

Developmental Characteristics of Young Adolescents

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Early adolescence is a distinct period of human growth and development situated between childhood and adolescence. During this remarkable stage of the life cycle, young adolescents, 10- to 15-year-olds, experience rapid and significant developmental change. Understanding and responding to the unique developmental characteristics of young adolescents is central among the tenets of middle level education.

Physical Developmental Characteristics

Physical development refers to bodily changes including growth, improved gross and fine motor skills, and biological maturity. In early adolescence, the young adolescent body undergoes more developmental change than at any other time except from birth to two years old. Young adolescents' growth is accelerated and uneven (California State Department of Education, 1987; Kellough & Kellough, 2008; Manning, 2002; Scales, 1991, 2010; Wiles, Bondi, & Wiles, 2006).

Developmental growth includes significant increases in height, weight, and internal organ size as well as changes in skeletal and muscular systems (Kellough & Kellough, 2008) with growth spurts occurring about two years earlier in girls than boys (Brighton, 2007; Tanner, 1973). Because bones are growing faster than muscles, young adolescents often experience coordination issues. Actual growing pains result when muscles and tendons do not adequately protect bones (Kellough & Kellough, 2008; Wiles et al., 2006). Fluctuations in basal metabolism cause these youth to experience periods of restlessness and lassitude (Kellough & Kellough, 2008). Young adolescents, particularly European-American youth, are often physically vulnerable due to improper nutrition, poor physical fitness, and health habits (Scales, 2010) as well as high-risk behaviors such as alcohol or drug use (Johnston, O'Malley, Bachman, & Schulenberg, 2011) and sexual activity.

Puberty, a phase of physiological change triggered by the release of hormones, begins in early adolescence (Manning & Bucher, 2012). The onset of puberty is an intense developmental period with hormones signaling the development of primary sex characteristics (genitalia) and secondary sex characteristics (e.g., breast development in girls; facial hair in boys). Girls tend to mature one to two years earlier than boys (Caissy, 2002). The increased adrenal hormone production affects skeletal growth, hair production, and skin changes (Dahl, 2004). These highly visible changes and disparate rates of maturity cause many young adolescents to feel uncomfortable about differences in their physical development (Simmons & Blyth, 2008).

The young adolescent brain undergoes remarkable physical development. While brain size remains relatively unchanged, researchers report significant changes

within the brain (Blakemore & Choudhury, 2006; Casey, Giedd, & Thomas, 2000; Dahl, 2004). During early adolescence, synaptic pruning is actively restructuring the brain's neural circuitry (Giedd, 2004; Nagel, 2010). The prefrontal cortex—an area of the brain that handles executive functions such as planning, reasoning, anticipating consequences, sustaining attention, and making decisions—continues to develop. Additionally, gender-specific differences are evident in young adolescent brains (see Caskey & Ruben, 2007.)

Physical development often affects young adolescents' emotional/ psychological and social development. Practitioners (e.g., teachers or guidance counselors) and parents can alleviate young adolescents' concerns about physical development by explaining that these changes are natural and common (Strahan, L'Esperance, & Van Hoose, 2009; Wiles et al., 2006). Adults can provide accurate information, respond to questions, and encourage young adolescents to consult credible resources (Scales, 2010).

Implications for Practice

Schools can support physical development by offering responsive educational opportunities for young adolescents. Among these opportunities are health and science curricula that describe and explain physical changes (Kellough & Kellough, 2008). Schools also need to provide (a) programs that encourage adequate exercise and healthy lifestyles, (b) access to plenty of water and nutritious food during the school day, (c) appropriate instruction concerning the risks of alcohol and drug use, teenage pregnancy, and sexually transmitted diseases. Young adolescents must be afforded opportunities for physical movement and periods of rest (George & Alexander, 1993). When young adolescents avoid physical activity due to concerns about body image (Milgram, 1992), teachers can incorporate movement in classroom activities, minimize peer competition, and interrupt comparisons between early and late maturing youth.

Intellectual Development

Intellectual development refers to the increased ability of people to understand and reason. In young adolescents, intellectual development is not as visible as physical development, but it is just as intense (Stevenson, 2002; Strahan et al., 2009). During early adolescence, youth exhibit a wide range of individual intellectual development (California State Department of Education, 1987; Kellough & Kellough, 2008; Manning, 2002; Scales, 2010), including metacognition and independent thought. They tend to be curious and display wide-ranging interests (Kellough & Kellough, 2008; Scales, 2010). Typically, young adolescents are eager to learn about topics they find interesting and useful—ones that are personally relevant (Brighton, 2007). They also favor active over passive learning experiences and prefer interactions with peers during educational activities (Kellough & Kellough, 2008).

During early adolescence, youth develop the capacity for abstract thought processes (Elkind, 1981; Flavell, 2011; Piaget, 1952, 1960) though the transition to higher levels of cognitive function varies considerably across individuals. Young adolescents typically progress from concrete logical operations to acquiring the ability to develop and test hypotheses, analyze and synthesize data, grapple with complex concepts, and think reflectively (Manning, 2002). As they mature, young adolescents start to understand the nuances of metaphors, derive meaning from traditional wisdom, and experience metacognition (Kellough & Kellough, 2008). Similarly, they are increasingly able to think through ideological topics, argue a position, and challenge adult directives (Brighton, 2007; Stevenson, 2002). They form impressions of themselves through introspection and "possess keen powers of perception" (Brighton, 2007, p. 11). Additionally, they appreciate more sophisticated levels of humor (Stevenson, 2002).

To make sense of the world around them, young adolescents, as learners, build upon their individual experiences and prior knowledge (Piaget, 1960). Experience plays a central role in developing the brain and induces learners to construct meaning based upon what they already believe and understand (Bransford, Brown, & Cocking, 1999). During early adolescence, youth are more interested in real life experiences and authentic learning opportunities; they are less interested in traditional academic subjects (Kellough & Kellough, 2008). Intellectually, young adolescents seek opportunities to explore the varied facets of their environment (Brighton, 2007). They also tend to be inquisitive about adults and are often keen observers of adult behavior (Scales, 2010). Moreover, they have an enhanced ability to think about the future, anticipate their own needs, and develop personal goals (Kellough & Kellough, 2008).

Implications for Practice

Teachers need to consider the intellectual developmental differences of young adolescents when planning learning experiences. To address this diversity, teachers need to provide an assortment of educational approaches and materials that are appropriate for their students' wide-ranging cognitive abilities. For example, the concrete thinkers require more structured learning experiences, while the abstract thinkers need more challenging activities (Manning & Butcher, 2012). In addition, young adolescents need teachers who understand and know how they think (Stevenson, 2002). Teachers need to plan curricula around real life concepts (Kellough & Kellough, 2008) and supply authentic educative activities (e.g., experimentation, analysis and synthesis of data) that are meaningful for young adolescents (Scales, 2010). Because young adolescents' interests are evolving, they require opportunities for exploration throughout their educational program (Manning & Butcher). To foster intellectual development, these youth need to interact directly with their world—through discourse and hands-on experience with peers and adults (Stevenson, 2002). Similarly, young adolescents need to learn and engage in democratic principles (Brighton, 2007). Teachers can also provide

forums for them to examine the reasons for school, home, and societal rules. As adult role models, teachers can guide young adolescents to connect intellectual thought and moral reasoning.

Moral Development

Moral development is defined as an individuals' ability to make principled choices and how to treat one another. During early adolescence, many of the attitudes, beliefs, and values that young adolescents develop remain with them for life (Brighton, 2007). They move away from blanket acceptance of adult moral judgment to the development of their own personal values; however, they usually embrace the values of parents or key adults (Scales, 2010). As noted, the increased capacity of young adolescents for analytical thought, reflection, and introspection characterizes the connection between their intellectual and moral development. Young adolescents also tend to be idealistic and possess a strong sense of fairness (Kellough & Kellough, 2008; Scales, 2010). As they progress into the interpersonal conformity stage of moral development (Kohlberg, 1983), young adolescents begin to reconcile their understanding of people who care about them with their own egocentricity (Roney, 2005). They transition from a self-centered perspective to considering the rights and feelings of others (Scales, 2010). Gender affects how adolescents approach moral dilemmas—males view moral issues through a justice lens and females use an interpersonal care lens (Gilligan, 1982).

Young adolescents often pose broad, unanswerable questions about life and refuse to accept trivial responses from adults (Kellough & Kellough, 2008). They also begin to view moral issues in shades of gray rather than only in black and white. While young adolescents start to consider complex moral and ethical questions, they tend to be unprepared to cope with them. Consequently, young adolescents struggle with making sound moral and ethical choices (Kellough & Kellough, 2008).

Implications for Practice

Teachers need to be aware of the relationship between young adolescents' intellectual development and their moral reasoning (Scales, 2010). They can organize instructional experiences that foster critical thinking skills and higher levels of moral reasoning. For example, teachers plan assignments that help students to incorporate their thoughts and feelings in writing (Scales, 2010). Teachers can engage young adolescents with activities that require consensus building and application of democratic principles; teacher advisory programs and service learning can foster teamwork and build community (Brighton, 2007). In addition, teachers can design experiences for students to examine moral dilemmas and contemplate responses (Scales, 2010). Such experiences can help young adolescents to develop values, resolve problems, and set their own behavior standards (Kellough & Kellough, 2008). Young adolescents can also be afforded opportunities to examine their own choices and the consequences of these choices (Kellough & Kellough, 2008). Further, teachers can develop scenarios that prompt

young adolescents to examine concepts of fairness, justice, and equity. School programs or curricula can include a focus on societal issues such as the environment, poverty, or racial discrimination.

Spiritual Development

Spiritual development is defined as a developmental process for making meaning of one's life (Lingley, 2013). Acknowledged as a legitimate domain of human development, spiritual development is rarely referenced in education.

Understandably, concerns about the separation of church and state and First Amendment rights prompts educators to avoid this aspect of human development (Brighton, 2007). Nevertheless, the exclusion of spiritual domain limits the prospect of developmentally responsive education (Lingley, 2013). Increasingly, scholars are studying the spiritual development of children and adolescents (Roehlkepartain, Benson, King, & Wagener, 2006), which may lead to broader recognition of this developmental domain. Acceptance of the spiritual domain in middle level education is important. Young adolescents often want to explore spiritual matters, develop connections between self and others, and gain a sense of themselves and the world (Scales, 2010). Implications for practice will depend on commitments to educating the whole child.

Psychological Development

During early adolescence, psychological development is characterized by identity formation and the quest for independence. Young adolescents experience two stages of identity formation: (a) industry versus inferiority when 10- to 11-year-olds identify themselves by the tasks and skills they perform well, and (b) identity versus identity when 12- to 15-year-olds explore and experiment with various roles and experiences (Erikson, 1968). Identity development depends on the degree of exploration and commitment to an identity (see Marcia, 1980). During these years, young adolescents seek their own sense of individuality and uniqueness (Brown & Knowles, 2007). They may experience an increased awareness of their ethnic identity as well (Scales, 2010). As young adolescents search for an adult identity and adult acceptance, they strive to maintain peer approval (Kellough & Kellough, 2008). As young adolescents expand their affiliations to include family and peers, feelings of conflict may arise due to competing allegiances (Wiles et al., 2006). The search for identity and self-discovery may intensify feelings of vulnerability, as they become attuned to the differences between self and others (Scales, 2010).

Typically, early adolescence is intense and unpredictable (Scales, 2010). Young adolescents have a tendency to be moody, restless, and may exhibit erratic and inconsistent behavior including anxiety, bravado, and fluctuations between superiority and inferiority (Kellough & Kellough, 2008; Scales, 2010; Wiles et al., 2006). They are often self-conscious and highly sensitive to criticism of their perceived personal shortcomings (Scales, 2010). Young adolescents' self-esteem levels are generally adequate and improve over time, while self-competence in

academic subjects, sports, and creative activities decline (Scales, 2010). Emotionally-charged situations may trigger young adolescents to resort to childish behaviors, exaggerate simple events, and vocalize naive opinions or one-sided arguments. Their emotional variability makes young adolescents at risk of making decisions with negative consequences (Milgram, 1992) and believing that their experiences, feelings, and problems are unique (Scales, 2010).

Implications for Practice

Teachers need to support young adolescents' quest for identity formation through curricular experiences, instructional approaches, and opportunities for exploration. Young adolescents need frequent opportunities to explore and experiment with various roles and experiences within the classroom context. Teachers can provide educative experiences such as role-playing, drama, and reading that foster identity formation. These experiences can help young adolescents realize that their challenges are not unique (Kellough & Kellough, 2008). In addition, teachers can incorporate opportunities for student choice and self-assessment. Teachers can also describe how self-esteem affects many aspects of their development and design experiences that build young adolescents' self-esteem. Likewise, teachers can acknowledge the importance of friendships and explain that shifting peer allegiances are normal (Scales, 2010).

To foster successful experiences for every young adolescent, schools need to provide organizational structures such as teaming and advisory programs. These structures help to ensure that every young adolescent is known well by at least one adult and has regular occasions to experience positive relationships with peers. Young adolescents need opportunities to form relationships with adults who understand them and who are willing to support their development. Educational programs and practices can be used to promote an atmosphere of friendliness, concern, and group cohesiveness (Kellough & Kellough, 2008). Young adolescents deserve school environments that are free from harsh criticism, humiliation, and sarcasm.

Social-Emotional Development

Social-emotional development concerns a person's capacity for mature interactions with individuals and groups. In early adolescence, social-emotional maturity often lags behind physical and intellectual development. Young adolescents have a strong need to belong to a group—with peer approval becoming more important and adult approval decreasing in importance (Scales, 2010). As young adolescents mature socially and emotionally, they may experience conflicting loyalties to peer group and family (Wiles et al., 2006). Because young adolescents are fiercely loyal to their peer group (Kellough & Kellough, 2008), they search for social stature within the peer group. Young adolescents often experiment with new behaviors as they seek social position and personal identity (Scales, 2010). They are also torn between their desire to conform to the peer group norms and their aspiration to be

distinctive and independent (Brighton, 2007). Young adolescents experience a variety of peer associations—positive and negative. During early adolescence, youth typically widen their circle of friends (Brighton, 2007) and may experience feelings of romantic or sexual attraction (Scales, 2010). Issues of sexual orientation and identity can also arise at this time (Brighton, 2007). Negative peer associations, particularly bullying, also become more prevalent in the middle school years. Young adolescents are also socially and emotionally vulnerable due to influences of media (Kellough & Kellough, 2008; Scales, 2010).

Young adolescents tend to emulate their esteemed peers and non-parent adults. While they prefer to make their own choices, the family remains a critical factor in final decision-making (Kellough & Kellough, 2008). Young adolescents may be rebellious toward their parents and adults, yet tend to depend on them (Scales, 2010). Young adolescents also frequently test the limits of acceptable behavior and challenge adult authority. They may overreact to social situations, ridicule others, and feel embarrassment (Scales, 2010). When experiencing adult rejection, young adolescents may seek the seemingly secure social environment of their peer group (Kellough & Kellough, 2008). Importantly, teachers report that addressing young adolescents' social and emotional needs may improve their learning and academic achievement (Raphael & Burke, 2012)

Implications for Practice

Because of young adolescents' need for affiliation and belonging, they must have opportunities to form affirming and healthy relationships with peers. Teachers must recognize the importance of peer relationships and friendship (Scales, 2010) and provide occasions for positive peer interactions (Kellough & Kellough, 2008). Teachers can design cooperative learning activities and collaborative experiences for young adolescents to interact productively with peers (Scales, 2010). Teachers can also plan activities that engage students in argumentation or debate in academic settings as well as those that simulate social situations through role-plays or simulations (Kellough & Kellough, 2008).

Schools play a key role in providing young adolescents with educative programs that promote freedom and independence within a safe space. Organizational structures such as teaming and service learning advance positive places for young adolescent's growth. School districts need to support programs that interrupt negative peer interactions, particularly bullying, that impedes the healthy development of youth. Schools can also ensure young adolescents' access to student government, service clubs, or other leadership groups that allow them to develop their own projects and guidelines for behavior (Kellough & Kellough, 2008).

Conclusion

Young adolescents warrant educational experiences and schools that are organized to address their physical, intellectual, emotional/psychological, moral/ethical, spiritual, and social developmental characteristics. Practitioners, parents, and others who work with young adolescents need to be aware of both subtle and obvious changes in developmental characteristics. Such changes can give adults insights into the challenges facing young adolescents and illuminate possible reasons for shifts in their abilities and behaviors.

The middle school founders emphasized the need to consider young adolescents when developing education environmental and organizational structures. The desire for developmental responsiveness was what set the middle school apart from its predecessor, the junior high. Today's educators and policymakers need to continue their support of initiatives that afford young adolescents with developmentally appropriate learning experiences and environments.