

Psychological Development: Cognition, Emotions, Personality

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“The hardest thing about adolescence is that everything seems too big...Pain and joy without limits. No one can live like that forever, so experience finally comes to our rescue. We come to know what we can endure, and also that nothing endures.”

Sara Paretsky, *Bleeding Kansas*

Adolescence is considered the age that bridges childhood and adulthood, Erik Erikson, who has contributed much to our understanding of the developmental stages described adolescence as, “the age mediating between childhood and adulthood (Erikson, 1997, p.xi).” Adolescence includes the sometimes tumultuous years between the ages of 11 and 21, and the Eriksons addressed this as one stage (Newman and Newman, 2013). Some authors attribute the fact that adolescence is such a trying time to the fact that adolescents lose synapses in the brain specifically in the primary visual cortex at a rate of 5,000 per second (Bears, Connor, and Paradiso, 2007; we will discuss this more later in the chapter)! Erik Erikson and his wife Joan Erikson, in their classic book entitled, “The Life Cycle Completed with New Chapters on the Ninth Stage of Development by Joan Erikson” (Erikson, 1997) discuss how their psychosocial theory focuses on several key words. These key words include “hope, fidelity, and care (Erikson, 1997, p. 54).”

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Out of the wrestling through the struggles of the different developmental stages, emerge these three key psychosocial strengths: 1) hope, 2) fidelity, and 3) care. Hope is said to emerge during infancy, and hope is triggered by the psychosocial crisis of *trust versus mistrust*, and care emerges during adulthood and is triggered by the psychosocial crisis of *generativity versus self-absorption*. The focus of this chapter is on adolescence, where *fidelity* emerges. Fidelity is the psychosocial strength that may be developed through the successful resolution of the psychosocial crisis of *trust versus mistrust*. Later in this chapter we will explore this psychosocial crisis and the psychosocial strength of adolescence. Current authors (Newman & Newman, 2013) have departed from the original conceptualization of adolescence as one stage of development and have broken it down into two different stages, early adolescence and late adolescence. They not only divided out this ten -year range into two intervals, but they also extended adolescence from age 21 to age 24. This newer conceptualization of early and late adolescence is consistent with some of the current neuroimaging research which suggests that the adolescent brain is not fully developed until well into one's 20's (Johnson, Blum, and Giedd, 2010), the pre-frontal cortex, or PFC for short, may not have completed the myelination process (the fatty cells that surround the neurons and allow for signals to travel more quickly may not be fully formed, as evidenced by the measurement of cerebral white matter), which is considered the most developed region of the brain. The PFC, has been referred to as the "executive command center" because it performs executive functions, it has also been referred to as the "boss in your brain" or the "cop in your rearview mirror" (Amen). The executive function involves planning, monitoring goal directed behavior and inhibition. It has been said that perhaps the car insurance companies understood the most about neural development, because they have not allowed individuals to rent cars until after the age of 25, coincidentally (or not so

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coincidentally) this is around the time that the brain reaches full development. Thus it is fitting that the stage of adolescence is considered now to extend to the age of 24.

The psychological development of adolescence, like other stages of human development, is an integrative process that includes developmental changes in various domains such as cognitive, emotional, and biological domains. There are opportunities for adaptive healthy development and also the potential to encounter problems in development that may lead to psychopathology. One example that has been used to illustrate this concept is captured by attachment theorists. Bowlby, known as the Father of Attachment Theory, has emphasized the impact that the primary care giver has on a child. However, although the impact is powerful and impactful it does not dictate that the child will have attachment problems throughout the lifespan. Rather, Bowlby and his proponents such as Bob Marvin (2013) emphasize that “life does offer second chances” and even if there are challenges in development adolescents can take advantage of opportunities to get back on track towards healthy development. This is important to keep in mind when reading about healthy development and developmental problems. One example, of how life can offer second chances is the impact of a loving teacher or grandparent. A child can begin to move towards a secure developmental style in response to a loving relationship with a caring adult (Kerig, Ludlow, & Wenar).

The integrative process of development can be explained organizationally as a process that is similar to a Venn diagram. Developmental aspects or circles in the diagram include cognitive, social, emotional, and biological domains and these domains interact with each other and overlap to facilitate the “sweet spot” or integrated adaptive development. When challenges with development during adolescence occur an organizational perspective which is informed by two components: 1) development is considered a holistic system that is also changing and interacting

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as aspects of the system impact one another, and 2) development can be conceptualized as occurring in a linear or hierarchical way (meaning there are pre-requisites and simpler aspects of development occur and more complex aspects build upon those). This holistic perspective of development (Kerig, Ludlow, & Wenar). One approach to understanding the holistic and hierarchical perspective on development is to consider Erik Erikson's theory of development that focused on the developmental tasks associated with each stage of development.

Let's return to the psychosocial crisis addressed during adolescence. Erikson described the psychosocial crisis as one involving the development of fidelity or role repudiation. The need for guidance during transitions from guidance from parents to guidance from mentors or other leaders and fidelity to the ideology or way of life evolves. However, on the other hand, the antithesis "role repudiation" could also occur. Role repudiation is associated with words like defiance, negative identity, and socially unacceptable behaviors. Role repudiation is associated with the outcome of an adolescent struggling to embrace some roles and values and rejecting others and embracing a negative identity which is associated with embracing behaviors that are not socially acceptable.

More recently in the literature on human growth and development this struggle to develop the ego strength of fidelity has been divided among the two proposed stages of adolescence. So years 12 to 18 or early adolescence focus on fidelity to others, while later adolescence age 18 to 24 focuses on fidelity to values (Newman & Newman, 2013). Fidelity to others is accomplished when an adolescent expresses and extends loyalty to others out of his or her own free will. Fidelity to values emerges when an adolescent is able to freely express and extend loyalty to values or principles. The psychosocial crises of these stages have also been redefined by current researchers and the crisis of early adolescence is group "identity versus alienation" and the crisis

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of later adolescence is now conceptualized as “individual identity versus identity confusion” (Newman and Newman, 2013).

This challenge of identity versus alienation that occurs during the early period of adolescence, age 12 to 18, exists along a continuum (Newman and Newman, 2013). On one end of the continuum is enmeshment with important family, friends, or other relationships, and on the other end of the continuum is isolation. The challenge is to find the balance that involves staying connected with these meaningful relationships, while at the same time also maintaining a sense of autonomy. This is not unlike how the adaptive attachment style is defined. A secure autonomous attachment style involves both the guiding beliefs that there are dependable others who valued relationships can be maintained with and at the same time maintaining a sense of autonomy from those other individuals.

Impact of puberty

Puberty, is part of the early adolescence stage. Recall early adolescence typically starts at age 12 and extends to age 18, this is typically the time frame from 7th grade to senior year in high school. Sexual maturity is an important biological process that occurs during puberty and “sexual maturity or having the functional ability to reproduce and involves physical and psychological changes (Newman & Newman, 2013 p. 154; Fleck, 2013).” This process of sexual maturity may look a little different in boys and girls. For example, in boys shifts in hormones may begin to emerge between the ages of approximately 10 and 13. A key phrase that is often discussed when talking about puberty, though it does not relate to the puberty process is the phrase “secondary sex characteristics.” During puberty, when the levels of testosterone and androsterone increase these secondary sex characteristics develop. Secondary sex characteristics involve hair growth including body hair, facial hair, and pubic hair.

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During puberty in addition to sexual maturation and the maturation of secondary sex characteristics researchers are finding that there is also brain maturation taking place. In the prefrontal cortex, which is often abbreviated and referred to as the PFC, there is another phase of the formation of synapses (Giedd, 2004, pp. 2–9) as cited in Zara) . The PFC is an important region of the brain because it is the executive command center, or the part of the brain that supervises other behavior, it is associated with planning, goal directed behavior, staying on task, etc. Dr. Daniel Amen, a neuroscientist who has one of the largest collection of single photon emission computed tomography (SPECT) collections to date, has referred to the PFC as “the cop in your review mirror.” If you consider this example, when a driver sees a police officer in his rear view mirror, this may be a cue to monitor his speed, his focus may go straight to his odometer. If the driver knows that he is speeding, then his focus may go straight to hitting the breaks. So, this “boss in his brain” or supervisor helps him or her to regulate behavior. In addition to this wave of development, there is also a clearing out or pruning that occurs (Zara). This pruning leads to the jettisoning of cells that are not used. For example, if an adolescent learns ballroom dancing steps then those pathways are developed and maintained, or “hardwired” into the brain. However, if an adolescent spends most of his or her time watching television rather than learning an instrument, a sport, or another skills, then those unused cells may be pruned during this time.

Sleep changes during puberty

Another aspect of puberty involves changes in sleep patterns, emerging research in neuroscience gives us a glimpse into the underlying process of these sleep changes. Research on slow wave (delta, 1-4 Hz) electroencephalogram (EEG; Campbell, Grimm, de Bie, and Fienberg, 2012) demonstrates a significant decrease in the amount of non-rapid eye movement (NREM)

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sleep. This decrease in NREM sleep is thought to be brought on by the pruning process that is taking place in the brain during adolescence. The best way to understand what NREM sleep is may be to compare it to rapid eye movement sleep or (REM) sleep. Rapid eye movement sleep in an EEG may appear to look more like wakefulness than sleep, the body is immobilized by the individual has vivid dreams. On the other hand in NREM sleep, which has also been referred to as slow wave sleep, this is the stage that the brain seems to be at rest. The brain in NREM sleep has a slower rate of firing among neurons, and typically upon waking during this sleep phase people do not recall their dreams. Some authors such as Bear, Connors, and Paradiso (2007) quote the sleep researcher from Stanford University named William Dement in describing the two phases. Regarding NREM sleep he describes this as “an idling brain in a moveable body” and regarding REM sleep he describes this as “an active hallucinating brain in a paralyzed body” (Dement as cited in Bears, Connors, and Paradiso, 2007). So, it is important to note, since there is a sharp decrease in this restful NREM sleep adolescents even if they are getting the mean required 9.25 hours of sleep, they may not feel rested, due to less time in restful sleep.

The national sleep foundation also indicates that during adolescence, adolescents often experience a sleep phase delay. This leads to difficulties falling asleep before 11:00pm. Given the societal demands of getting to school early, church early, after school activities such as athletic practice and homework, and other early morning activities this stage is also often associated with sleep deprivation. The national sleep foundation reports that the mean sleep need for adolescents is 9.25 hours of sleep per night, so it is important for adolescents to prioritize sleep and allow time for this increase in needed sleep in order to function at their best (National

Information processing during adolescence

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Dan Siegel (2014) has summarized current research on the adolescent brain in his text entitled, "Brainstorm." Siegel shares that there are four features of growth in the adolescent brain, each has positive assets and pitfalls. These four features include: 1) novelty seeking, 2) social engagements, 3) increased emotional intensity, and 4) creative exploration.

Siegel mentions that the first feature of growth in the adolescent brain, novelty seeking, involves a drive for newness and novelty. Some of the benefits associated with the novelty seeking involve openness to change and the sense of adventure. Although there are potential benefits there are also potential struggles. Novelty seeking can be associated with high risk behaviors and more inclination to behave impulsively without giving thought to consequences.

The second feature is social engagement. Social engagement involves opportunity for connections and peer friendships. Siegel shares this motivation to connect socially leads to the development of peer relationships that are supportive and associated with wellbeing. The pitfalls associated with social engagement include the potential for excluding adult influence and relationships and the increased risk behaviors that may be associated with having other teenagers as one's primary source of support (Siegel, 2014).

Siegel (2014) indicates the third feature of adolescence is emotional intensity. Emotional intensity can lead to a zest for life and enhanced energy. However, the pitfall associated with emotional intensity can be moodiness and emotional ups and downs.

The fourth feature is creative exploration (Siegel, 2014). Creative exploration involves an expanded sense of consciousness and seeking to move beyond widely accepted to novel practices. However, searching for meaning and purpose during

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adolescent years may trigger an identity crisis. A sense of awe and wonder may be developed that can be associated with the “ordinary being extraordinary” (Siegel, 2014, p. 8).

With increases in novelty seeking, social engagement, emotional intensity, and creative exploration there are also some changes that may impact the way adolescents process information. The changes in information processing are in part related to changes in the reward circuitry of the adolescent brain. Since there is increased activity in the reward drive, or the brain circuits using dopamine (Siegel, 2014), this is associated with an increase in adolescents’ drive for reward. This may explain adolescents experiencing a gravitation towards thrill seeking. Feelings of boredom may be reported often during adolescence, if novel experiences are not possible. This focus on thrill seeking behavior and stimulation may be associated with impulsivity (Siegel, 2014) and failing to pause in decision making/pursuing immediate gratification.

Perhaps the groundwork for information processing during adolescents began much earlier during childhood. Some authors have extended the implications of the well-known “Marshmallow Test” (where children were asked to choose between eating a marshmallow immediately or waiting a pre-determined amount of time and getting two marshmallows) to adolescence and indicated that children who did not wait, for the second marshmallow, during childhood experienced a host of poor outcomes during adolescence (Stevens, 2017). Some studies have found that preschoolers who waited were rated by their parents as being more competent both cognitively and socially.

As Siegel says this pause may be inhibited during adolescence and may be associated with higher levels of impulsivity in information processing (Siegel, 2014).

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Jean Piaget contributed to much of what we understand about cognitive development and provided the clearest picture of this developmental process which may give us insight into information processing, memory, processing speed, content knowledge and more (Barrouillet and Gaillard, 2011). As the study of cognitive processing developed, the brain came to be seen as a location that holds cognitive information, much like a computer's hard drive. The brain was considered to be limited by the amount of information that could be held and the capacity to process it at any particular developmental stage.

Piaget conceptualized human growth and development as occurring in four primary stages (Newman & Newman, 2013), the fourth stage begins in adolescence and is called, "formal operational thought" and this stage of cognitive development persists throughout the course of adulthood. At this stage of development an adolescent is able to contemplate a multiplicity of different thoughts at the same time. Formal operational thought also lays the ground work for creating a systemic thought process for solving problems and the thought processes that allow for both scientific and philosophical thought (Newman & Newman, 2013). This stage of development corresponds with the brain's myelination, which some sources say extends throughout adolescence and even into early adulthood. Just like general brain development begins in the more primitive areas of the brain and proceeds forward towards the prefrontal cortex (where more advanced processes take place), so does the myelination process. Recall, the PFC is the executive command center in the brain that is responsible for goal directed behaviors including decision making, planning, organization, and more.

Memory

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There are different types of memory such as long term, short term, and working memory. Even within those broad categories, there are sub-categories of different types of memories. Three different categories of long-term memory include: 1) semantic memory which involves knowing words, 2) episodic memory (which involves recalling every day experiences) and 3) scripts (memories which the brain has organized into patterns that are correlated with habits or events) (Westman & Costello, 2011).

Working memory is a type of memory that tends to be important in children's development (Wastman and Costello, 2011). Barouillet and Gaillard (2011, pg. 9) define working memory as "a processing resource of limited capacity involved in the preservation of information while simultaneously processing the same or other information." Working memory is important in part because it is needed in order to work through current problems or tasks. The maximum length of time for working memory to remain active is 30 seconds (Westman and Costello, 2011), however if an adolescent employs a strategy such as combining the numbers 1-2-3 to a three digit number 123, this may free up space in working memory.

Another type of memory that may be especially significant to the increased focus on the development of social relationships that occurs during adolescence is called autobiographical memory. Autobiographical memory, is similar to what is known as "event memory." Event memory has been defined as, "an amalgam of incidental and deliberate memory with information usually encoded without the intent to remember but with deliberate forces operating at the level of reconstructing the experience" (Schneider, 2015, p.75). When memories of these events are associated with one's personal experience then this type of memory is called, "autobiographical memory." Since

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autobiographical memories are recollections of one's personal experience, they tend to involve thoughts, feelings, and impressions. Children's autobiographical memories become more complex as they age. Research has demonstrated, children's attachment relationship with their mothers impacts their autobiographical memories in later life. Children whose mother's exhibit three key characteristics in their style of reminiscing with their children, may contribute to the enhancement of their children's development of more accurate memories and more developed autobiographical memories during adolescence. These three facilitative characteristics of reminiscing include: 1) supporting independence or autonomy, 2) using a detailed narrative or "elaborative" narrative style, and 3) reminiscing in a way that communicates emotions openly (Schneider, 2015, p. 99). However, research reveals that there are cross cultural differences, with European-American mothers being more elaborative than Asian mothers and increased elaboration being associated with earlier age of first autobiographical memory.

As children transition from childhood to adolescence they develop new skills such as social and cognitive skills, these skills lay the ground work for novel types of autobiographical memories. One strategy for strengthening the retention of autobiographical memory over time (into adolescence and beyond) is the strategy of conducting multiple interviews, asking children open-ended questions. A mother's style of interacting with her child, if characterized by open-ended questions and an elaborative style of reminiscing has been associated with more accurate and extensive memories during adolescence (Schneider, 2015).

Processing Information

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In addition to all of the myelination taking place in adolescence and the stabilization of memory, adolescents are also processing a large quantity of information related to significant relationships. The Adult Attachment Interview (AAI; George, Kaplan, & Main, 1996) is an assessment that provides some important insight into the how adolescents are processing information related to their childhood attachment experiences (Scharff & Mayseless, 2007, p. 45; Dykas & Cassidy, 2007).

Internal working models (IWMs) develop throughout childhood. The function that these IWMs perform during childhood is to help children identify patterns in parental behavior that can provide information about current behaviors that will provide a roadmap for processing information about attachment behaviors and predicting future responsiveness of caregivers (Dykas & Cassidy, 2007). This process of using IWM's to inform the expectations that children have of their attachment figures, continues during adolescence, however important changes occur during this developmental stage. One significant change, is that in adolescence the information gathered regarding the attachment behaviors of their early caregivers crystalizes and becomes integrated into a single information processing framework also known as a "state of mind" with respect to attachment (Dykes & Cassidy, 2007, p. 43). Internal working models that develop through interpersonal learning experiences with primary care givers during childhood, may lay the groundwork for the later information processing that takes place during adolescence, specifically during interactions with peers. Thus the lens by which adolescents view peer relationships, may have been developed much earlier during early childhood. The AAI is an assessment that asks the hallmark question that requests the interviewee share five adjectives that describe his or her childhood relationship with their mother. This allows the interviewee to provide general descriptions or adjectives.

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However, later the individual is prompted to describe specific autobiographical episodes or memories that provide an explanation of why that particular word was selected. For example, if an individual states that his childhood relationship with his mom was loving, caring, supportive, strict, and stressful, then a follow up question would be, “Would you provide me with a specific autobiographical episode that illustrates how your childhood relationship with your mother was loving (George, Kaplan, and Main, 1996)?” There are four general attachment styles or states of mind that exhibit the way adolescents process relational information by a turning away from attachment figures and the discussion of attachment relationships (dismissing), turning towards attachment figures and relationships (secure autonomous), getting caught up in the discussion of attachment relationships (preoccupied), or no specific pattern of discussing attachment/lack of resolution of loss or abuse (disorganized patterns). During adolescence the aforementioned state of mind becomes apparent (Dykas & Cassidy, 2007), and it also may manifest related to how adolescents process information related to social interactions with peers. For example, if an adolescent processes information in a way that is consistent with the relationship rules (Clinton & Sibcy).

Some authors explain these relationship rules, as rules that indicate whether the self is worthy of love and whether others are able to show love. These rules inform strategies for interacting in attachment relationships (i.e. turning towards, turning away, getting tangled up in, or disorganization). Recall, there are four primary attachment styles discussed in the literature. The first is the most adaptive, secure autonomous relationship rules indicate the self is worthy of love and others are able to show love. The dismissing attachment style is characterized by relationship rules that indicate the self is worthy of love, but that others fall

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short and are unable to provide love. The third is the preoccupied style, relationship rules that govern this style indicate others are able to show love, but that they may not because the self is not worthy of love. The fourth attachment style, is the most concerning of these four. In the fourth attachment style, as Clinton and Sibcy put it, “the grass is dead on both sides of the fence.” In other words, the self is not worthy of love and others are unable to show love.

During the adolescent years, if an adolescent has a secure autonomous attachment style, then tend to be high in expressing value for attachment relationships and are able to discuss their autobiographical memories of attachment in a way that is open and coherent (not unlike the elaborative style of the mother discussed previously), and should then be able to process information with their peers in the same open and coherent manner (Dykas & Cassidy, 2007).

On the other hand, if the adolescent has developed insecure working models during childhood and processes information related to attachment through this lens, then they will experience challenges in discussing attachment related information regarding their peer relationships as well (Dykas & Cassidy, 2007). Although, adolescents early attachment relationships and IWMs may predict the way in which they processes information in current attachment relationships, these IWMs also play a role in facilitating other information. For example, these IWM's may influence how adolescents process other social information Dykas and Cassidy indicate the other social information may include information “that arouses adolescents' exploratory, affiliative, fear, or sexual behavioral systems” (Dykas & Cassidy, 2007, p. 46). In addition, the way adolescents process information related to new acquaintances may be informed by their underlying IWMs. Some generalization may occur as adolescents extend the rules from their IWM's to other individuals as they process new social information (Dykas & Cassidy, 2007).

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Processing Speed

Processing speed, here refers to how quickly adolescents process information.

Processing speed plays a role in working memory and other cognitive processes, processing speed predicts success in several other cognitive capacities, and higher processing speeds are correlated with higher capacities in working memory and enhanced accuracy in mathematical calculations (Kail & Ferrer, 2007). Information processing speed had a developmental trajectory. Processing speed accelerates during the years of early childhood, and as children get into middle childhood and early and mid-adolescence processing speed continues to accelerate, but at a slower rate. However, during late adolescence processing speed is said to accelerate to “asymptotic” (note asymptotic is usually means a given value is moving towards a limit, that limit is typically infinity) levels (Kail & Ferrer, 200, p. 1761). In other words, during late adolescence processing speed is becoming very high.

Content Knowledge

Secondary and post-secondary teachers are often tasked with teaching children and adolescence strategies to increase both content knowledge and reading comprehension (Vaughn, Swanson, Roberts, Wanzek, Stillman-Spisak, Solis, & Simmons, 2013). There are various strategies that can be used to accomplish these goals. One method for helping adolescents increase their reading comprehension focuses on content knowledge. Kintsch’s model, that involves knowledge construction and integration involves, seeking to construct knowledge and then contextualizing new knowledge with pre-existing information to make it easier to comprehend and learn the new information (Vaughn, Swanson, Roberts, Wanzek, Stillman-Spisak, Solis, & Simmons, 2013; Kintsch, 1998).

Metacognition during Adolescence

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The term “meta” means about and cognition means thought processes, so metacognition involves thinking about our thinking, or reflecting on our own thought processes (Weil, Flemming, Demonthiel, Kilford, Weil, Reese, Dolan, Jayne Blakemore, 2013). Researchers have found that metacognitive ability improves significantly with age, and they have found that metacognition peaks during the years of adolescence. However, metacognitive development has been found to stabilize during adulthood. It has been said that metacognitive processes are linked to the processes of the PFC which is still developing during adolescence and into one’s early twenties (Weil, Flemming, Demonthiel, Kilford, Weil, Reese, Dolan, Jayne Blakemore, 2013).

Reasoning and Moral Issues

Kohlberg’s Stages of Moral Development

In accordance with Piagetian tradition, psychologist Lawrence Kohlberg theorized morality as a sequence of stages that is developed rather than existing as something innate or learned (Moshman, 1999). Kohlberg’s stages of morality are subdivided among three levels of morality and are based upon the type of reasoning that is involved (1981). The preconventional level of morality indicates that a child’s behavior is motivated by the avoidance of pain and the desire for pleasure. Essentially, the child forms a sense of right or wrong based upon feeling stimuli that is good or bad. In stage one of this level, children tend to obey rules to avoid punishment with the result of obedience serving as its own reward. The second stage of this model indicates that children begin to realize that being obedient provides opportunities to earn rewards for one’s own benefit.

The second level of Kohlberg’s moral reasoning, Conventional morality, involves being a member of society and behaving in ways that are socially acceptable. Stage three of this model

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indicates the idea that individuals desire respect from others and strive to do what is asked of them (Kohlberg, 1969). A child wants to hold the “good kid” persona in order to be appreciated by others. Furthermore, stage four of Kohlberg’s reasoning implies that social systems determine morality. For instance, people conclude that society as a whole arbitrates what is morally right and that individuals alone cannot determine what is right. The social system constructs obedience to society’s rules as being right in itself (1969).

Postconventional morality is the final level of moral reasoning that holds to the belief that certain principles of morality must govern one’s actions. These ideals become more important than the rules of society (1969). Stage five addresses how people rightly follow established rules and democracy. However, as societies develop, rules must be renewed over time in order for laws to stay up to date. In the final stage of moral reasoning, individuals perceive laws as written applications of universal moral principles (Kohlberg, 1969). Individuals in this stage measure these laws against one’s conscience and determine if personal ideals are more important than a society’s particular rules.

Moral Development in Girls

A student of Kohlberg, psychologist Carol Gilligan introduces three stages of moral development in females. Gilligan challenged Kohlberg’s universal morality views and theorized that a female’s moral development is different from males and should not be misrepresented by masculine models (Woods, 1996). According to Gilligan, males view morality in terms of justice whereas females see it as caring for others and having the willingness to make sacrifices within relationships (Gilligan, 2009). Consequently, Gilligan describes morality as a process consisting of three stages. The preconventional stage, “orientation toward individual survival,” focuses on egocentric moral decisions that are best for oneself (Feldman, 2015, p. 325). For example, a child

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will demand other friends to only do activities of its own choosing. This stage is followed by a gradual transition from self-centered intentions to thinking about what is best for others in stage two. Moreover, the conventional phase of this model includes “goodness as self-sacrifice” where females begin to hold the view of sacrificing personal wishes to the desires of others (p. 325). A transition occurs from “goodness” to “truth” by taking into account the needs of self and others. For instance, the same child who insisted on participating in certain activities now decides to engage in other activities even if they are not preferred by the child in order to be a good friend to others. The final stage of Gilligan’s moral development includes “morality of nonviolence” and portrays the idea of hurting anyone as being immoral including hurting themselves (p. 325). According to Gilligan (2009), this postconventional stage supports a principle of nonviolence and is the most complex level of reasoning that some individuals may never experience. The child who is a few years older now realizes that both friends should enjoy spending time doing activities that brings mutual enjoyment.

Body Image

Adolescent boys and girls both experience physical and sexual maturation bringing forth a time of rapid growth and change. In result, adolescents can react with feelings of enjoyment or disgust where few will remain neutral in the midst of these changes. They begin to wonder if they are normal and will be accepted by their peers. Furthermore, adolescents can become preoccupied with their body and form perceptions of what is physically accepted by society. In 1935, Psychiatrist Paul Schilder first introduced the concept of body image (BI) and how an individual pictures one’s body in their own mind (Schilder, 1978). BI is a multifaceted concept because it consists of biological, cultural, and social factors. Peers play a crucial role in BI development and change among adolescents including following peer clothing trends and eating behaviors. Most adolescents set high physical standards in comparison to real and improvised

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images of the human body portrayed by the media (Pemde, 2015). Images of “beautiful women” bombard society in magazines, television shows, movies, and social media. This can be detrimental to an adolescent’s developing brain because they strive to maintain an appearance that may not be physiologically natural. Consequently, unnatural physical standards can trigger maladaptive behaviors including depression, anxiety, body dysmorphic disorder, and eating pathology.

Eating Disorders

Eating disorders are becoming more rampant in result of males and females feeling self-conscious about their personal body image. Third to obesity and asthma, eating disorders are the most prevalent chronic illness among adolescents ages 14-19 (Gonzalez et al., 2007). Such individuals take desperate measures in order to maintain cultural ideals of beauty through maladaptive eating habits. The most common forms of eating disorders are Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorder found in a population-based sample (N=1,383; 49% male) to affect 15% of adolescent females and 3% of adolescent males (Allen et al., 2013). Adolescents become discontent with the size of their waist or shape of various body parts resulting in food avoidance and maintaining a fear of weight gain. For females, it is common to see eating symptomology due to cultural standards of weight and appearance. Females idealize the body image of being thin while males prefer body images that are muscular. Consequently, 10% of anorexia and bulimia patients are male (Weltzin, 2012). Males at risk for eating disorders include athletes involved in sports that require low body weight such as wrestling or antigravitational sports like pole-vaulting or high-jumping (2012). In contrast to females, males are susceptible to excessive exercise whereas females avoid caloric intake in order to decrease body

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fat and lose weight. Females involved in aesthetically oriented sports such as ballet, gymnastics, or diving are pressured to maintain a lean body image.

According to Dancyger and colleagues (2013), eating disorders have an elevated mortality rate compared to other psychiatric disorders. Specifically, the standardized rate of mortality for AN is up to 12 times greater (5.86 per 100,000) than the general female population from the ages of 15-24. Eating disorders can cause physical complications including electrolyte imbalances, abnormalities with the heart, osteoporosis, endocrine malfunction, and gastrointestinal impairments. It is common for individuals with eating disorders to die of heart failure,

Identity and self-esteem

Adolescence can be an exciting time of exploration and breaking apart from an individual's primary support system. It is a time of self-discovery where individuals question personal beliefs, where they fit in society, and what peers they will befriend. Adolescence begins to determine one's exact nature of self and where they fit in society. According to Coleman (2014), an individual's self-concept refers to a number of dimensions such as the psychological self that deals with emotional health and body image. Another dimension is the individual's sexual self or sexual orientation. The social self includes peers, coworkers, and relationships with authority. The familial self indicates family functioning and the coping self consists of self-reliance, confidence levels, and one's mental health (2014). Self-esteem refers to a person's self-evaluation or self-worth (2014). These factors contribute to an adolescent's identity and figuring out the question "Who am I?"

According to Erikson (1963), adolescence is in the identity-versus-identity-confusion stage where individuals discover strengths, weaknesses, and roles that fit an adolescent's

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capabilities and views of themselves. During this stage individuals can discover unique personal qualities about themselves and seek to understand who they are through making choices involving occupational, political, sexual, and personal engagements. Adolescence who struggle establishing an identity can adopt socially unacceptable behaviors to express who they do not desire to be and can have difficulty forming close relationships (Feldman, 2014). As a result, their sense of self is unable to establish a grounded identity.

Summary

Adolescence is a time of transition where changes in the body and brain are occurring rapidly. Encouraging engagement in learning activities is crucial for future adolescent development and this can be a time of vibrant novelty and adventure, or a time of dangerous risk taking.

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