www.ama-assn.org/>
 - National Alliance for on Mental Illness
<https://www.nami.org/>
 - National Association of Social Workers
<https://www.socialworkers.org/>
 - National Institutes of Health
<https://www.nih.gov/>
 - Society for Neuroscience
<https://www.sfn.org/>
1. What are key terms, phrases, and concepts common to all of the professional guidelines?
 2. What guidelines and presentation style were unique to specific professions?
 3. How are these points similar to and different from those discussed in *Adolescence*?
 4. Why are ethical guidelines necessary? Do you think that they are more important to us today than they were 75 or more years ago?

Wrap-Up. Be prepared to discuss the key points that you identified across professions.

Essay Questions

Students' answers to these kinds of questions demonstrate an ability to comprehend and apply ideas discussed in this chapter.

1. Compare G. Stanley Hall's view of adolescence with Margaret Mead's and inventionists' views; discuss which of these appears to be most influential today.
2. Explain the indicators of social neglect Marian Wright Edelman uses as evidence that the United States is near the bottom in a ranking of industrialized nations in child and youth treatment.
3. Explain the deciding characteristics of biological, cognitive, and socioemotional developmental processes. Give examples of each from personal experience or other course work.
4. Briefly explain and give examples of developmental controversies including (a) the nature-nurture issue, (b) the continuity-discontinuity issue, and (c) early-later experience. Also explain why developmentalists do not adopt extreme positions on the three issues.

5. Compare the psychoanalytic theories of Freud and Erikson. Explain in what ways Erikson made fundamental changes to psychoanalytic theory.
6. Compare the cognitive theories of Piaget, Vygotsky, and the information-processing approach. Identify the stages of Piaget's theory; sketch the nature of cognitive changes that take place from infancy through adolescence according to the other theories.
7. Explain the similarities and differences between the behavioral and social cognitive theories. Give an example of a personal experience that would be explained differently by a theorist from each behavioral perspective.
8. Define and distinguish the five systems in Bronfenbrenner's ecological theory. Provide at least two examples of each system from your personal life.
9. Explain why the eclectic approach is beneficial in understanding adolescent development as a whole and problematic in studying a single aspect of development.
10. Compare correlational and experimental strategies for conducting research in adolescent development. What do you gain and lose by using a correlational strategy rather than experimental strategy in research?
11. Explain what is meant by research bias. What scientific approaches and research methods lead to research bias? What strategies might investigators use to reduce the bias that has occurred previously in developmental research?
12. Compare cross-sectional and longitudinal research. What are the pros and cons of each type of design?

References

- McCarthy, J.B. (Ed.). (2000). *Adolescent development and psychopathology*. University Press of America.
- Miller, P.H. (2016). *Theories of developmental psychology* (6th ed.). Worth Publishers, Macmillan Learning.
- Parke, R.D., Ornstein, P.A., Rieser, J.J., & Zahn-Waxler, C. (1994). *A century of developmental psychology*. American Psychological Association.
- Thomas, R.M. (2001). *Recent theories of human development*. Sage.
- World Health Organization. (1999). *Programming for adolescent health and development*. Author.

INTERNET ACTIVITIES

Internet Activity 1.1—Classics in the History of Psychology

The Classics in the History of Psychology (<https://psychclassics.yorku.ca/>) offers classic articles listed by topic or by author. You can assign an article (for example, Hall, G. Stanley, [1904],

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“Adolescent Girls and their Education”) for students to read or read sections of the article to the class to give them an idea of the roots of psychology and how it has progressed.

Internet Activity 1.2—Research a Famous Psychologist

Students can use the Internet as a resource to research a famous developmental psychologist. For example, there are several websites about Piaget’s life, such as <https://piaget.org>. Give students the following questions and have them find the answers on the Web.

1. Where was Piaget born? Where did he grow up?
2. What was his childhood like?
3. Who were his parents and what did his father do for a living?
4. What is the significance of the albino sparrow?
5. Briefly outline his career.
6. Find three common criticisms of Piaget’s theory.

You can also pick your favorite psychologist and come up with questions for students to answer.

Internet Activity 1.3—National Institutes of Health

The website for the National Institutes of Health (NIH) offers specific information regarding research with human subjects. Students can go to this page to research the historical origins of the NIH’s commitment to the protection of the rights of human subjects. There is also information about the roles and responsibilities of Institutional Review Boards.
<https://www.nih.gov/>

RESOURCES AVAILABLE IN CONNECT

McGraw Hill Connect is a digital assignment and assessment platform that strengthens the link between faculty, students, and coursework, helping everyone accomplish more in less time. For students, Connect uses innovative, interactive technology to enable a more personalized learning experience that better engages students in course content so they are better prepared, are more active in discussion, and achieve better results.

Available within Connect, **SmartBook™** is an adaptive learning program designed to help students stay focused and maximize their study time. Based on metacognition, and powered by LearnSmart™, SmartBook’s adaptive capabilities provide students with a personalized reading and learning experience that helps them identify the concepts they know, and more importantly, the concepts they don’t know.

Below is a selection of other resources available for this chapter in Connect.

Chapter	Resource Title	Resource Type
1	Piaget’s Formal Operational Substage	Video