

Theories of Human Development



We know what we are, but know not what we may be.

W. Shakespeare

Consider the above quote by Shakespeare, from the perspective of a person who is unfamiliar with human development and the multiple changes of transformation that take place from the moment of birth and long into the future lifespan. Imagine looking at newborn babies bundled in blankets, resting peacefully in their bassinets. You may know what is seen but you are unable to know what may be.

Through observation it is clear that there is difference in size, shape, color tone, level of activity, and even the degree to which hair is present. Some may be quiet with eyes closed, sleeping, while others clearly in stress are red faced and screaming. Again, the observer would know these observations but certainly would be hard pressed to describe what may be.

While the process of developing from the joining of two cells to what now appears in a flesh-and-blood bundle in a nursery is in itself quite an amazing, complex, and intricate affair, the complexity or intricacy does not cease at birth. Ask yourself, which of the bundled babies will become a president, a CEO, or a notorious criminal? Which one among those sleeping or crying may fail to thrive or may develop with major physical, intellectual, social, or emotional challenges? Which of this birth class will be tall or short, slim or obese, athletic, academic, artistic, or skilled with his or her hands? Which of those present at that moment will navigate life feeling good about themselves, accomplishing that which they desire and reflecting at the end on a life fulfilled? These are the questions that the observer may ponder, along with one more. What are the factors, the elements, and the processes that give shape or contribute to that which will become?

These above questions were offered as a way to ponder these very same questions that we may have while expanding our knowledge. If we knew what was to be, and what factors gave shape to that future scenario, then we would be better positioned to intervene when danger and blocks were clearly present and supportive to those conditions that facilitated optimal development. And, while we now know so much more about those very factors, there is much to research, investigate, and discover.

As noted in Chapter 1, human development is complex. It is multidimensional, multidirectional, contextual, and in many ways, quite idiosyncratic to each individual. These characteristics make it difficult to study and challenging to know factually. This chapter introduces the theories and research methodologies that are leading us to a more complete and accurate understanding of the nature and conditions of human development. Specifically, after studying this chapter, the student will be able to

1. describe the general focus of seven main theories of human development: Maturationist Theory, Psychoanalytic Theory, E. Erikson's Psychosocial Theory, Behaviorism Theory, Biopsychosocial Theory, Cognitive Development Theory, and Ecological System Theory;
2. identify the J. Piagetian Stages of Cognitive Development as they appear at different periods of development;
3. describe the psychosocial task experienced at each period of development as described by E. Erickson;
4. explain the methods of research employed in the pursuit of knowledge and validation of developmental theories; and
5. describe the fundamental ethical concerns and principles that guide research on human development.

Theories and Theoretical Models of Human Development

The complexity of human development invites the creation of multiple perspectives and theories, some global and grand in nature addressing principles that apply to every domain of development, where others are more domain specific (e.g., focusing on cognitive development).

Theories provide a framework for the study of human development that furthers scientific vision and stimulates the application of science for public policy and social programs. Most importantly, theories help organize a large body of information and provide ways of examining facts. They also help focus our search for new understandings, explain how findings may be interpreted, and identify major disagreements among scholars (Dacey, Travers, & Fiore, 2009).

This chapter will briefly describe the seven major theoretical perspectives or theories on human development: Maturationist Theory, Psychoanalytic Theory, Erikson's Psychosocial Theory, Behaviorism Theory, Biopsychosocial Theory, Cognitive Development Theory, and Ecological System Theory. Like most theories used in counseling, each can serve as a lens through which to view human development and to guide practice decisions. It is useful, as you review each theory, to consider the implication that theory presents for a counselor's intervention and prevention programming.



Photo 2.1 Life adversity, and how an individual copes with it, has an impact on the person's developmental stages and ultimately on quality of life.

Maturationist Theory

Granville Stanley Hall (1844–1924) was a pioneering American psychologist and educator. His interests focused on childhood development, evolutionary theory, and their applications to education. Hall was a strong believer in the scientific method and its application to the study of human nature. He supported empirical research in the then emerging area of child development, developing both theories of psychological development and its application to children's education. Although Hall's understanding was incomplete, and his theories not fully accepted, his work was significant in laying the foundation for the field (Parry, 2006; Ross, 1972). His maturationist theory emphasized the importance of genetics and evolution and was based on the premise that growing children would recapitulate evolutionary stages of species development as they grew up. He concluded that it would be counterproductive to push a child ahead of any one developmental stage since each stage laid the foundation for what was to follow. In very simple terms, the position was that everyone would need to crawl before learning to walk.

Psychoanalytic Theories

While much attention has been given to the psychoanalytic position on issues such as determinism, instinctual drives, and the unconscious, the early works of psychoanalytic theorists, especially the founder, Sigmund Freud (1856–1939) highlighted the essential role played by early childhood experiences. Freud's position was that a person's psychological responses and behaviors were reflections of biological instinctual drives. Freud postulated that

Table 2.1 Freud's Psychosexual Stages of Development

Stage	Age	Characteristics
Oral Stage	Birth to 1	An infant's primary interaction with the world is through the mouth. The mouth is vital for eating, and the infant derives pleasure from oral stimulation through gratifying activities such as tasting and sucking. If this need is not met, the child may develop an oral fixation later in life, examples of which include thumb-sucking, smoking, fingernail biting, and overeating.
Anal Stage	1 to 3	With the development of new cells and the control provided by those cells (sphincters), the focus shifts from oral stimulation to controlling bladder and bowel movements. Toilet training is a primary issue with children and parents. Too much pressure can result in an excessive need for order or cleanliness later in life, while too little pressure from parents can lead to messy or destructive behavior later in life.
Phallic Stage	3 to 6	At this point in development, the focus of the id's instinctual energies shifts to the genitals. It is during this period that children develop an attraction to the opposite-sex parent. It is also at this period that children adopt the values and characteristics of the same-sex parent and form the superego.
Latent Stage	6 to 11	During this stage, children develop social skills, values, and relationships with peers and adults outside of the family.
Genital Stage	11 to 18	During this stage, people develop a strong interest in the opposite sex, and the onset of puberty causes the libido to become active once again. If development has been successful to this point, the individual will continue to develop into a well-balanced person.

objects or means for satisfying our instinctual drive for pleasure shifted throughout our early years of development moving from the mouth and oral stimulation, to the anus and the experience of control, and eventually to the genitals and the inclusion of sex role behaviors and identification (See Table 2.1). Freud posited that it was during our childhood, our first 6 years, that we developed ways to resolve conflicts between the desire for pleasure and the demands, often repressive, encountered in reality. For Freud, it was this dynamic process of conflict resolution that he believed shaped one's development and later lifestyle (Freud, 1962). While many of the tenets originally presented by Freud have been modified by contemporary psychoanalytic theorists, emphasis on the importance of early childhood experiences, especially experience in and with relationships, continues to play a pivotal role in their understanding of adult choices and behavior. Table 2.1 demonstrates Freud's Psychosexual Stages of Development from ages 1 to 18 years old and its implications for human development and growth.

Erik Erikson's Psychosocial Development Theory

Unlike Freud, who focused on early childhood with an emphasis on biological instinctual urges as key to human development, Erik Erikson presented a model emphasizing the challenges and tasks presented across one's lifespan as key to understanding human development. Further, unlike Freud, Erickson emphasized development from within a social context. Erickson's theory is an epigenetic theory, which means it focuses on both the biological and genetic origins of behaviors as interacting with the direct influence of environmental forces over time. He posited that this biological unfolding in relation to our sociocultural settings is done in stages of psychosocial development, where progress through each stage is in part determined by our success, or lack of success, in all the previous stages.

Erickson posited that humans pass through 8 stages of development with each presenting the individual with a unique developmental task, or what he termed "crisis" (see Erikson's Stages of Psychosocial Development in Table 2.2). Erickson felt that these psychosocial crises were based on physiological development interacting with the demands put on the individual by parents and society (Erikson, 1982; Stevens, 1983)

Erikson's Stages of Psychosocial Development are presented in Table 2.2. As you review the brief description of each stage, note how the resolution of any one stage may pave the way for subsequent stages. For example, the



Photo 2.2 The early years of schooling are major contributors to children's developmental stages.

Source: Creatas/Creatas/Thinkstock.

child who has difficulty developing a basic trust (trust vs. mistrust, Stage 1) of his or her environment may find it difficult to risk engaging in the types of self-directed behaviors that would allow for a positive resolution to the autonomy versus shame and doubt stage (Stage 2).

Table 2.2 Erikson's Stages of Psychosocial Development

Stages	Life Stage & Age	Meaning & Interpretation
Trust vs. Mistrust	Infant (0–1 ½)	The infant will develop a healthy balance between trust and mistrust if cared for and responded to consistently. Abuse or neglect will foster mistrust. Positive outcomes consist of the development of hope and drive, while negative outcomes could contribute to withdrawal.
Autonomy vs. Shame & Doubt	Toddler (1–3)	Autonomy means self-reliance or independence of thought and confidence to act for oneself. Toilet training is a significant part of this stage. Positive outcomes consist of willpower and self-control, while negative outcomes could contribute to compulsive behaviors.
Initiative vs. Guilt	Preschool (4–6)	Initiative means aptitude and self-confidence to perform actions, even with the understanding of risks and failure. Guilt results from abandonment or believing an action will draw disapproval. Positive outcomes foster purpose and direction, while negative outcomes encourage inhibition.
Industry vs. Inferiority	School Age (7–12)	Industry means having a meaningful activity and the competence to perform a skill. Inferiority means feeling incapable of experiencing failure or inability to discover one's own strengths. This stage is crucial in the school years. Positive outcomes foster competence, while negative outcomes encourage inertia.
Identity vs. Role Confusion	Adolescent (12–18)	Identity means understanding of self and how one fits into the surrounding world, while role confusion focuses on the inability to understand one's self or personal identity. Positive outcomes foster fidelity and devotion, while negative outcomes encourage repudiation behavior.
Intimacy vs. Isolation	Young Adult (19–40)	Intimacy means developing relationships with friends, family, and partners. Isolation involves feelings of being excluded from relationships or partnership. These encompass sexual maturity, reciprocal love, support, and emotional connection. Positive outcomes foster love and affiliation, while negative outcomes encourage exclusivity.
Generativity vs. Stagnation	Adulthood (41–65)	Generativity means unconditional care for one's offspring or the future generations to come, while stagnation refers to self-absorption/concentration. Positive outcomes foster care and giving, while negative outcomes encourage reactivity.
Integrity vs. Despair	Mature Adult (65+)	Integrity means understanding of self and satisfaction with life, while despair contributes to feelings of wasted time, opportunity, and chances. Positive outcomes foster wisdom, while negative outcomes encourage despair.

Behaviorism Theory

Whereas, Erikson introduced the importance of social context to development, the Behavioral Theory, at least in its classical form, placed nearly sole emphasis on the impact of environment, experience, and learning about the unfolding development of the human condition.

This orientation can best be illustrated by a quote offered by John B. Watson (1878–1985), deemed the father of American Behaviorism. Watson's emphasis on the role of environment in the shaping of human development is concretized in his statement "Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I will guarantee to take any one at random and train him to become any type of specialist I might select . . . doctor, lawyer, artist, merchant-chief . . . and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors" (Watson, 1998, p.82). That is quite a guarantee and clearly highlights the valuing and focuses this behaviorist placed on the role of environment, experience, and learning in the creation of the human condition.

Two main themes or forms of behavioral theory have been presented in explaining how the environment has such a formational impact. One proffered by B. F. Skinner (1904–1990) suggested that behavior was formed, or shaped, as a result of the consequences experienced. His operant conditioning model argued that behavior followed by a rewarding stimulus would be more likely to recur and endure than that followed by a punishing consequence (Cohen, 1987; Skinner, 1974).

Thus, an infant who experiences the comfort of being picked up and cradled following his or her crying is more likely to employ crying behavior in the future. Or, an individual who has experienced ridicule following his or her initiation of a social contact may soon employ withdrawal and isolation as a developmental coping style.

A second behavioral approach to the explanation of the influence of environment on development is that initially presented by Albert Bandura (1997, 2008) as social learning theory. Bandura's model expanded the classic behavioral theory to include cognitive elements. Bandura's work emphasized the importance of observational learning (also called imitation or modeling). For example, consider the situation of a child who was raised in an environment where there was much domestic arguing and physical violence and the employment of alcohol as a stress-reducing strategy. Raised in this setting and observing these social exchanges and coping styles, the child, according to social learning theory, would be very likely to model the observed behavior and engage in similar domestic violence and alcohol use behaviors.

According to Bandura, Barbaranelli, Caprara, and Pastorelli (2001), social learning is connected to perceptions and interpretations of the individual's experience. Self-efficacy, the belief that personal achievement depends on one's actions, teaches people to have high aspirations and to strive for notable accomplishments when they see others solve problems successfully. This premise is contrary to Behavioral Theory, which holds that behavior depends on associations between one stimulus and another and also assumes that all behaviors react from a chain of learned responses. In contrast, social learning maintains that behaviors come from people acting on the stimulation of the environment.

Cognitive Theories

Whereas Behavioral Theory targeted the process of developing behavior and the psychoanalytic models emphasized the role of the unconscious, theorists expressing a Cognitive Theory of development emphasized the unfolding of conscious thought and the developing abilities to process, store, retrieve, and use information. Two major players in the realm of cognitive theory are Jean Piaget, a well-known Swiss psychologist and Lev Vygotsky, an equally well-known psychologist from Russia. Both men contributed significantly to our understanding of the nature of cognitive development.

Piaget's Theory of Cognitive Development

Piaget's theory of cognitive development describes how humans gather and organize information and how this process changes developmentally (Inhelder & Piaget, 1958). He believed that children are born with a very basic

mental structure on which all subsequent learning and knowledge is based. For Piaget, the focus was on how mental structures and processes evolved to help individuals make meaning out of their experience and adapt to their changing environments. To understand this process of adaptation, he employed the constructs of schema, assimilation, accommodation, and equilibration.

For Piaget, a schema (or the plural schemata) referred to the cognitive structures by which an individual organizes his or her experience and environment. For example, an infant upon encountering a dog for the first time will experience visual, auditory, and olfactory input. These data, according to Piaget, will be linked in a neural pathway, a schema that will eventually be used as a mental template to represent *dog* each time these stimuli are encountered. However, as we know, not all dogs will be like the first one experienced, and other animals, for example a fox or wolf, while possessing some of the characteristic of our *dog* will be different. It is these subtle differences that will force an individual to develop new schemata to reflect and organize these categories of stimulation. The process by which this is done includes (a) first a new encounter; (b) an experience of disequilibrium, discomfort of not quite understanding or being able to make sense of the new encounter; and then (c) the process of adaptation.

When discussing this process of adaptation, Piaget noted that our first inclination is to attempt to “force” the new experience into an existing template or schema by way of the process of assimilation. Consider the infant who begins to discern the features of a male-daddy from that of a female-mommy. It would not be unexpected that when encountering a new male figure the infant responds with “daddy.” But as the infant develops and possesses increased visual clarity and memory, discerning that the new male does not possess all the distinguishing characteristics of “daddy,” he or she will be forced to make an adjustment or to create a new schema, perhaps “uncle,” as a way of making meaning and organizing this encounter. This condition of making a new schema is called accommodation. For Piaget, humans are continually adjusting knowledge in order to adapt to the environment through a process of equilibration, assimilating when possible and accommodating when necessary (Atherton, 2011).

As Piaget researched cognition and cognitive development, he concluded that a person’s cognitive development unfolds through four distinct and qualitatively different stages (see Piaget’s Stages of Cognitive Development in Table 2.3). He believed that these stages reflected an invariant sequence of development with all children passing through each in order. Further, he posited that each stage was qualitatively different than the others, such that it was not simply a matter of more knowledge or information but a different way or ability to derive and use that information. Finally, while assuming the necessity of biological readiness as a determining factor in one’s progression through the stages, he also acknowledged the potential for the environment to accelerate or even retard that progression.

Although many think Piaget’s Cognitive Theory is too narrow to explain lifespan human development, he is credited with discovering that thoughts, not just experience, contribute to human development. The advancement of medical research, particularly brain research, has allowed scientists to study how humans process information and react to various stimulations and will ultimately allow them to understand human cognition development at every age in the near future (Atherton, 2011).

Vygotsky’s Sociocultural Perspective

Lev Vygotsky (1896–1954), a pioneer of sociocultural theory, like Piaget, maintained that children actively construct their knowledge. However, he disagreed with Piaget’s proposal that progression through the identified cognitive stages was natural and invariant. Vygotsky emphasized the role of culture in promoting certain types of activities (Rogoff & Chavajay, 1995) and emphasized that a child masters tasks that are deemed culturally important.

Vygotsky believed that human development is the result of interactions between people and their social environment. He focused on the connections between people and the sociocultural context in which they act and interact in shared experiences and cultural artifacts such as written languages, number systems, various signs, and symbols (Burns, Bodrova, & Leong, 2012). The purpose of these cultural artifacts is to facilitate the possible adjustment of a growing child into the culture and transform the way the child’s mind is formed. Initially, children

Table 2.3 Piaget's Stages of Cognitive Development

Stage	Approximate Age	Description
Sensorimotor	Birth to 18–24 months	Infants adapt and organize experiences by way of sensory and motor actions. Initially, simple reflexes, for example sucking, help them know their world. Later, within this stage, the infant differentiates self from the external world and objects take on their own existence. This is when object permanence occurs with the infant able to symbolize the object and realize that objects exist even if out of sensory experience.
Preoperational	2 to 7 years	While the child at this stage lacks logical operations, he or she is no longer tied to sensorimotor input but is tied to and operates via representational and conceptual frameworks. The child is able to employ symbols to recreate or present experiences. In this stage, the child believes that everyone sees the world the same way that he or she does. This is called egocentrism. Conservation, another achievement of this stage, is the ability to understand that quantity does not change if the shape changes.
Concrete Operational	7 to 11 years	In this stage, the child has the ability to employ logic; however, only to concrete problems and objects.
Formal Operational	Over 11	At this point, children's abstract thinking leads to reasoning with more complex symbols. They can think logically about abstract propositions and test hypotheses systematically. They become concerned with the hypothetical, the future, and ideological problems.



Photo 2.3 Strong intergenerational family bonding is very important throughout the lifespan of family members.

Source: Jack Hollingsworth/Photodisc/Thinkstock.

develop these tools to serve solely as social functions and ways to communicate needs. These cultural tools are an achievement that expands one's mental capacities, allowing individuals to master their own behavior. Children generally learn how to use these cultural tools through interactions with parents, teachers, or more experienced peers (Burns et al., 2012).

Biopsychosocial Theories

The Biopsychosocial theory was discussed in some detail in Chapter 1, and thus will not be expanded upon here. It is sufficient to highlight that the biopsychosocial model focuses on the integration and reciprocal effect that the biological, psychological, and social systems have on our development. The theory helps to highlight the fact that mental and psychological states are influenced by many interacting processes, including internal and external variables and factors such as bodily processes, personality dispositions, and life events.

Ecological Systems Theory

Theories of development classified as ecological theories emphasize environmental factors. One ecological theory that has important implications for understanding life-span development was created by Urie Bronfenbrenner. Bronfenbrenner (1917–2005), a Russian-American, developed the Ecological Systems Theory of human development. According to the theory, a child's development occurs within a complex system of relationships including parent-child interactions (i.e., the microsystem); the extended family, school, and neighborhood (the mesosystem); and the general society and culture (the exosystem). All in all, the theory posited five environmental systems significant for understanding human development: microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Table 2.4 provides descriptions of these systems, whereas Figure 2.1 highlights the dynamic interactive nature of these systems.



Photo 2.4 An environment that is accommodating creates a better society where everyone can function independently.

Source: Toby Burrows/Digital Vision/Thinkstock.

As you review Table 2.4, consider how specific formation of each of the systems can interfere with one's optimal development. Consider, for example, the impact that living in poverty, or in an abusive family, or in a culture/society that is war torn has on development. As you reflect on each of these systems, consider the implications for a counselor's intervention and prevention services.

Table 2.4 Bronfenbrenner's Ecological Systems Theory

System	Description
Microsystem	<p>The <i>microsystem</i> refers to the immediate surroundings of the individual and consists of the interactions in his or her immediate surroundings. It is the setting in which a person lives; family, peer groups, neighborhood, and school life are all included in the microsystem.</p> <p>It is in the microsystem that the most direct interactions with social agents take place, with parents, peers, and teachers, for example. The individual is not merely a passive recipient of experiences in these settings but someone who actually helps to construct the social settings.</p>
Mesosystem	<p>The <i>mesosystem</i> connects with the structure of the microsystem. The relationship can be seen between school life, the neighborhood, and the family. The child's environment links the child with his or her immediate surroundings.</p> <p>Some common examples are the connections between family experiences and school experiences, school experiences and church experiences, and family experiences and peer experiences.</p> <p>A result of mesosystem interactions could be that children whose parents have rejected them may have difficulty developing positive relations with their friends or peers.</p>
Exosystem	<p>The <i>exosystem</i> is the outer shell surrounding both the mesosystem and the microsystem. The inner level of the exosystem is affected by the support of the macrosystem. Bronfenbrenner describes the exosystem as being made up of social settings that do not contain the developing person but nevertheless affect experiences in his or her immediate settings (Berk, 2007).</p> <p>The exosystem includes other people and places that the child may not interact with often but still have a large effect on the child, such as parents' workplaces, extended family members, neighborhoods, and so on. For example, a wife's or child's experience at home may be influenced by the husband's experiences at work. The father might receive a promotion that requires more travel, which might increase conflict with the wife and affect patterns of interaction with the child.</p>
Macrosystem	<p>The <i>macrosystem</i> influences the individual directly, but the individual has less influence in determining settings. The macrosystem includes aspects of culture and the relative freedoms permitted by the national government, cultural values, the economy, wars, and so on. Macrosystem also describes the culture in which individuals live, including socioeconomic status, poverty, and ethnicity.</p>
Chronosystem	<p>The <i>chronosystem</i> refers to the patterning of environmental events and transitions over the life of an individual as well as sociohistorical circumstance. For example, divorce is one transition.</p> <p>Researchers have found that the negative effects of divorce on children often peak in the first year after the divorce. Two years after the divorce, family interaction is less chaotic and more stable. An example of sociohistorical circumstances would be the increasing opportunities in the last decades for women to pursue a career.</p>

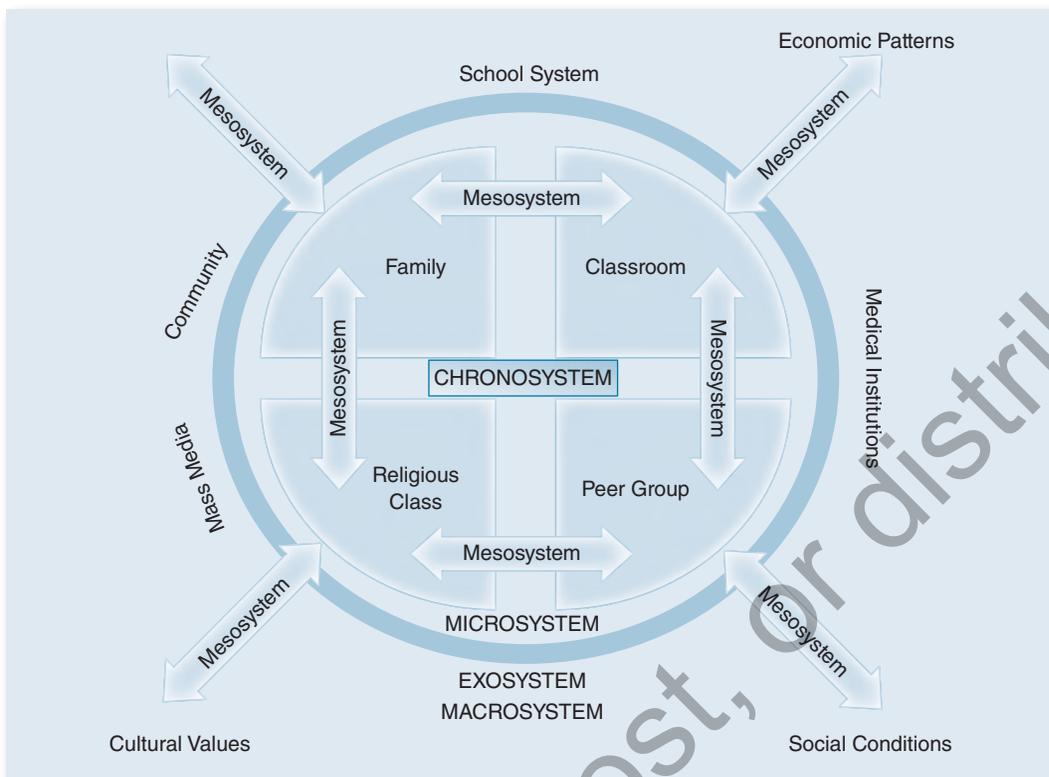


Figure 2.1 Bronfenbrenner's Ecological Systems Theory of Dynamic Interactive Nature

The Ecological Systems Theory developed by Bronfenbrenner has influenced the thinking of developmental psychologists and other psychologists throughout the world. This theory has significantly impacted the field of child and youth care. The umbrella, cube, and ecological onion models, which are widely used by professionals in child and youth care to organize ideas and information and to facilitate planning, are based on Bronfenbrenner's theory (Oswalt, 2008). Guided Practice Exercise 2.1, A Collision of Cultures, is provided to allow you to view a case through the lens of Bronfenbrenner's Ecological Systems theory.

Guided Practice Exercise 2.1 A Collision of Cultures

Instructions: As you read through the case of "Ben," reflect on the information as you filter it through the Ecological Theory of Development. Following your reading, respond to the questions presented. Discuss your responses with a colleague or professor.

The Case of Ben

Ben is an American-Chinese boy growing up in a very traditional American society with very traditional Chinese parents. Ben's parents communicate with each other in Chinese (Mandarin) at home. Ben's

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parents are highly educated individuals, and because Ben is their first child, he has been spoiled since he was a toddler. Due to their work responsibilities, the parents live separately, which requires a 2-hour drive to get together, and Ben's mother is the primary caretaker for Ben. The parents have been making an effort to see each other and Ben every weekend. Ben has been attending school, and the majority of his classmates are either White Americans or Black Americans. Since Ben can see his father only on weekends, and was instructed by his father to take care of his mother when his father is not around, Ben has developed a very authoritarian attitude toward his mother. When Ben was 8 his mother gave birth to a sister, and Ben's behavior became more overbearing toward his mother and sister.

Recently, the school informed Ben's mother that Ben has been "acting-up" in school, and he has been frequently disciplined by his teachers. Ben's parents are extremely concerned about Ben's growth and development, especially his mental health and his biopsychosocial development, which can contribute to Ben's growth and development as a dynamic, interactional, and dualistic individual.

Reflection and Discussion Points

- a. Can you identify any unique pressures or forces coming from Ben's micro-, meso-, or exosystems?
- b. What do you predict will be the impact on Ben's identity?
- c. What are your feelings about Ben and his parents' relationship moving forward?
- d. How might a counselor intervene?

Cultural Diversity and Human Development

From the cultural diversity perspective, the contributions of Bronfenbrenner and Vygotsky are significant to the study of human development because their theories focus on its socioecological and sociocultural contexts. Bronfenbrenner's theory focuses on the mutual accommodation and interaction between the developing individual and the physical environment; this ecological approach defines the development of the individual who interacts with the environment in a process of mutual accommodation. Vygotsky, in a similar theoretical approach, developed the theory of cognitive development to emphasize that human development is inseparable from social and cultural activities. His theory complements Bronfenbrenner's ecology of human development. According to Vygotsky, by interacting with the environment, society, and people with higher skill levels, children develop higher mental processes and learn to use the tools of culture such as language, mathematics, interpersonal skills, and so on. This interaction process is important because it allows children to become acculturated in the use of their intellectual tools. Most importantly, by interacting with a variety of cultural, ecological, and social contexts, children can understand and learn self-regulation. Guided Practice Exercise 2.2 will further demonstrate Vygotsky's concept of various interactions and their impacts on the child.

Guided Practice Exercise 2.2

Instructions: As you read about "Kate," process the information through your understanding of Vygotsky's and Bronfenbrenner's theories. Your task is to identify the unique contributions and

influences, both positive and negative, on Kate's development as she grows up in a culturally diverse family. Discuss your observations with a colleague or instructor.

Kate's Case

Kate grew up in a culturally diverse family on the East Coast. Her father, Paul, comes from a traditional Greek family and migrated to the United States after high school. Kate's father married Linda, Kate's mother, who is of Hispanic descent. Kate's family resided in a middle-upper-class neighborhood since Kate's birth. When Kate started her senior year in high school, she developed an isolative behavior toward her family and her peers in school. Kate also exhibited resentment and anger about her racial identity. Kate has expressed her frustration in reference to comments from her friends and classmates about her multicultural background, the imperfection of her father's English language, her multiracial appearance, and her family's celebration of her parents' special occasions that differ significantly from those of her neighbors. In coping with her unhappiness and frustration, the skill that Kate has developed is to pretend to be tough, not just toward her friends and classmates but also toward her family members. These behaviors have contributed negatively to her school performance and social relationships. She is in transition from high school to college, and without appropriate therapeutic intervention, Kate's behavior can be detrimental to her growth and development, especially her educational attainment and career objectives.

Seeking the Truth: Research Methodologies

According to Miller (2011), a **developmental theory** is a systematic statement of general principles that provides a coherent framework for understanding how and why people change over time with respect to their behaviors, attitudes, thoughts, philosophies, physical, and psychological capabilities. Theories in development are scientific theories and, as such, represent the *systematic* statement and integrated assumptions and hypotheses drawn from the observations and research conducted by developmental theorists. As a scientific theory, theories of development propose explanations of phenomena that can be tested for confirmation or falsification using scientific methodology. Through research, theories are modified to reflect and explain new data. But when the subject is human development, the application of the scientific method is not always easy, and as such, multiple methods of research are employed. The difficulty answering valuable questions regarding the impact and influence of various factors on normative development can be seen in Guided Practice Exercise 2.3. It is suggested that you return to this scenario after reading about the various methods of research employed in studying human development. Consider which of the various methods would be most useful and applicable to studying this situation.

Guided Practice Exercise 2.3

Instructions: Developmental theories have alerted us to the significant influence social and environmental forces have on development. Read the following case of "Monique" and consider the various, multidimensional elements impacting not only Monique's development but also that of her brother. Also, as you read through the various methodologies used to research development, consider which method(s) may reveal the most accurate understanding of this situation.

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The Case of Monique

Monique grew up with her brother, who has severe mental retardation. Research studies have indicated that siblings are an integral part of most children's social world during their growing up years. Furthermore, the emotional ties between siblings are next only to those between parents and children.

Reflect on the following questions:

1. How might having a brother with severe mental retardation affect Monique's human growth and development?
2. Would her sense of identity be negatively influenced by the presence of a disabled brother?
3. Would her self-esteem be affected by having a disabled brother?
4. Would she be well-adjusted in her sibling role and accept her brother with a disability as an inseparable part of their lives?
5. Would her peer relationships be altered by the presence of her brother, such as signs of latent shame associated with having a sibling with a disability?
6. What kind of data do we need to collect in order to find out the impact of having a brother with severe mental retardation during developmental years?
7. Further, what other factors may have contributed to Monique's coping mechanisms when she was growing up?
8. How important is the extended family support system, parents as the primary caregivers, independent mobility of the brother, and Monique's awareness regarding the limitations of her brother?

Research Observation

The scientific observation approach in human development research requires the researcher to record human behavior objectively, methodically, and systematically. In employing scientific observations, researchers need to know what they are looking for, what they are observing, when and where they will be observing it, and how the observation will be made. This research approach can be applied to both **qualitative** and **quantitative research methods**. When a researcher wants to make an observation and attempt to get a comprehensive picture of a specific situation by gathering notes and verbatim or narrative data, this research is considered qualitative. When the researcher uses independent measures such as scales and objective observational recording instruments, the data collected are quantitative (Berger, 2011).

There are two possible settings for making scientific observations: (a) a laboratory, which is a controlled setting in which the researcher can manipulate the environment (removing the real-world experience) to optimize the research result and (b) a real-world setting.

Although conducting behavioral observations in a laboratory setting will provide researchers the ability to control certain factors that may influence behaviors not related to the study, this approach has drawbacks. First, being

an artificial setting to that of typical human engagement, the participants in the laboratory research study may perform differently (most work harder and perform better) since they are aware that they are being observed. This phenomenon is called the **Hawthorne Effect**. Second, volunteers who are willing to come to the laboratory to participate may not represent the population the researchers intend to study. Last, due to its complex nature and the amount of variables involved, the study of human development is difficult, if not impossible, to examine in the laboratory.

Human development and lifespan studies often lend themselves to investigation within real-world settings. These naturalistic observations can be conducted in child care centers, classrooms, work settings, shopping malls, sporting arenas, and so on. In conducting observations in natural settings, the researchers can observe people's real behaviors and interactions with one another. As with any other type of research methods and data collection, the major concern of direct scientific observation is its validity and reliability. A well-defined behavior to be measured and a well-trained observer to make the observations will enhance the validity of the data to be collected. A well-trained observer must be aware of his or her own bias, world view, beliefs, and perceptions, which may influence the way he or she observes and interprets the situation. The observer effect, in which people being observed behave differently because they are being observed, may also compromise the research.

Survey Interviews

Often the research question being investigated is best understood by way of direct response from those within the study. For example, in wishing to learn more about peoples' attitudes or beliefs about a particular issue, asking them directly may be the most effective strategy for gaining understanding.

The use of direct interview or the application of a survey or questionnaire can be very effective in gathering this type of self-reported information, especially when seeking it from large groups of people. In a good survey, the questions are clear and unbiased, allowing respondents to answer unambiguously. As is true for all research methodology, survey research has both strengths and weaknesses as a vehicle for gathering insight and understanding (see Strengths and Weaknesses of Survey Research in Table 2.5).

Process of Case Study

In contrast to the large number of people typically included in survey research, a case study is an in-depth look at a single individual. The focus of the case study is to collect complete, detailed information about the individual in a situation or when exhibiting a set of behaviors. A case study is heavy in qualitative data, with extensive detailing of conditions and events and reliance on anecdotal accounts of those involved (Parsons & Brown, 2002).

Typically, the process of a case study starts with a wide view of data collection. Researchers gather as much data as possible that describe the case, while at the same time formulating questions and refining data collection techniques. As the study progresses, attention may shift to gathering information that explains the present situation and the factors contributing to what is observed. Data are collected using a wide variety of methods—observation, questionnaire, interviews, and so on. While the strength of a case study is that it can provide a rich, in-depth look at a single individual, a limitation is that the data collected are not easily generalizable to other individuals.

Research Design: The Experiment

According to Campbell and Stanley (1963), "By experiment, we refer to that portion of research in which variables are manipulated and their effects upon other variables observed" (p. 1.). Thus, the experiment would be one in

Table 2.5 Strengths and Weaknesses of Survey Research

Strengths	Weaknesses
<ol style="list-style-type: none"> 1. Surveys are relatively inexpensive. 2. Surveys are useful in describing the characteristics of a large population. 3. Surveys can be administered from remote locations using a website, mail, e-mail, or telephone. 4. Collecting large samples is feasible in a survey, making the results statistically significant even when analyzing multiple variables. 5. Multiple questions can be asked about a specific topic, giving considerable flexibility to the analysis. 6. There is flexibility at the creation phase in deciding how the questions will be administered: as face-to-face interviews, by telephone, as a group-administered written or oral survey, or by electronic means. 7. Standardized questions make measurement more precise by enforcing uniform definitions upon the participants. 8. Between-group study can be standardized to ensure that similar data can be collected from groups then interpreted comparatively. 9. High reliability is not difficult to obtain by presenting all subjects with a standardized stimulus. 10. Observer subjectivity is greatly eliminated by this medium of research. 	<ol style="list-style-type: none"> 1. A methodology relying on standardization forces the researcher to develop questions general enough to be minimally appropriate for all respondents, possibly compromising what is most appropriate to many respondents. 2. The initial study design, including the method and the tool, has to remain unchanged throughout the data collection, and this makes the design inflexible. 3. In order to get a good-sized sample, the researcher must ensure that a large number of the selected samples will respond to the survey. 4. In the conclusion of the survey, it may be hard for participants to recall information or to tell the truth about a controversial question. 5. The survey is a widely used research method for gathering data from samples ranging from health concerns and political viewpoints to attitudes and opinions. Surveys tend to be weak on validity (except face validity) and strong on reliability. In addition, survey answers are influenced by the wording and sequence of the questions. The selective memory of the respondents may also contribute to how they answer the questions. 6. The artificiality of the survey format has compromised its validity, and participants are more inclined to respond to questions they perceive to be relevant and meaningful rather than those questions they cannot comprehend. Survey data must have reliability if they are to be useful since survey research presents all subjects with a standardized stimulus and potentially eliminates the unreliability issue in the process of data collection.

which the researcher manipulates one or more independent variables, controls any other relevant extraneous variables, and observes the effect of the manipulations on the dependent variable(s).

The independent variable is the variable being manipulated by the researcher, and the dependent variable is the change in behavior measured by the researcher. The independent variable, the variable predicted

from, is the presumed cause. The dependent variable, the variable predicted to, is the presumed effect. All other variables that might affect the results, and therefore produce a false set of results, are called confounding variables (also called random variables), and these must in some way be eliminated from influencing the outcome.

Since an experiment is a study of cause and effect, it differs from nonexperimental methods in that it involves the deliberate manipulation of one variable while trying to keep all other variables constant. It is clear that when applied to the study of human development, pure experimentation is difficult at best and impossible when applied to certain research questions. Humans simply don't lend themselves to isolation, laboratory conditions, and manipulation of factors. But it is not impossible, just difficult. For example, if a researcher is interested in understanding how best to affect children's reading abilities, he or she may gather two groups of children matched on variables that could affect reading abilities but that are not the variables under study (for example, intelligence, current reading level, visual acuity, motivation, etc.) Once these variables have been accounted for (i.e., controlled), the method of teaching, which is the focus of the study (i.e., independent variable), will be introduced to one of the groups. The dependent measure might be a reading score or measure of grade-level performance. The hypothesis under investigation would be that the group receiving the test variable (the reading program) would do significantly better than those who did not.

In the above example, we noted a number of other—not tested—factors that could account for differences in the two groups. But this list is not exhaustive. You probably could identify other factors that could influence performance on the group reading test. This is an overly simplified view of an experimental approach to studying a developmental issue but hopefully serves to demonstrate the difficulty one has researching developmental factors. Table 2.6 highlights the strengths and weaknesses of laboratory experimentation when applied to the study of human development.

Table 2.6 Strengths and Weaknesses of Laboratory Research

Strengths	Weaknesses
<ol style="list-style-type: none"> 1. Experiments are the only means by which cause and effect can be established, and a true experimental design is able to deliberately and systematically introduce changes and then observe their consequences. 2. Experiments allow the researcher to control the variables; the purpose of control is to enable the researcher to isolate the one key independent variable in order to observe its effect on the dependent variable. To control the variables allows the researcher to conclude that it is the independent variable, and nothing else, that is influencing the dependent variable. 	<ol style="list-style-type: none"> 1. The experiment is not typical of real-life situations, and the unnatural environment may generate the distortion of behaviors because the experimental setting is not ecologically valid (not a real-life setting). The range of behavior to be observed in the laboratory is relatively narrow. By controlling the situation so precisely, the observation and measurement of the behavior may be very limited. 2. A psychological experiment is a social situation in which neither the subjects nor the experimenters are passive; they are active, thinking human beings. The Hawthorne Effect has demonstrated that regardless of the experimental manipulation employed, the workers' production seems to be improved, and the logical conclusion is that the workers are pleased to receive attention from the researchers who expressed an interest in them. Thus, the results do not necessarily reflect how the workers would behave in the same situation if experimenters were not present.

(Continued)

Table 2.6 (Continued)

Strengths	Weaknesses
<p>3. Experiments can be replicated. The experimental method consists of standardized procedures and measures, which allow it to be easily repeated.</p> <p>4. The data generated by experimental research are normally quantitative data and can be analyzed using inferential statistical tests. The results of the tested data permit statements to be made about how likely the results are to have occurred through chance.</p>	<p>3. Often, the experimental method, as it operates in psychology, has a history of using biased or unrepresentative sampling. For instance, the participants in this type of research are often psychology students who are required to partake in research as a course requirement.</p> <p>4. The strength of the experimental method is the amount of control that the researcher has over variables. However, it is not possible to completely control all variables. There may be other variables at work of which the experimenter is unaware, and it is extremely difficult to control the mental world of the research participants.</p> <p>5. The ethical practice in experimental research is a major concern since experiments nearly always involve deceiving participants to some extent. In fact, the very term <i>subject</i> implies that the participant is being treated as something less than a person. It is important for researchers to understand that many areas of human life cannot be studied using the experimental method because it would be too unethical to conduct this type of research in those areas.</p> <p>6. Some behavioral researchers consider normative data to have very limited usage because such data tend to describe, rather than explain, phenomena. In addition, grouping people together, many argue, limits researchers' ability to look at individuals' specificities.</p>

The Field Experiment

Sometimes an experiment can be conducted in a more natural setting, that is, in the field. As an example, the television series entitled "Primetime: What Would You Do?" has been a part of the Primetime series, an American news magazine broadcast on ABC (2013) since 2008. The show stages events that people do not experience or expect in everyday life, and these events, as staged, are usually injustices or illegal activity. The producers set up hidden cameras to view the reactions of ordinary people when they encounter these staged injustices or illegal acts as performed by actors. They want to see whether the individuals are compelled to act or mind their own business. In these field experiments, the series looks at how ordinary people react to everyday dilemmas that test their character and values. One of the scenarios involves three teenagers (actors) who beat and taunt a homeless man in front of a passerby on the sidewalk. As with the laboratory experiment, the independent variable of this type of field experiment is still deliberately manipulated by the researcher. Regardless, it still has the advantage of being less artificial than the laboratory experiment.

Natural Experiments

In a natural experiment, behavioral scientists and psychologists can use a natural situation to conduct a research study that they cannot themselves manipulate. For example, a psychologist may use a one-way mirror or a hidden

camera or observe from a distance to study aggressive behavior among children. In conducting this type of experiment, the researcher must not allow the children to notice him or her. This is not a true experiment because the psychologist is unable to manipulate or control variables. For this reason, it is sometimes referred to as a quasi-experiment (Kazdin, 1980).

Lifespan Study

Researchers in life-span development often have a special concern with studies that focus on the relation of age to some other variable. Methods that are sometimes employed to study the effect of age involve identifying groups of varying ages and comparing them on some dimension (i.e., cross-sectional research) or at other times following the same individuals across their life span noting changes in the dimensions under investigation (i.e., longitudinal study).

Cross-Sectional Research

A cross-sectional study is a descriptive study in which characteristics under investigation are measured simultaneously in different age populations. Cross-sectional studies can be thought of as providing a snapshot of contrasting populations at a particular point in time. While the data collected may reveal differences, the actual cause for those differences cannot be isolated nor validly attributed to age alone.

Longitudinal Research

A longitudinal study, like a cross-sectional one, is observational. So, once again, researchers do not interfere with their subjects. However, in a longitudinal study, researchers conduct several observations of the same subjects over a period of time, sometimes lasting many years. The benefit of a longitudinal study is that researchers are able to detect developments or changes in the characteristics of the target population at both the group and individual levels. The key here is that longitudinal studies extend beyond a single moment in time. As a result, they can establish sequences of events.

Rules Governing Human Subject Research

World Opinion

Rules governing research on human subjects has been embedded not just in the parameters of our professional ethic but also within the rules and regulations established by ours and other governments. For example, as a result of the atrocities revealed during the Nuremberg trial following World War II, the Nuremberg Code (1948) was established. This code articulated the basic requirements for conducting research in a way that respects the fundamental rights of research subjects. The World Medical Association met in Helsinki, Finland, in 1964 to draft the Declaration of Helsinki, a document that would build on the Nuremberg Code of 1948 to outline the standards of ethical research involving human subjects. This declaration was revised in 2000.

Additional rules of study followed upon the experience with Thalidomide (1962). Prior to this time, informed consent prior to taking medication was not required. After significant numbers of pregnant women gave birth to infants with deformities, public outrage over this practice led to an amendment to the Food, Drug, and Cosmetic Act that basically required investigators and researchers to obtain informed consent from potential subjects before giving them investigational medications.

Other events also have had a significant effect on how we regulate research conduct nowadays. These include the Wichita Jury Study (1955), the NIH Ethics Committee (1964), the Ethic of Clinical Research and the New England Journal of Medicine, the Congressional Hearings on the Quality of Health Care and Human Experimentation (1973), the Milgram Studies of Obedience to Authority (1960s), the San Antonio Contraception Study (1970s), the Tearoom Trade Study (1970s), and the Tuskegee Syphilis Study (1932–1972).

Additionally, the National Research Act of 1974 established the National Commission for Protection of Human Subjects of Biomedical and Behavioral Research. The goal of this commission was to clarify the ethical guidelines to apply to research involving human subjects in all research disciplines. The commission conducted a series of meetings at the Belmont Conference Center near Baltimore, Maryland, and generated the report in 1979 to address and explain the fundamental ethical principles that should guide research conduct involving human subjects. This became known as the Belmont Report.

The Three Major Ethical Principles of the Belmont Report are

Principle 1: Respect for persons—Treat individuals as autonomous agents and protect persons with diminished autonomy.

Principle 2: Beneficence—Do unto others as you would have them do unto you.

Principle 3: Justice—Distribute the risks and potential benefits of research equally among those who may benefit from the research.

ACA Guidelines for Ethical Research

According to the American Counseling Association (ACA, 2005): “Counselors who conduct research are encouraged to contribute to the knowledge base of the profession and promote a clearer understanding of the conditions that lead to a healthy and more just society. Counselors support efforts of researchers by participating fully and willingly whenever possible. Counselors minimize bias and respect diversity in designing and implementing research programs” (p. 16).

The Code of Ethics of ACA addresses many areas related to conducting counseling research and provides guidelines:

1. Researchers have responsibilities when using human research participants. They should seek consultation if the research suggests a deviation from standard practices, consult the Institutional Review Board (IRB) procedures, and use precaution to avoid injury to participants. Also, the principal researcher should be mindful of ethical obligations and responsibilities and have minimal interference in the lives of research participants. Finally, the research should consider multicultural and diversity issues.
2. Rights of research participants include informed consent—counselors may not conduct research that involves deception. There are policies on student/supervisee participation, client participation, confidentiality of information, persons not capable of giving informed consent, commitments to participants, explanations after data collection, informing sponsors, and disposal of research documents and records.
3. Nonprofessional relationships with research participants should be avoided. Researchers do not condone or subject research participants to sexual harassment or potentially beneficial interactions.
4. Researchers must report accurate results and are obligated to report unfavorable results and errors while protecting the identity of participants and allowing replications of the study.
5. Publication includes recognizing the contributions of others. Counselors may not plagiarize; they must review republished data or ideas, acknowledge contributors appropriately, and establish agreements in advance of the publication. Students are listed as principal authors if they are the primary contributors and submissions should not be duplicated.

Research Contributing to a Counselor's Identity

Research is not only a data source for ethical and effective practice but is a process in which all professional counselors should seek to contribute. Engaging with the research either as a knowledgeable consumer or contributor is essential not only to effective practice but to the development of one's professional identity.

The field of counseling has been constantly evolving and progressing due to the increasing demands of competent, well-trained professional counselors to work with many emerging modern society issues (substance abuse, family in crisis, posttraumatic stress disorder, etc.) and individuals from diverse cultural and ethnic backgrounds. This also applies to the importance of studying human development through the lifespan because one cannot deny the contribution of life experience to the well-being and quality of life of each individual in society. It is important for counselors to keep up with current research that is being conducted. The more research studies that counselors read, understand, and are able to apply at work, the more they can optimize their abilities to improve counseling services for their clients. New studies can help counselors understand what is important for them to focus on in their work. It can also teach them what is expected of a professional counselor at work. However, over the last two decades, the enthusiasm for research has declined.

According to Reisetter, Korcuska, Yexley, Bonds, Nikels, and McHenry (2004) there is a need to inspire interest in research among counselor education students in training and in practice. Although there has been a lot of research on the development of humans, there is much more to learn. Students in the counseling fields, along with practicing counselors, need to read, understand, and participate in more counseling research activities.

According to Nelson and Southern (2008), there are four areas counselors should consider when determining how scholarly they are on the job and how they can apply this knowledge to optimize their job performance. They believe that the most important area is discovery, where a counselor researches and investigates. The second important area is integration, which occurs when a scholar takes isolated concepts and places them in a larger context that gives new meaning to an emerging perspective. The third area is application, which involves service-related activities geared toward applying knowledge/scholarship to solving individual and community problems. The last, and perhaps least valued, area is teaching with educators in the academic profession. Nelson and Southern (2008) believe that counselors need to acquire a passion for advancing knowledge in ways that satisfy needs for personal growth and innovation in society. We support that notion of counselor as research-practitioner.

SUMMARY

- Many theories have explained that human development consists of physical, cognitive, and social perspectives and how these are present throughout prenatal, childhood, and adult development
- Human development is multidimensional, multidirectional, plastic, multidisciplinary, and contextual, and the domains that characterize human development are physical, cognitive, and social.
- There are 10 major theoretical perspectives on human development: Maturationist Theory, Psychoanalytic Theory, Erikson's Theory, Behaviorism Theory, Social Learning Theory, Evolution Theory, Cultural Theory, Biopsychosocial Theory, Cognitive Development Theory, and Ecological System Theory.
- Studying the implications of cultural factors is indispensable to the study of human development.
- The process of scientific inquiry is a very rigorous and systematic journey for the purpose of developing new theories and re-affirming existing ones.
- Research design requires the in-depth understanding of various methods of collecting data, including different approaches in reference to experimental and nonexperimental designs, cross-sectional research, and longitudinal research.
- The ACA Code of Ethics contains clear guidelines that provide members with the knowledge of how to conduct ethical research.

ADDITIONAL RESOURCES

SAGE Research Methods (www.srmo.sagepub.com/)

This website was created to help researchers, faculty, and students with their research projects. The platform links over 175,000 pages of SAGE's renowned books and journal and reference content with truly advanced search-and-discovery tools. Researchers can explore method concepts to help them design research projects, understand a particular method or identify a new method, and write up their research. Since this platform focuses on methodology, rather than on disciplines, researchers from the social sciences, health sciences, and more, can use it. SAGE Research Methods contains content from over 640 books, dictionaries, encyclopedias, and handbooks, and the entire *Little Green Book* and *Little Blue Book* series—two major works collating a selection of journal articles and newly commissioned videos.

Examples of Some of the Videos

- Stephen Gorard. (2011). "How do I choose between different research methods?"
- Naomi Jones. (2011). "How do I design policy-focused research?"
- Rachel Thomson & Julie McLeod. (2011). "How do I research social change?"
- Martyn Hammersley. (2011). "Methodology: Who needs it?"
- Bren Neale. (2011). "What is longitudinal research?"

RECOMMENDED SUPPLEMENTAL READINGS

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