

Overview of Adolescent Development

The World Book Dictionary defines an adolescent as “a person growing up from childhood to manhood or womanhood.” It comes from the Latin word meaning “to grow up.” Common usage of the term to represent the period of development between childhood and adulthood began in the 1600’s (Bakan, 1972). However, until G. Stanley Hall completed his two-volume work Adolescence in 1916, the study of this developmental period was mainly done in a framework of the “philosopher-educator” (Muuss, 1996, p 1). Hall, considered the father of scientific study of adolescence, brought a new approach to the study of this life stage.

Adolescence involves multiple dimensions of maturation. It has been characterized as the period in the human life cycle during which the individual must establish a sense of personal identity (Muuss, 1996). In the early years of adolescence, individuals begin making decisions about self-worth, worth of others, the “value of education, health, work, and citizenship” (Jackson & Hornbeck, 1989, p 831). It involves maturation of neurological organization in the brain, physical maturation, maturation of the reproduction system, development of a sense of self as an adult, acquisition of adult status, and development of self-control in interaction in the community (Newton, 1995). Adolescence has, in our culture, become a highly visible phenomenon which has been discussed at great lengths, both glamorized, and depicted as horrible and painful. Understanding this phenomenon will help parents and educators develop a broader, more accurate perspective of the adolescence period of development.

One thing to keep in mind when considering adolescents is that children at this stage of development are, in fact, still children. They are not miniature adults. Not by far. Many adolescents bodies have reached near adult status, but that does not make treating them like adults appropriate. Rather than viewing them as miniature adults, it is more accurate to consider them near-adult-sized children. Throughout most of the years of the adolescent stage, they behave more like children than they do adults. Considering them anything else but children in a latter stage of development is incorrect.

For that reason, much of what was covered in the previous chapter is very applicable to adolescents. In this chapter, some of the key differences will be highlighted, but much of adolescent development is really an extension of development in previous stages.

The Phenomenon of Adolescence

The period of adolescence is usually marked by significant physical changes that occur at about the same time as rapid social and emotional changes. Some theorists, in fact, explain the social and emotional changes as a result of the physical changes (Newton, 1995). Many times, this period is characterized as a time of tension, crisis, and turmoil through which the adolescent passes on the way to adulthood. There are, perhaps, more myths about this developmental phase than any other. While it is certain that accomplishing all the tasks of adolescence is a challenge and has potential pitfalls, the truth is that over all time, adults became adults without skipping these developmental years and, within cultural contexts of the times, they accomplished the necessary developmental tasks too.

Certain aspects of adolescence are much the same now as they have been for ages. The processes linked to physical development are, for the most part about the

same now as they have been over time. However, one thing that has changed is the age of onset. Research has shown that the age of onset for adolescents is getting younger over time. There has been a trend of adolescence onset occurring about four months earlier every decade. In 1995 (Newton), studies suggested the average age of menarche in girls, one widely used marker, was 12.8 years. In the 1840's this age was closer to 17 (Santrock, 1998). Much study has been done on the effects of the timing of the onset of adolescence and in one study of girls, it was found that early physical development added to the psychological and emotional distress already associated with adolescence (Ge, Conger, & Elder, 1996).

While physically linked development has remained fairly stable, socially and culturally linked development has changed drastically. Where, in the past, children would often marry and start families of their own within a few years of puberty, now much more time must pass before the adolescent can function as an adult in the adult world. The need for higher levels of education, more vocational training, and restrictions on things like signing contracts or leases have created a culture in which adolescents are physically much like adults, but who cannot function in that culture as an adult. Therefore, efforts to develop sense of self as an adult and acquire status as an adult in society are hindered. Generally, the adolescent cannot move out of the parental home, with financial independence until around the ages of 20-23. The effect is a dilation of adolescence from what once averaged age 13 to 18 to what is now more like age 11 to 22 (Newton, 1995).

Another distinct difference in the phenomenon of adolescence is the environment in which today's adolescents spend the majority of their time as compared to that of the past. Most people asked would recognize that the school experience and adolescents' preferences for spending free time together creates a situation where adolescents are around peers far more than they are around adults. This is significant since leisure activities in adolescence are an integral part of the process of social development (Colley, Griffiths, Hugh, Landers, & Jaggli, 1996). In the distant past, as a gross generalization, adolescents were around siblings and other members of the family on the farm or apprenticed into a skilled labor. Even into the late 1800's, many adolescents worked as labor for farms, factories, and industries (Bakan, 1972). In such cases, their contact with adults was much more significant than now where they are in a classroom with 20-30 other students and one teacher. It can be postulated that this tendency to be around other adolescents rather than adults contributes to delays in development of sense of self as an adult. In any case, the fact that the length of the adolescence period is now far longer than it was in the days of the settlers is clear (Santrock, 1998).

Other environmental factors that place stress on the process of adolescence are the high presence of violence, availability of drugs and alcohol, ideas about sex, divorce, and general mobility of families (Santrock, 1998). With these factors eroding the stability of the adolescent world, the challenges of making the transition to adulthood are made more difficult and success at developing adult independence and autonomy takes more time. Media influences, too, have an effect in shaping the identity of adolescents. One study concludes that young viewers of soap operas on television are still shaping their expectations about gender roles. The younger the teen viewer, the more influential the media portrayals. (Larson, 1996).

The result of all of this is what has been referred to as a time of storm and stress where adolescents worry about who they are (Erikson, 1968) and as a time of growth "that moves the individual from childish dependence on parents to self-sufficiency or

autonomy in various areas of living” (Newton, 1968 p 23). Through this process, difficult as it may seem, “the vast majority of adolescents successfully negotiate the path from childhood to adulthood” (Santrock, 1998, p 15). Most make the journey into fully functioning adulthood despite developmental “bumps in the road” they encounter along the way. Parents and educators, when dealing with members of this category-between-categories we call adolescence must keep in mind this big picture view. The child developing into the adult begins this multifaceted journey around age 11 and may spend as much as the next 12 years in it. On the other side of the journey emerges an adult, more or less autonomous, and more or less independent of parents. Understanding the complexity of the process and factors that make it so complex empowers the adult who looks on to be, if nothing else, patient and to make sound judgements about how the process is going.

The Processes of Adolescent Development

Adolescent development should not be viewed as a discrete period of development. Although it has some particularly unique characteristics, it is part of a lifelong process and is “connected to development and experiences in childhood and adulthood” (Santrock, 1998, p 24). Development in the adolescent years prepares individuals for adult status (Sigelman & Shaffer, 1991).

Adolescent development involves many facets. Beginning with puberty, there is great increases in physical development, cognitive development and social development. Newton (1995) has depicted this process of development in a very convenient presentation. He represents the process of adolescent development as a passage from preadolescence to adulthood. The period of adolescence is divided into three sequential stages.

The first stage is withdrawal. Corresponding to the beginning of the growth spurt, adolescents begin to become more secretive and self-conscious about changes to their bodies. At the same time, they begin to develop peer relationships and reduce dependency on relationships with family members, replacing them with relationships with peers. They also begin to examine roles, beliefs, and values. This takes place roughly from the onset of puberty until around age 13.

The next stage is isolation for preparation which lasts about two years. This is a period of introspection and interaction with peers rather than the adult world. The period of isolation allows time to integrate “the enlarged adult body, the reproductively mature body, and the new sense of self into a unified person” (p 27). Removed to some degree (by choice) from family interactions, they are exposed to other systems or moral values and religious beliefs and begin the process of resolving conflicts.

The last stage is reentry to society as an adult. In this stage adolescents begin the process of reentry into family and society as an adult. In this stage, they integrate their experiences into some new personal interpretation. This reentry stage lasts until the year of legal adult status. At this time, Newton identifies their state as pseudoadult until the time the individuals are truly able to function in society as an independent adult.

Physical Development

Physical development during adolescence is clearly dramatic. Although both physical and sexual development begins with conception, adolescence represents a period of rapid changes in these areas. Not only does the body grow in size to adult

status, but also the body develops from “relatively undifferentiated body shape to a gender-distinctive” shape of either an adult male or female (Newton, 1995, p 45).

Physical development during the period of adolescence involves changes in four areas. Changes begin in the endocrinological system which starts to create large quantities of hormones. Following these changes, the body begins to grow. Increases in height and weight accompany growth of bones and internal organs. Likewise, there is a maturation of the reproductive system that takes place (Newton, 1995). Another area of physical development is changes in the brain (Santrock, 1998).

The triggering process for these changes occurs in the brain. The hypothalamus, the part of the brain that serves as one of the major communications centers to the body, begins to send signals to the pituitary gland. The pituitary gland is the master gland of the body and responds to the signal from the hypothalamus by releasing various hormones. These hormones, in turn, begin development of various other changes such as overall growth and maturation of the reproductive system (Newton, 1995).

This process begins, as evidenced by the onset of physical growth spurt, around 9 1/2 years of age for girls and between 10 1/2 and 16 years of age for boys. This rapid growth ends around 14 1/2 years of age for girls and between 13 1/2 and 19 years of age for boys. As the body is getting taller, it is also becoming heavier. What is going on visibly is only the outward evidence of what is going on internally as weight increases and organs develop in size (Newton, 1995).

Maturation of the reproductive system begins to be noticeable at different times in male and females. The first signs of development in the reproductive system for girls are changes in the breasts beginning between ages 8 and 13 and ending between ages 13 and 18. Evidence of maturation of the internal reproductive organs is generally considered the presence of menstruation. Menarche occurs for girls generally between the age of 10 and 16 1/2. In males, development of reproductive system generally begins between the age of 9 1/2 and 13 1/2 and is complete somewhere between the age of 13 1/2 and 17 (Newton, 1995).

It is easy to see that physical development can vary greatly from one adolescent to another. It also varies within the same individual. All body parts do not begin reaching adult size evenly -- hands and feet may grow faster than are the rest of the body (Understanding Psychology, 1991).

Adolescents who are adjusting to changes in their body are naturally preoccupied with their physical appearance. This attention to bodily image is strong throughout adolescence, but is especially strong during puberty. Frequently, young adolescents are more dissatisfied with their bodies than are older adolescents. Girls tend to be even more dissatisfied than boys (Santrock, 1998). In general, adolescents, are often more concerned about their physical development than character or intellectual qualities (Sigelman & Shaffer, 1991).

Adolescence is also a time of brain and neurological development. “While no new neurons develop during adolescence, there is much growth, development and change in the brain” (Newton, 1995, p 33). There is clear evidence that brain size increases during adolescence. One obvious measure of this is increase in head circumference (Santrock, 1998).

Besides enlargement of the brain, other changes are going on. The brain is essentially a network of cells that transmits electric impulses. Brain cells are called neurons. Each neuron cell has finger-like protrusions called dendrites. Dendrites project from one brain cell to other cells. They form synaptic connections with other

neurons. While the brain is growing larger, great changes on the cellular level are taking place. Many of the synapses break, disconnecting previously connected brain cells. Many new synaptic connections are formed. Dendrites branch out to make more connections which leads to more complex brain cell networks. At this time there is a process taking place called myelination where the proteins that insulate the brain cell increase and make the transmission of electric impulses more efficient.

One effect of all of this change is a reorganization of the connections between the left brain and right brain hemispheres (the corpus callosum). The reorganization involves the breaking of general diffuse connections and the formation of new specific connections. As a result the brain two hemispheres can operate more independently (Newton, 1995).

In summation, brain and neurological development during adolescence amounts to the rewiring and enlargement of the brain. This total rework of brain connections make it capable of more efficient mental processing. The result of these changes in the brain is a “creature with higher and more complex cognitive ability” and wider range of behavior (Newton, 1995, p 33). With the neurological and brain development comes changes in how the brain operates. As the brain matures there is a natural development of cognitive ability.

Cognitive Development

At the same time the body is changing, the mind is changing too. “The child who could reason logically about real world problems becomes the adolescent who can think systematically and abstractly about worlds that do not even exist or propositions that flatly contradict reality” (Sigelman & Shaffer, 1991, p 574). It is during the period of adolescence that Piaget’s formal operational thought stage is reached. One primary difference between formal operational thought and concrete operational thought (the stage that Piaget places before formal operational thought) is the degree of abstractness the adolescent can handle (Muuss, 1996).

The presence of this higher level of think is in part indicated by increases in verbal problem solving ability. Where before, in concrete operational stage, it would be necessary to see concrete examples to solve certain problems, the formal operational thinker can solve them merely by hear the verbal presentation. The abstract nature of adolescent thought also points to the presence of formal operational thinking. There is also a tendency to think about the process of thought itself (Santrock, 1998).

Adolescents are no longer limited to concrete experiences as basis of their thought. They can deal with hypothetical cases, “what if’s,” and make-believe (Santrock, 1998). They develop the capacity to systematically form and test hypotheses. They learn to understand abstract theories and can grasp philosophy (Sigelman & Shaffer, 1991). As they develop this ability, the complexity of their abstractions increases. In the end, when the process has reached completion the young adult has developed some means of organizing systems of abstractions (Newton, 1995).

Higher level thinking abilities also illuminate, to the adolescent, the differences “between what is and what should be” (Sigelman & Shaffer, 1991, p 574). The adolescent begins to think about how things should be. In this mode, the adolescent tends to be overly idealistic (Santrock, 1998). They test their world with the new skills that come from the capacity to reason logically. When parts of their world fail to meet their expectations that all should be logical they are sometimes rebellious (Sigelman & Shaffer, 1991).

The capacity to think in broad abstract terms facilitates the ability to take on the perspective of others (Santrock, 1998). Coupled with the preoccupation with self, the adolescent begins to consider how they must appear to others. The adolescent develops the ability to look at self from the viewpoint of others. "David Elkind calls this 'playing to an imaginary audience'" (Newton, 1995, p 42).

As a result, a great deal of cognitive development relates to the development of a sense of identity. During the period of adolescence, individuals, according to Erikson, must examine "who they are, what they are all about, and where they are going in life" (Santrock, 1998, p 322). He characterized adolescence as the period in which the individual must establish a sense of personal identity (Muuss, 1996). Much energy is spent on this task as adolescents "obsessively posture as a result of self-awareness" concerned with all aspects of image such as how they stand, smile, walk or talk (Newton, 1995, p 73).

By the late adolescence, many have developed a good sense of who they are. They have resolved what Erikson's called their identity crisis. As the mind and body mature, the adolescent begins to view the world in new ways. They begin to describe themselves in terms of their values and philosophies about life. With their identity established, their approach to social relationships change. By the end of adolescence, more emphasis is placed on personality compatibility in selecting friends (Sigelman & Shaffer, 1991).

In Newton's model, this identity formation -- along with development of moral reasoning and values -- is the end product of the withdrawal, isolation, and reentry of the adolescent from and back into society and the family (1995). Newton's model is not totally unlike James Marcia's representation of changes that go on in adolescent development of self. Marcia presents the process as three phases he calls deconstruction, reconstruction, and consolidation (Santrock, 1994).

Moral development also increases as the ability to use higher order thinking increases. The questioning of why things are as they are begins in preadolescence. By age 13, most are beginning to question values of the family and other authorities (Newton, 1995). What must follow is the replacement of blind obedience with behavior based on the development of moral reasoning. Lawrence Kohlberg developed a model of moral reasoning that moves individuals through six stages of development (Muuss, 1996). At the bottom level, all moral thinking is based on external consequences. In the highest level, moral decisions are based on an overarching internal belief system (Santrock, 1998). Many adolescents reach a level of moral development where they recognize the need for law and order in the social system (Sigelman & Shaffer, 1991). This would place them on Kohlberg's fifth level which is the normal adult perspective about morality and values (Newton, 1995).

Social Development

The process of adolescence involves enormous changes in social behavior. These changes cannot be examined except in the context of the physical and cognitive changes that are going on at the same time. Much of social development is tied to identity formation and moral development (Newton, 1995).

The first evidence of social change is a progressive gravitation away from family toward peers instead as most prominent figures in social life. Adolescents become much more involved in peer activities and spend less time at home (Sigelman & Shaffer, 1991). This is represented by Newton (1995) as the withdrawal and isolation of

adolescents from their families and society as a whole. They turn to peers as the primary source of their social interaction.

In the withdrawal stage, adolescent egocentrism is at its height. Social interactions are primarily with same sex peer groups who are seen as an audience for the adolescent. Playing to this audience and responding to feedback from this audience are high priorities of the individual in this stage. This same sex peer group provides a social context for opinions ranging from fashion to extracurricular activities. In fact, Harry Stack Sullivan, argued to be the most influential theorist to discuss friendships in this stage of life, believed that “there is a dramatic increase in the psychological importance and intimacy of close friends during early adolescence” (Santrock, 1994, p 218).

In the isolation stage, beginning around age 13, social interaction begins to increasingly involve mixed groups. It is not uncommon to see special opposite sex relationships in this stage as well. The increased closeness of these relationships require the adolescent to develop more sophisticated social ability (Santrock, 1994).

The reentry stage is marked by deeper intimacy in relationships. Social activities begin to favor organized groups. “As the adolescent approaches adulthood, the importance of peer group diminishes, leaving an intimate opposite-sex relationship and some special friends as primary.” This development “corresponds to increasing individualization of the adolescent and his comfort with adult identity” (Newton, 1995, p 127).

Throughout this development, the process need not be hostile. “Most adolescents maintain good relationship with their parents. . . .” However, the patterns of interaction in the family must adapt to the changes that occur during adolescence. Adolescents generally begin to have greater say so in decisions that affect their lives (Sigelman & Shaffer, 1991).