# **Chapter 6: Adolescence**

Adolescence is a period that begins with puberty and ends with the transition to adulthood (approximately ages 10–18). Physical changes associated with puberty are triggered by hormones. Changes happen at different rates in distinct parts of the brain and increase adolescents' propensity for risky behavior. Cognitive changes include improvements in complex and abstract thought. Adolescents' relationships with parents go through a period of redefinition in which adolescents become more autonomous. Peer relationships are important sources of support, but companionship during adolescence can also promote problem behaviors. Identity formation occurs as adolescents explore and commit to different roles and ideological positions. Because so much is happening in these years, psychologists have focused a great deal of attention on the period of adolescence.

## Learning Objectives: Physical Development in Adolescence

- Summarize the overall physical growth
- Describe the changes that occur during puberty
- Describe the changes in brain maturation
- Describe the changes in sleep
- Describe gender intensification
- Identify nutritional concerns
- Describe eating disorders
- Explain the prevalence, risk factors, and consequences of adolescent pregnancy

### **Growth in Adolescence**

**Puberty** *is* a period of rapid growth and sexual maturation. These changes begin sometime between eight and fourteen. Girls begin puberty at around ten years of age and boys begin approximately two years later. Pubertal changes take around three to four years to complete. Adolescents experience an overall physical growth spurt. *The growth proceeds from the extremities toward the torso. This is referred to as distalproximal development. First the hands grow, then the arms, and finally the torso. The overall physical growth spurt results in 10-11 inches of added height and 50 to 75 pounds of increased weight. The head begins to grow sometime after the feet have gone through their period of growth. Growth of the head is preceded by growth of the ears, nose, and lips. The difference in these patterns of growth result in adolescents appearing awkward and out-of-proportion. As the torso grows, so do the internal organs. The heart and lungs experience dramatic growth during this period.* 

During childhood, boys and girls are quite similar in height and weight. However, gender differences become apparent during adolescence. From approximately age ten to fourteen, the average girl is taller, but not heavier, than the average boy. After that, the average boy becomes

both taller and heavier, although individual differences are certainly noted. As adolescents physically mature, weight differences are more noteworthy than height differences. At eighteen years of age, those that are heaviest weigh almost twice as much as the lightest, but the tallest teens are only about 10% taller than the shortest (Seifert, 2012).

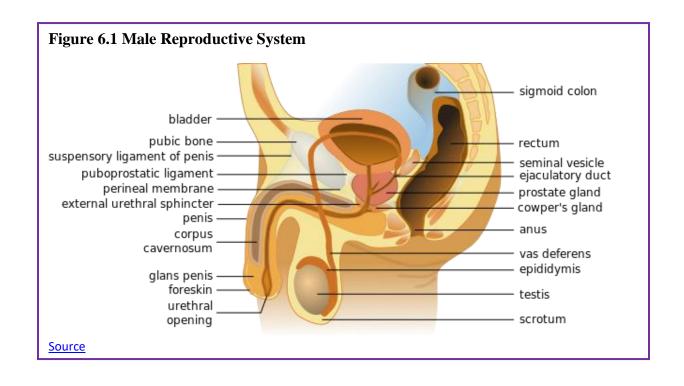
Both height and weight can certainly be sensitive issues for some teenagers. Most modern societies, and the teenagers in them, tend to favor relatively short women and tall men, as well as a somewhat thin body build, especially for girls and women. Yet, neither socially preferred height nor thinness is the destiny for many individuals. Being overweight, in particular, has become a common, serious problem in modern society due to the prevalence of diets high in fat and lifestyles low in activity (Tartamella et al., 2004). The educational system has, unfortunately, contributed to the problem as well by gradually restricting the number of physical education courses and classes in the past two decades.

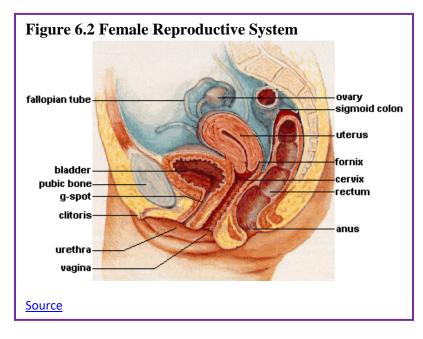
Average height and weight are also related somewhat to racial and ethnic background. In general, children of Asian background tend to be slightly shorter than children of European and North American background. The latter in turn tend to be shorter than children from African societies (Eveleth & Tanner, 1990). Body shape differs slightly as well, though the differences are not always visible until after puberty. Asian background youth tend to have arms and legs that are a bit short relative to their torsos, and African background youth tend to have relatively long arms and legs. The differences are only averages, as there are large individual differences as well.

## **Sexual Development**

Typically, the growth spurt is followed by the development of sexual maturity. Sexual changes are divided into two categories: Primary sexual characteristics and secondary sexual characteristics. **Primary sexual characteristics** are changes in the reproductive organs. For males, this includes growth of the testes, penis, scrotum, and **spermarche** or first ejaculation of semen. This occurs between 11 and 15 years of age. For females, primary characteristics include growth of the uterus and **menarche** or the first menstrual period. The female gametes, which are stored in the ovaries, are present at birth, but are immature. Each ovary contains about 400,000 gametes, but only 500 will become mature eggs (Crooks & Baur, 2007). Beginning at puberty, one ovum ripens and is released about every 28 days during the menstrual cycle. Stress and higher percentage of body fat can bring menstruation at younger ages.

Male Anatomy: Males have both internal and external genitalia that are responsible for procreation and sexual intercourse. Males produce their sperm on a cycle, and unlike the female's ovulation cycle, the male sperm production cycle is constantly producing millions of sperm daily. The main male sex organs are the penis and the testicles, the latter of which produce semen and sperm. The semen and sperm, as a result of sexual intercourse, can fertilize an ovum in the female's body; the fertilized ovum (zygote) develops into a fetus which is later born as a child.





Female Anatomy: Female external genitalia is collectively known as the vulva, which includes the mons veneris, labia majora, labia minora, clitoris, vaginal opening, and urethral opening. Female internal reproductive organs consist of the vagina, uterus, fallopian tubes, and ovaries. The uterus hosts the developing fetus, produces vaginal and uterine secretions, and passes the male's sperm through to the fallopian tubes while the ovaries release the eggs. A female is born with all her eggs already produced. The vagina is attached to the

uterus through the cervix, while the uterus is attached to the ovaries via the fallopian tubes. Females have a monthly reproductive cycle; at certain intervals the ovaries release an egg, which passes through the fallopian tube into the uterus. If, in this transit, it meets with sperm, the sperm might penetrate and merge with the egg, fertilizing it. If not fertilized, the egg is flushed out of the system through menstruation.

Secondary sexual characteristics are visible physical changes not directly linked to reproduction but signal sexual maturity. For males this includes broader shoulders and a lower voice as the larynx grows. Hair becomes coarser and darker, and hair growth occurs in the pubic area, under the arms and on the face. For females, breast development occurs around age 10, although full development takes several years. Hips broaden, and pubic and underarm hair develops and also becomes darker and coarser.

Figure 6.3 First time shaving

Source

Acne: An unpleasant consequence of the hormonal changes in puberty is acne, defined as pimples on the skin due to overactive sebaceous (oil-producing) glands (Dolgin, 2011). These glands develop at a greater speed than the skin ducts that discharges the oil. Consequently, the ducts can become blocked with dead skin and acne will develop. According to the University of California at Los Angeles Medical Center (2000), approximately 85% of adolescents develop acne, and boys develop acne more than girls because of greater levels of testosterone in their systems (Dolgin, 2011). Experiencing acne can lead the adolescent to withdraw socially, especially if they are self-conscious about their skin or teased (Goodman, 2006).

Effects of Pubertal Age: The age of puberty is getting younger for children throughout the world. According to Euling et al. (2008) data are sufficient to suggest a trend toward an earlier breast development onset and menarche in girls. A century ago the average age of a girl's first period in the United States and Europe was 16, while today it is around 13. Because there is no clear marker of puberty for boys, it is harder to determine if boys are maturing earlier too. In addition to better nutrition, less positive reasons associated with early puberty for girls include increased stress, obesity, and endocrine disrupting chemicals.

Cultural differences are noted with Asian-American girls, on average, developing last, while African American girls enter puberty the earliest. Hispanic girls start puberty the second earliest, while European-American girls rank third in their age of starting puberty. Although African-American girls are typically the first to develop, they are less likely to experience negative consequences of early puberty when compared to European-American girls (Weir, 2016).

Research has demonstrated mental health problems linked to children who begin puberty earlier than their peers. For girls, early puberty is associated with depression, substance use, eating disorders, disruptive behavior disorders, and early sexual behavior (Graber, 2013). Early maturing girls demonstrate more anxiety and less confidence in their relationships with family and friends, and they compare themselves more negatively to their peers (Weir, 2016).

Problems with early puberty seem to be due to the mismatch between the child's appearance and the way she acts and thinks. Adults especially may assume the child is more capable than she actually is, and parents might grant more freedom than the child's age would indicate. For girls, the emphasis on physical attractiveness and sexuality is emphasized at puberty and they may lack effective coping strategies to deal with the attention they may receive.

Figure 6.4

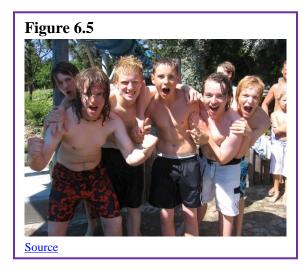
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Additionally, mental health problems are more likely to occur when the child is among the first in his or her peer group to develop. Because the preadolescent time is one of not wanting to appear different, early developing children stand out among their peer group and gravitate toward those who are older. For girls, this results in them interacting with older peers who engage in risky behaviors such as substance use and early sexual behavior (Weir, 2016).

Boys also see changes in their emotional functioning at puberty. According to Mendle, Harden, Brooks-Gunn, and Graber (2010), while most boys experienced a decrease in depressive symptoms during puberty, boys who began puberty earlier and exhibited a rapid tempo, or a fast rate of change, actually increased in depressive symptoms. The effects of pubertal tempo were stronger than those of

pubertal timing, suggesting that rapid pubertal change in boys may be a more important risk factor than the timing of development. In a further study to better analyze the reasons for this change, Mendle et al. (2012) found that both early maturing boys and rapidly maturing boys displayed decrements in the quality of their peer relationships as they moved into early adolescence, whereas boys with more typical timing and tempo development actually experienced improvements in peer relationships. The researchers concluded that the transition in peer relationships may be especially challenging for boys whose pubertal maturation differs significantly from those of others their age. Consequences for boys attaining early puberty were increased odds of cigarette, alcohol, or another drug use (Dudovitz, et al., 2015).

Gender Role Intensification: At about the same time that puberty accentuates gender, role differences also accentuate for at least some teenagers. Some girls who excelled at math or science in elementary school, may curb their enthusiasm and displays of success at these subjects for fear of limiting their popularity or attractiveness as girls (Taylor et al/, 1995; Sadker, 2004). Some boys who were not especially interested in sports previously may begin dedicating themselves to athletics to affirm their masculinity in the eyes of others. Some boys and girls who once worked together successfully on class projects may no longer feel comfortable



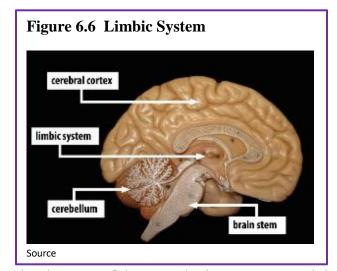
doing so, or alternatively may now seek to be working partners, but for social rather than academic reasons. Such changes do not affect all youngsters equally, nor affect any one youngster equally on all occasions. An individual may act like a young adult on one day, but more like a child the next.

### **Adolescent Brain**

The brain undergoes dramatic changes during adolescence. Although it does not get larger, it matures by becoming more interconnected and specialized (Giedd, 2015). The myelination and

development of connections between neurons continues. This results in an increase in the white matter of the brain and allows the adolescent to make significant improvements in their thinking and processing skills. Different brain areas become myelinated at different times. For example, the brain's language areas undergo myelination during the first 13 years. Completed insulation of the axons consolidates these language skills but makes it more difficult to learn a second language. With greater myelination, however, comes diminished plasticity as a myelin coating inhibits the growth of new connections (Dobbs, 2012).

Even as the connections between neurons are strengthened, synaptic pruning occurs more than during childhood as the brain adapts to changes in the environment. This synaptic pruning causes the gray matter of the brain, or the cortex, to become thinner but more efficient (Dobbs, 2012). The corpus callosum, which connects the two hemispheres, continues to thicken allowing for stronger connections between brain areas. Additionally, the hippocampus becomes more strongly connected to the frontal lobes, allowing for greater integration of memory and experiences into our decision making.



The **limbic system**, which regulates emotion and reward, is linked to the hormonal changes that occur at puberty. The limbic system is also related to novelty seeking and a shift toward interacting with peers. In contrast, the **prefrontal cortex** which is involved in the control of impulses, organization, planning, and making good decisions, does not fully develop until the mid-20s. According to Giedd (2015) the significant aspect of the later developing prefrontal cortex and early development of the limbic system is the "mismatch" in timing between the two. The approximately ten years that separates the

development of these two brain areas can result in risky behavior, poor decision making, and weak emotional control for the adolescent. When puberty begins earlier, this mismatch extends even further.

Teens often take more risks than adults and according to research it is because they weigh risks and rewards differently than adults do (Dobbs, 2012). For adolescents the brain's sensitivity to the neurotransmitter dopamine peaks, and **dopamine** is involved in reward circuits, so the possible rewards outweighs the risks. Adolescents respond especially strongly to social rewards during activities, and they prefer the company of others their same age. Chein et al. (2011) found that peers sensitize brain regions associated with potential rewards. For example, adolescent drivers make risky driving decisions when with friends to impress them, and teens are much more likely to commit crimes together in comparison to adults (30 and older) who commit them alone (Steinberg et al., 2017). In addition to dopamine, the adolescent brain is affected by **oxytocin** which facilitates bonding and makes social connections more rewarding. With both dopamine and oxytocin engaged, it is no wonder that adolescents seek peers and excitement in their lives that could end up actually harming them.

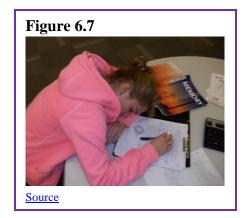
Because of all the changes that occur in the adolescent brain, the chances for abnormal development can occur, including mental illness. In fact, 50% of the mental illness occurs by the age 14 and 75% occurs by age 24 (Giedd, 2015). Additionally, during this period of development the adolescent brain is especially vulnerable to damage from drug exposure. For example, repeated exposure to marijuana can affect cellular activity in the endocannabinoid system. Consequently, adolescents are more sensitive to the effects of repeated marijuana exposure (Weir, 2015).

However, researchers have also focused on the highly adaptive qualities of the adolescent brain which allow the adolescent to move away from the family towards the outside world (Dobbs, 2012; Giedd, 2015). Novelty seeking and risk taking can generate positive outcomes including meeting new people and seeking out new situations. Separating from the family and moving into new relationships and different experiences are actually quite adaptive for society.

## **Adolescent Sleep**

According to the National Sleep Foundation (NSF) (2016), adolescents need about 8 to 10 hours of sleep each night to function best. The most recent Sleep in America poll in 2006 indicated that adolescents between sixth and twelfth grade were not getting the recommended amount of sleep. On average adolescents only received 7½ hours of sleep per night on school nights with younger adolescents getting more than older ones (8.4 hours for sixth graders and only 6.9 hours for those in twelfth grade). For the older adolescents, only about one in ten (9%) get an optimal amount of sleep, and they are more likely to experience negative consequences the following day. These include feeling too tired or sleepy, being cranky or irritable, falling asleep in school, having a depressed mood, and drinking caffeinated beverages (NSF, 2016). Additionally, they are at risk for substance abuse, car crashes, poor academic performance, obesity, and a weakened immune system (Weintraub, 2016).

Troxel et al. (2019) found that insufficient sleep in adolescents is a predictor of risky sexual behaviors. Reasons given for this include that those adolescents who stay out late, typically without parental supervision, are more likely to engage in a variety of risky behaviors, including risky sex, such as not using birth control or using substances before/during sex. An alternative explanation for risky sexual behavior is that the lack of sleep negatively affects impulsivity and decision-making processes.



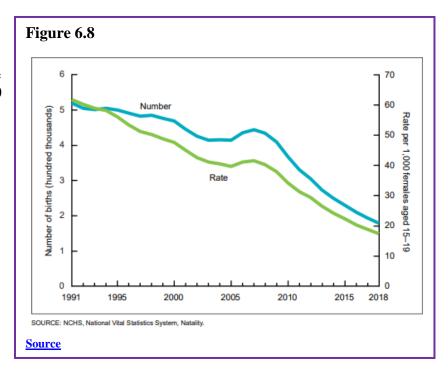
Why do adolescents not get adequate sleep? In addition to known environmental and social factors, including work, homework, media, technology, and socializing, the adolescent brain is also a factor. As adolescent go through puberty, their circadian rhythms change and push back their sleep time until later in the evening (Weintraub, 2016). This biological change not only keeps adolescents awake at night, it makes it difficult for them to wake up. When they are awake too early, their brains do not function optimally. Impairments are noted in attention, academic achievement, and behavior while increases in tardiness and absenteeism are also seen.

To support adolescents' later sleeping schedule, the Centers for Disease Control and Prevention recommended that school not begin any earlier than 8:30 a.m. Unfortunately, over 80% of American schools begin their day earlier than 8:30 a.m. with an average start time of 8:03 a.m. (Weintraub, 2016). Psychologists and other professionals have been advocating for later school times, and they have produced research demonstrating better student outcomes for later start times. More middle and high schools have changed their start times to better reflect the sleep research. However, the logistics of changing start times and bus schedules are proving too difficult for some schools leaving many adolescent vulnerable to the negative consequences of sleep deprivation. Troxel et al. (2019) cautions that adolescents should find a middle ground between sleeping too little during the school week and too much during the weekends. Keeping consistent sleep schedules of too little sleep will result in sleep deprivation but oversleeping on weekends can affect the natural biological sleep cycle making it harder to sleep on weekdays.

## **Adolescent Sexual Activity**

By about age ten or eleven, most children experience increased sexual attraction to others that affects social life, both in school and out (McClintock & Herdt, 1996). By the end of high school, more than half of boys and girls report having experienced sexual intercourse at least once, though it is hard to be certain of the proportion because of the sensitivity and privacy of the information. (Center for Disease Control, 2004; Rosenbaum, 2006).

**Adolescent Pregnancy:** As can be seen in Figure 6.8, in 2018 females aged 15-19 years experienced a birth rate (live births) of 17.4 per 1,000 women. The birth rate for teenagers has declined by 58% since 2007 and 72% since 1991, the most recent peak (Hamilton, Joyce, Martin, & Osterman, 2019). It appears that adolescents seem to be less sexually active than in previous years, and those who are sexually active seem to be using birth control (CDC, 2016).



Risk Factors for Adolescent Pregnancy: Miller et al. (2001) found that parent/child closeness, parental supervision, and parents' values against teen intercourse (or unprotected intercourse) decreased the risk of adolescent pregnancy. In contrast, residing in disorganized/dangerous neighborhoods, living in a lower SES family, living with a single parent, having older sexually

active siblings or pregnant/parenting teenage sisters, early puberty, and being a victim of sexual abuse place adolescents at an increased risk of adolescent pregnancy.

Consequences of Adolescent Pregnancy: After the child is born life can be difficult for a teenage mother. Only 40% of teenagers who have children before age 18 graduate from high school. Without a high school degree her job prospects are limited, and economic independence is difficult. Teen mothers are more likely to live in poverty, and more than 75% of all unmarried teen mother receive public assistance within 5 years of the birth of their first child. Approximately, 64% of children born to an unmarried teenage high-school dropout live in poverty. Further, a child born to a teenage mother is 50% more likely to repeat a grade in school and is more likely to perform poorly on standardized tests and drop out before finishing high school (March of Dimes, 2012).

Research analyzing the age that men father their first child and how far they complete their education have been summarized by the Pew Research Center (2015) and reflect the research for females. Among dads ages 22 to 44, 70% of those with less than a high school diploma say they fathered their first child before the age of 25. In comparison, less than half (45%) of fathers with some college experience became dads by that age. Additionally, becoming a young father occurs much less for those with a bachelor's degree or higher as just 14% had their first child prior to age 25. Like men, women with more education are likely to be older when they become mothers.

### **Eating Disorders**

According to the DSM-5-TR (American Psychiatric Association, 2022), eating disorders are characterized by a persistent disturbance of eating or eating-related behavior that results in the altered consumption or absorption of food and that significantly impairs physical health or psychosocial functioning. Although eating disorders can occur in children and adults, they frequently appear during the teen years or young adulthood (National Institute of Mental Health (NIMH), 2016). Eating disorders affect both genders, although rates among women are 2½ times greater than among men. Similar to women who have eating disorders, men also have a distorted sense of body image, including muscle dysmorphia, which is an extreme desire to increase one's muscularity (Bosson et al.,

Figure 6.9

Source

2019). The prevalence of eating disorders in the United States is similar among Non-Hispanic Whites, Hispanics, African-Americans, and Asians, with the exception that anorexia nervosa is more common among Non-Hispanic Whites (Hudson et al., 2007; Wade et al., 2011).

**Risk Factors for Eating Disorders:** Because of the high mortality rate, researchers are looking into the etiology of the disorder and associated risk factors. Researchers are finding that eating disorders are caused by a complex interaction of genetic, biological, behavioral, psychological, and social factors (NIMH, 2016). Eating disorders appear to run in families, and researchers are working to identify DNA variations that are linked to the increased risk of developing eating

disorders. Researchers from King's College London (2019) found that the genetic basis of anorexia overlaps with both metabolic and body measurement traits. The genetic factors also influence physical activity, which may explain the high activity level of those with anorexia. Further, the genetic basis of anorexia overlaps with other psychiatric disorders. Researchers have also found differences in patterns of brain activity in women with eating disorders in comparison with healthy women.

The main criteria for the most common eating disorders: Anorexia nervosa, bulimia nervosa, and binge-eating disorder are described in the DSM-5-TR (American Psychiatric Association, 2022) and listed in Table 6.1.

Table 6.1 DSM-5-TR Ea Anorexia Nervosa	<ul> <li>Restriction of energy intake leading to a significantly low body weight</li> <li>Intense fear of gaining weight</li> <li>Disturbance in one's self-evaluation regarding body weight</li> </ul>
Bulimia Nervosa	<ul> <li>Recurrent episodes of binge eating</li> <li>Recurrent inappropriate compensatory behaviors to prevent weight gain, including purging, laxatives, fasting or excessive exercise</li> <li>Self-evaluation is unduly affected by body shape and weight</li> </ul>
Binge-Eating Disorder	<ul> <li>Recurrent episodes of binge eating</li> <li>Marked distress regarding binge eating</li> <li>The binge eating is not associated with the recurrent use of inappropriate compensatory behavior</li> </ul>

**Health Consequences of Eating Disorders:** For those suffering from anorexia, health consequences include an abnormally slow heart rate and low blood pressure, which increases the risk for heart failure. Additionally, there is a reduction in bone density (osteoporosis), muscle loss and weakness, severe dehydration, fainting, fatigue, and overall weakness. Anorexia nervosa has the highest mortality rate of any psychiatric disorder (Arcelus et al., 2011). Individuals with this disorder may die from complications associated with starvation, while others die of suicide. In women, suicide is much more common in those with anorexia than with most other mental disorders.

The binge and purging cycle of bulimia can affect the digestives system and lead to electrolyte and chemical imbalances that can affect the heart and other major organs. Frequent vomiting can cause inflammation and possible rupture of the esophagus, as well as tooth decay and staining from stomach acids. Lastly, binge eating disorder results in similar health risks to obesity, including high blood pressure, high cholesterol levels, heart disease, Type II diabetes, and gall bladder disease (National Eating Disorders Association, 2016).

## Figure 6.10



Eating Disorders Treatment: To treat eating disorders, adequate nutrition and stopping inappropriate behaviors, such as purging, are the foundations of treatment. Treatment plans are tailored to individual needs and include medical care, nutritional counseling, medications (such as antidepressants), and individual, group, and/or family psychotherapy (NIMH, 2016). For example, the Maudsley Approach has parents of adolescents with anorexia nervosa be actively involved in their child's treatment, such as assuming responsibility for feeding the child. To eliminate bingeeating and purging behaviors, cognitive

**behavioral therapy** (CBT) assists sufferers by identifying distorted thinking patterns and changing inaccurate beliefs.

## **Learning Objectives: Cognitive Development in Adolescence**

- Describe Piaget's formal operational stage and the characteristics of formal operational thought
- Describe adolescent egocentrism
- Describe Information Processing research on attention and memory
- Describe the developmental changes in language
- Describe the various types of adolescent education
- Identify changes in high school drop-out rates based on gender and ethnicity

## Piaget's Formal Operational Stage

During the formal operational stage, adolescents are able to understand **abstract principles** which have no physical reference. They can now contemplate such abstract constructs as beauty, love, freedom, and morality. The adolescent is no longer limited by what can be directly seen or heard. Additionally, while younger children solve problems through trial and error, adolescents demonstrate **hypothetical-deductive reasoning**, which is developing hypotheses based on what might logically occur. They are able to think about all the possibilities in a situation beforehand, and then test them systematically (Crain, 2005). Now they are able to engage in true scientific thinking.

Formal operational thinking also involves accepting hypothetical situations. Adolescents understand the concept of **transitivity**, which means that a relationship between two elements is carried over to other elements logically related to the first two, such as if A<B and B<C, then

A<C (Thomas, 1979). For example, when asked: If Maria is shorter than Alicia and Alicia is shorter than Caitlyn, who is the shortest? Adolescents are able to answer the question correctly as they understand the transitivity involved.

**Does everyone reach formal operations?** According to Piaget, most people attain some degree of formal operational thinking, but use formal operations primarily in the areas of their strongest interest (Crain, 2005). In fact, most adults do not regularly demonstrate formal operational thought, and in small villages and tribal communities, it is barely used at all. A possible explanation is that an individual's thinking has not been sufficiently challenged to demonstrate formal operational thought in all areas.

**Adolescent Egocentrism:** Once adolescents can understand abstract thoughts, they enter a world of hypothetical possibilities and demonstrate **egocentrism** *or a heightened self-focus*. The egocentricity comes from attributing unlimited power to their own thoughts (Crain, 2005). Piaget believed it was not until adolescents took on adult roles that they would be able to learn the limits to their own thoughts.

David Elkind (1967) expanded on the concept of Piaget's adolescent egocentricity. Elkind theorized that the physiological changes that occur during adolescence result in adolescents being primarily concerned with

Figure 6.11

Source

themselves. Additionally, since adolescents fail to differentiate between what others are thinking and their own thoughts, they believe that others are just as fascinated with their behavior and appearance. This belief results in the adolescent anticipating the reactions of others, and consequently constructing an imaginary audience. "The **imaginary audience** is the adolescent's belief that those around them are as concerned and focused on their appearance as they themselves are" (Schwartz et al., 2008, p. 441). Elkind thought that the imaginary audience contributed to the self-consciousness that occurs during early adolescence. The desire for privacy and reluctance to share personal information may be a further reaction to feeling under constant observation by others. Alternatively, recent research has indicated that the imaginary audience is not imaginary. Specifically, adolescents and adults feel that they are often under scrutiny by others, especially if they are active on social media (Yau & Reich, 2018).

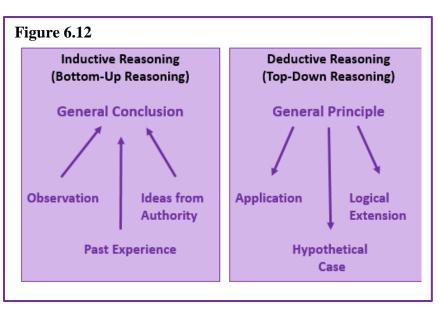
Another important consequence of adolescent egocentrism is the **personal fable** or belief that one is unique, special, and invulnerable to harm. Elkind (1967) explains that because adolescents feel so important to others (imaginary audience) they regard themselves and their feelings as being special and unique. Adolescents believe that only they have experienced strong and diverse emotions, and therefore others could never understand how they feel. This uniqueness in one's emotional experiences reinforces the adolescent's belief of invulnerability, especially to death. Adolescents will engage in risky behaviors, such as drinking and driving or unprotected sex, and feel they will not suffer any negative consequences. Elkind believed that adolescent egocentricity emerged in early adolescence and declined in middle adolescence, however, recent research has also identified egocentricity in late adolescence (Schwartz, et al., 2008).

Consequences of Formal Operational Thought: As adolescents are now able to think abstractly and hypothetically, they exhibit many new ways of reflecting on information (Dolgin, 2011). For example, they demonstrate greater introspection or thinking about one's thoughts and feelings. They begin to imagine how the world could be which leads them to become idealistic or insisting upon high standards of behavior. Because of their idealism, they may become critical of others, especially adults in their life. Additionally, adolescents can demonstrate hypocrisy, or pretend to be what they are not. Since they are able to recognize what others expect of them, they will conform to those expectations for their emotions and behavior seemingly hypocritical to themselves. Lastly, adolescents can exhibit pseudostupidity. This is when they approach problems at a level that is too complex, and they fail because the tasks are too simple. Their new ability to consider alternatives is not completely under control and they appear "stupid" when they are in fact bright, just not experienced.

### **Information Processing**

**Cognitive Control:** As noted in earlier chapters, executive functions, such as attention, increases in working memory, and cognitive flexibility have been steadily improving since early childhood. Studies have found that executive function is very competent in adolescence. However, **self-regulation**, or *the ability to control impulses*, may still fail. A failure in self-regulation is especially true when there is high stress or high demand on mental functions (Luciano & Collins, 2012). While high stress or demand may tax even an adult's self-regulatory abilities, neurological changes in the adolescent brain may make teens particularly prone to more risky decision making under these conditions.

**Inductive and Deductive Reasoning: Inductive** reasoning emerges in childhood and occurs when specific observations, or specific comments from those in authority, may be used to draw general conclusions. This is sometimes referred to as "bottom-up-processing". However, in inductive reasoning the veracity of the information that created the general conclusion does not guarantee the accuracy of



that conclusion. For instance, a child who has only observed thunder on summer days may conclude that it only thunders in the summer. In contrast, **deductive reasoning** emerges in adolescence and refers to *reasoning that starts with some overarching principle and based on this proposes specific conclusions*. This is sometimes referred to as "top-down-processing". Deductive reasoning guarantees a truthful conclusion if the premises on which it is based are accurate.

Intuitive versus Analytic Thinking: Cognitive psychologists often refer to intuitive and analytic thought as the **Dual-Process Model**; the notion that humans have two distinct networks for processing information (Albert & Steinberg, 2011). Intuitive thought is automatic, unconscious, and fast (Kahneman, 2011), and it is more experiential and emotional. In contrast, analytic thought is deliberate, conscious, and rational. While these systems interact, they are distinct (Kuhn, 2013). Intuitive thought is easier and more commonly used in everyday life. It is also more commonly used by children and teens than by adults (Klaczynski, 2001). The quickness of adolescent thought, along with the maturation of the limbic system, may make teens more prone to emotional intuitive thinking than adults.

### **Education**

In early adolescence, the transition from elementary school to middle school can be difficult for many students, both academically and socially. Crosnoe and Benner (2015) found that some students became disengaged and alienated during this transition which resulted in negative long-term consequences in academic performance and mental health. This may be because middle school teachers are seen as less supportive than elementary school teachers (Brass et al., 2019). Similarly, the transition to high school can be difficult. For example, high schools are larger, more bureaucratic, less personal, and there are less opportunities for teachers to get to know their students (Eccles & Roeser, 2016).

**Peers:** Certainly, the beliefs and expectations about academic success supported by an adolescent's family play a significant role in the student's achievement and school engagement. However, research has also focused on the importance of peers in an adolescent's school experience. Specifically, having friends who are high-achieving, academically motivated and engaged promotes motivation and engagement in the adolescent, while those whose friends are unmotivated, disengaged, and low achieving promotes the same feelings (Shin & Ryan, 2014; Vaillancourt et al., 2019).

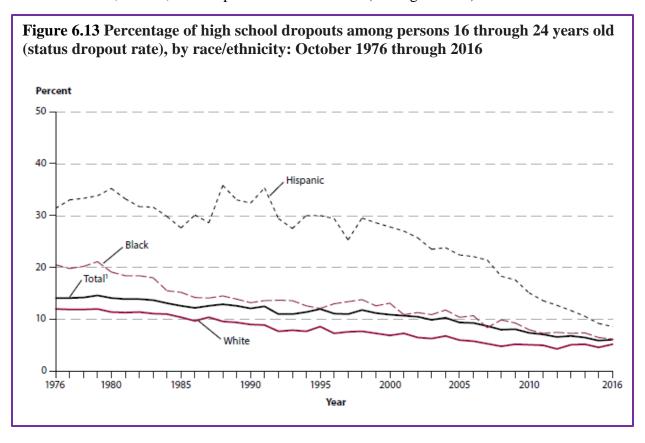
Gender: Crosnoe and Benner (2015) found that female students earn better grades, try harder, and are more intrinsically motivated than male students. Further, Duchesne et al. (2019) described how female students were more oriented toward skill mastery, used a variety of learning strategies, and persevered more than males. However, more females exhibit worries and anxiety about school, including feeling that they must please teachers and parents. These worries can heighten their effort but lead to fears of disappointing others. In contrast, males are more confident and do not value adult feedback regarding their academic performance (Brass et al., 2019). There is a subset of female students who identify with sexualized gender stereotypes (SGS), however, and they tend to underperform academically. These female students endorse the beliefs that "girls" should be sexy and not smart. Nelson and Brown (2019) found that female students who support SGS, reported less desire to master skills and concepts, were more skeptical of the usefulness of an education, and downplayed their intelligence.

**Life of a high school student:** On average, high school teens spend approximately 7 hours each weekday and 1.1 hours each day on the weekend on educational activities. This includes attending classes, participating in extracurricular activities (excluding sports), and doing homework (Office of Adolescent Health, 2018). High school males and females spend about the

same amount of time in class, doing homework, eating and drinking, and working. However, they do spend their time outside of these activities in different ways.

- **High school males.** On average, high school males spend about one more hour per day on media and communications activities than females on both weekdays (2.9 vs. 1.8 hours) and weekend days (4.8 vs. 3.8 hours). They also spend more time playing sports on both weekdays (0.9 vs. 0.5 hours) and weekend days (1.2 vs. 0.5 hours). On weekdays, high school males get an hour more of sleep than females (9.2 vs. 8.2 hours, on average).
- **High school females.** On an average weekday, high school females spend more time than boys on both leisure activities (1.7 vs. 1.1 hours) and religious activities (0.1 vs. 0.0 hours). High school females also spend more time on grooming on both weekdays and weekend days (1.1 vs. 0.7 hours, on average for both weekdays and weekend days).

**High School Dropouts:** The **status dropout rate** *refers to the percentage of 16 to 24 year-olds who are not enrolled in school and do not have high school credentials* (either a diploma or an equivalency credential such as a General Educational Development [GED] certificate). The dropout rate is based on sample surveys of the civilian, noninstitutionalized population, which excludes persons in prisons, persons in the military, and other persons not living in households. The dropout rate among high school students has declined from a rate of 12% in 1990, to 6.1% in 2016 (U.S. Department of Education, 2018). The rate is lower for Whites than for Blacks, and the rates for both Whites and Blacks are lower than the rate for Hispanics. However, the gap between Whites, Blacks, and Hispanics have narrowed (see Figure 6.13).



The dropout rate for males in 1990 was 12%, where it stayed until 2000. Thereafter the rate has dropped to 7.1% in 2016. The dropout rate for females in 1990 was 12%, and it has dropped to 5.1% in 2016 (U.S. Department of Education, 2018).

Reasons for Dropping Out of School: Garcia et al. (2018) reviewed the research on why students dropped out of school and identified several major obstacles to school completion. These included: Adolescents who resided in foster care or were part of the juvenile justice system. In fact, being confined in a juvenile detention facility practically guaranteed that a student would not complete school. Having a physical or mental health condition, or the need for special educational services, adversely affected school completion. Being maltreated due to abuse or neglect and/or being homeless also contributed to dropping out of school. Additonally, adolescent-specific factors, including race, ethnicity and age, as well as family-specific characteristics, such as poverty, single parenting, large family size, and stressful transitions, all contributed to an increased likelihood of dropping-out of school. Lastly, community factors, such as unsafe neighborhoods, gang activity, and a lack of social services increased the number of school dropouts.

## **School Based Preparatory Experiences**

According to the U. S. Department of Labor (2019), to perform at optimal levels in all education settings, all youth need to participate in educational programs grounded in standards, clear performance expectations and graduation exit options based upon meaningful, accurate, and relevant indicators of student learning and skills. These should include:

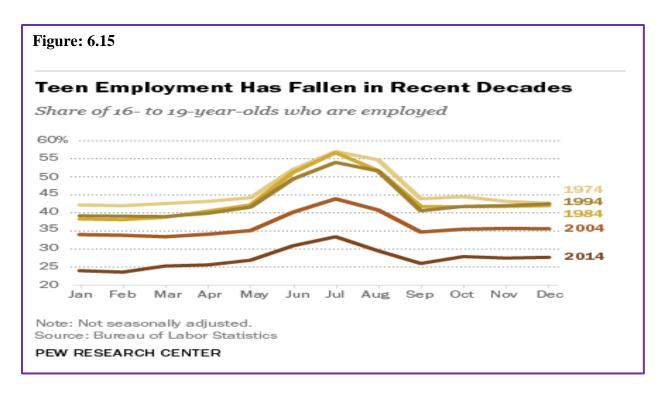
- Academic programs that are based on clear state standards
- Career and technical education programs that are based on professional and industry standards
- Curricular and program options based on universal design of school, work and communitybased learning experiences
- Learning environments that are small and safe, including extra supports such as tutoring, as necessary
- Supports from and by highly qualified staff;
- Access to an assessment system that includes multiple measures, and
- Graduation standards that include options.

## **Teenagers and Working**

Many adolescents work either summer jobs, or during the school year. Holding a job may offer teenagers extra funds, the opportunity to learn new skills, ideas about future careers, and perhaps the true value of money. However, there are numerous concerns about teenagers working, especially during the school year. A long-standing concern is that that it "engenders precocious maturity of more adult-like roles and problem behaviors" (Staff et al., 2011, p. 150).



Several studies have found that working more than 20 hours per week can lead to declines in grades, a general disengagement from school (Staff et al., 2010; Lee & Staff, 2007; Marsh & Kleitman, 2005), an increase in substance abuse (Longest & Shanahan, 2007), engaging in earlier sexual behavior, and pregnancy (Staff et al., 2011). However, like many employee groups, teens have seen a drop in the number of jobs. The summer jobs of previous generations have been on a steady decline, according to the United States Department of Labor, Bureau of Labor Statistics (2016). See Figure 6.15 for recent trends.



## **Teenage Drivers**

Driving gives teens a sense of freedom and independence from their parents. It can also free up time for parents as they are not shuttling teens to and from school, activities, or work. The National Highway Traffic Safety Administration (NHTSA) reports that in 2014 young drivers (15 to 20 year-olds) accounted for 5.5% (11.7 million) of the total number of drivers (214 million) in the US (National Center for Statistics and Analysis (NCSA), 2016).

However, almost 9% of all drivers involved in fatal crashes that year were young drivers (NCSA, 2016), and according to the National Center for Health Statistics (2014), motor vehicle accidents are the leading cause of death for 15 to 20 year-olds. "In all motorized jurisdictions around the world, young, inexperienced drivers have much higher crash rates than older, more experienced drivers" (NCSA, 2016, p. 1). A teen's risk of an accident is especially high during the first months of receiving a license (CDC, 2018a). The rate of fatal crashes is twice as high for young males as for young females (CDC, 2018a), although for both genders the rate was highest



for the 15-20 years-old age group. For young males, the rate for fatal crashes was approximately 46 per 100,000 drivers, compared to 20 per 100,000 drivers for young females. The NHTSA (NCSA, 2016) reported that of the young drivers who were killed and who had alcohol in their system, 81% had a blood alcohol count past what was considered the legal limit. Fatal crashes involving alcohol use were higher among young men than young women. The NHTSA also found that teens were less likely to use seat belt restraints if they were driving under the influence of alcohol, and that restraint use decreased as the level of alcohol intoxication increased. Overall, teens have the lowest rate of seat belt use. In a 2017 CDC survey, only 59% of teens reported that they always wore a seat belt when riding as a passenger (CDC, 2018b). Crash data shows that almost half of teenage passengers who die in a car crash were not wearing a seat belt (Insurance Institute for Highway Safety, 2017).

In a AAA study of non-fatal, but moderate to severe motor vehicle accidents in 2014, more than half involved young male drivers 16 to 19 years of age (Carney et al., 2015). In 36% of rear-end collisions, teen drivers were following cars too closely to be able to stop in time, and in single-vehicle accidents, driving too fast for weather and road conditions was a factor in 79% of crashes involving teens. Distraction was also a factor in nearly 60% of the accidents involving teen drivers. Fellow passengers, often also teenagers (84% of the time), and cell phones were the top two sources of distraction, respectively. This data suggested that having another teenager in the car increased the risk of an accident by 44% (Carney et al., 2015). According to the NHTSA, 10% of drivers aged 15 to 19 years involved in fatal crashes were reported to be distracted at the time of the crash; the highest figure for any age group (NCSA, 2016). Distraction coupled with inexperience has been found to greatly increase the risk of an accident (Klauer et al., 2014). Finally, despite all the public service announcements warning of the dangers of texting while driving, four out of ten teens report having engaged in this within the past 12 months (CDC, 2018b).

The NHTSA did find that the number of accidents has been on a decline since 2005. They attribute this to greater driver training, more social awareness to the challenges of driving for teenagers, and to changes in laws restricting the drinking age. The NHTSA estimates that the raising of the legal drinking age to 21 in all 50 states and the District of Columbia has saved 30,323 lives since 1975. The CDC also credits graduated driver licenses (GDL) for reducing the number of accidents. While GDL programs vary widely, a comprehensive program has a longer practice period, requires greater parental participation, and limits newly licensed drivers from driving under certain high-risk conditions (CDC, 2018a).

## Learning Objectives: Psychosocial Development in Adolescence

- Describe the changes in self-concept and self-esteem in adolescence
- Summarize Erikson's fifth psychosocial task of identity versus role confusion
- Describe Marcia's four identity statuses
- Summarize the three stages of ethnic identity development
- Describe the parent-teen relationship
- Describe the role of peers
- Describe dating relationships

## **Self-concept and Self-esteem in Adolescence**

In adolescence, teens continue to develop their self-concept. Their ability to think of the possibilities and to reason more abstractly may explain the further differentiation of the self during adolescence. However, the teen's understanding of self is often full of contradictions. Young teens may see themselves as outgoing but also withdrawn, happy yet often moody, and both smart and completely clueless (Harter, 2012). These contradictions, along with the teen's growing recognition that their personality and behavior seem to change depending on who they are with or where they are, can lead the young teen to feel like a fraud. With their parents they may seem angrier and sullen, with their friends they are more outgoing and goofier, and at work they are quiet and cautious. "Which one is really me?" may be the refrain of the young teenager. Harter (2012) found that adolescents emphasize traits such as being friendly and considerate more than do children, highlighting their increasing concern about how others may see them. Harter also found that older teens add values and moral standards to their self-descriptions.

As self-concept differentiates, so too does self-esteem. In addition to the academic, social, appearance, and physical/athletic dimensions of self-esteem in middle and late childhood, teens also add perceptions of their competency in romantic relationships, on the job, and in close friendships (Harter, 2006). Self-esteem often drops when children transition from one school setting to another, such as shifting from elementary to middle school, or junior high to high school (Ryan et al., 2013). These drops are usually temporary, unless there are additional stressors such as parental conflict, or other family disruptions (De Wit et al., 2011). Self-esteem rises from mid to late adolescence for most teenagers, especially if they feel competent in their peer relationships, their appearance, and athletic abilities (Birkeland et al., 2012).

## **Erikson: Identity vs. Role Confusion**

Erikson believed that the primary psychosocial task of adolescence was establishing an identity. Teens struggle with the question "Who am I?" This includes questions regarding their appearance, vocational choices and career aspirations, education, relationships, sexuality, political and social views, personality, and interests. Erikson saw this as a period of confusion and experimentation regarding identity and one's life path. During adolescence we experience **psychological moratorium**, where teens put on hold commitment to an identity while exploring

the options. The culmination of this exploration is a more coherent view of oneself. Those who are unsuccessful at resolving this stage may either withdraw further into social isolation or become lost in the crowd. However, more recent research, suggests that few leave this age period with identity achievement, and that most identity formation occurs during young adulthood (Côtè, 2006).

Expanding on Erikson's theory, James Marcia (2010) identified four identity statuses that represent the four possible combinations of the dimension of commitment and exploration (see Table 6.2).

Table 6.2 Marcia's	Four	<b>Identity</b>	Statuses

	Exploration				
		Absent	Present		
Commitment to an Identity	Absent	Identity Diffusion	Identity Moratorium		
	Present	Identity Foreclosure	Identity Achievement		

The least mature status, and one common in many children, is identity diffusion. **Identity diffusion** *is a status that characterizes those who have neither explored the options, nor made a commitment to an identity*. Those who persist in this identity may drift aimlessly with little connection to those around them or have little sense of purpose in life.

Figure 6.17



Those in **identity foreclosure** have made a commitment to an identity without having explored the options. Some parents may make these decisions for their children and do not grant the teen the opportunity to make choices. In other instances, teens may strongly identify with parents and others in their life and wish to follow in their footsteps.

**Identity moratorium** is a status that describes those who are activity exploring in an attempt to establish an identity but have yet to have made any commitment. This can be an anxious and emotionally tense time period as the adolescent experiments with different roles and explores various beliefs. Nothing is certain and there are many questions, but few answers.

**Identity achievement** *refers to those who after exploration have made a commitment*. This is a long process and is not often achieved by the end of adolescence.

During high school and the college years, teens and young adults move from identity diffusion and foreclosure toward moratorium and achievement. The biggest gains in the

development of identity are in college, as college students are exposed to a greater variety of

career choices, lifestyles, and beliefs. This is likely to spur on questions regarding identity. A great deal of the identity work we do in adolescence and young adulthood is about values and goals, as we strive to articulate a personal vision or dream for what we hope to accomplish in the future (McAdams, 2013).

Developmental psychologists have researched several different areas of identity development and some of the main areas include:

**Religious identity:** The religious views of teens are often similar to that of their families (Kim-Spoon et al., 2012). Most teens may question specific customs, practices, or ideas in the faith of their parents, but few completely reject the religion of their families.

**Political identity:** The political ideology of teens is also influenced by their parents' political beliefs. A new trend in the 21<sup>st</sup> century is a decrease in party affiliation among adults. Many adults do not align themselves with either the democratic or republican party but view themselves as more of an "independent". Their teenage children are often following suit or become more apolitical (Côtè, 2006).

**Vocational identity:** While adolescents in earlier generations envisioned themselves as working in a particular job, and often worked as an apprentice or part-time in such occupations as teenagers, this is rarely the case today. Vocational identity takes longer to develop, as most of today's occupations require specific skills and knowledge that will require additional education or are acquired on the job itself. In addition, many of the jobs held by teens are not in occupations that most teens will seek as adults.

**Gender identity:** Acquiring a gender identity is becoming an increasingly prolonged task as attitudes and norms regarding gender keep changing. The roles appropriate for males and females are evolving, and the lack of a gender binary allow adolescents more freedom to explore various aspects of gender. Some teens may foreclose on a gender identity as a way of dealing with this uncertainty, and they may adopt more stereotypic male or female roles (Sinclair & Carlsson, 2013).

**Sexual identity:** According to Carroll (2016), by age 14 most adolescents become interested in intimate relationships, and they may begin sexual experimentation. Many adolescent feel pressure to express interest in opposite-sex relationships, even if they are not ready to do so. This pressure can be especially stressful for those adolescents who are gay, lesbian, bisexual or questioning their sexual identity. Many non-heterosexual adolescents struggle with negative peer and family reactions during their exploration. A lack of parental acceptance, especially, can adversely affect the gay, lesbian or bisexual adolescent's emerging sexual identity and can result in feelings of depression. In contrast, adolescents whose familes support their sexual identity have better health outcomes.

Ethnic identity refers to how people come to terms with who they are based on their ethnic or racial ancestry. "The task of ethnic identity formation involves sorting out and resolving positive and negative feelings and attitudes about one's own ethnic group and about other groups and identifying one's place in relation to both" (Phinney, 2006, p. 119). When groups differ in status in a culture, those from the non-dominant group have to be cognizant of the customs and

values of those from the dominant culture. The reverse is rarely the case. This makes ethnic identity far less salient for members of the dominant culture. In the United States, those of European ancestry engage in less exploration of ethnic identity, than do those of non-European ancestry (Phinney, 1989). However, according to the U.S. Census (2012) more than 40% of Americans under the age of 18 are from ethnic minorities. For many ethnic minority teens, discovering one's ethnic identity is an important part of identity formation.



Phinney's model of ethnic identity formation is based on Erikson's and Marcia's model of identity formation (Phinney, 1990; Syed & Juang, 2014). Through the process of exploration and commitment, individual's come to understand and create an ethic identity. Phinney suggests three stages or statuses with regard to ethnic identity:

- 1. Unexamined Ethnic Identity: Adolescents and adults who have not been exposed to ethnic identity issues may be in the first stage, unexamined ethnic identity. This is often characterized with a preference for the dominant culture, or where the individual has given little thought to the question of their ethnic heritage. This is similar to diffusion in Marcia's model of identity. Included in this group are also those who have adopted the ethnicity of their parents and other family members with little thought about the issues themselves, similar to Marcia's foreclosure status (Phinney, 1990).
- 2. Ethnic Identity Search: Adolescents and adults who are exploring the customs, culture, and history of their ethnic group are in the ethnic identity search stage, similar to Marcia's moratorium status (Phinney, 1990). Often some event "awakens" a teen or adult to their ethnic group; either a personal experience with prejudice, a highly profiled case in the media, or even a more positive event that recognizes the contribution of someone from the individual's ethnic group. Teens and adults in this stage will immerse themselves in their ethnic culture. For some, "it may lead to a rejection of the values of the dominant culture" (Phinney, 1990, p. 503).
- 3. Achieved Ethnic Identity: Those who have actively explored their culture are likely to have a deeper appreciation and understanding of their ethnic heritage, leading to progress toward an achieved ethnic identity (Phinney, 1990). An achieved ethnic identity does not necessarily imply that the individual is highly involved in the customs and values of their ethnic culture. One can be confident in their ethnic identity without wanting to maintain the language or other customs.

The development of ethnic identity takes time, with about 25% of tenth graders from ethnic minority backgrounds having explored and resolved the issues (Phinney, 1989). The more ethnically homogeneous the high school, the less identity exploration and achievement (Umana-Taylor, 2003). Moreover, even in more ethnically diverse high schools, teens tend to spend more time with their own group, reducing exposure to other ethnicities. This may explain why, for

many, college becomes the time of ethnic identity exploration. "[The] transition to college may serve as a consciousness-raising experience that triggers exploration" (Syed & Azmitia, 2009, p. 618).

It is also important to note that those who do achieve ethnic identity may periodically reexamine the issues of ethnicity. This cycling between exploration and achievement is common not only for ethnic identity formation, but in other aspects of identity development (Grotevant, 1987) and is referred to as **MAMA cycling** or *moving back and forth between moratorium and achievement*.

**Bicultural/Multiracial Identity:** Ethnic minorities must wrestle with the question of how, and to what extent, they will identify with the culture of the surrounding society and with the culture of their family. Phinney (2006) suggests that people may handle it in different ways. Some may keep the identities separate, others may combine them in some way, while others may reject some of them. **Bicultural identity** means the individual sees himself or herself as part of both the ethnic minority group and the larger society. Those who are **multiracial**, that is whose parents come from two or more ethnic or racial groups, have a more challenging task. In some cases, their appearance may be ambiguous. This can lead to others constantly asking them to categorize themselves. Phinney (2006) notes that the process of identity formation may start earlier and take longer to accomplish in those who are not mono-racial.

**Negative Identity:** A **negative identity** *is the adoption of norms and values that are the opposite of one's family and culture*, and it is assumed to be one of the more problematic outcomes of identity development in young people (Hihara et al., 2019). Those with a negative identity hold dichotomous beliefs, and consequently divide the world into two categories (e.g., friend or foe, good or bad). Hihara et al. suggest that this may be because teens with a negative identity cannot integrate information and beliefs that exist in both their inner and outer world. In addition, those with a negative identity are generally hostile and cynical toward society, often because they do not trust the world around them. These beliefs may lead teens to engage in delinquent and criminal behavior and prevent them from engaging in more positive acts that could be beneficial to society.

## Parents and Teens: Autonomy and Attachment

While most adolescents get along with their parents, they do spend less time with them (Smetana, 2011). This decrease in the time spent with families may reflect a *teenager's greater desire for independence* or **autonomy**. It can be difficult for many parents to deal with this desire for autonomy. However, it is likely adaptive for teenagers to increasingly distance themselves and establish relationships outside of their families in preparation for adulthood. This means that both parents and teenagers need to strike a balance between autonomy, while still maintaining close and supportive familial relationships.

Children in middle and late childhood are increasingly granted greater freedom regarding moment-to-moment decision making. This continues in adolescence, as teens are demanding greater control in decisions that affect their daily lives. This can increase conflict between parents and their teenagers. For many adolescents this conflict centers on chores, homework, curfew, dating, and personal appearance. These are all things many teens believe they should

manage that parents previously had considerable control over. Teens report more conflict with their mothers, as many mothers believe they should still have some control over many of these areas, yet often report their mothers to be more encouraging and supportive (Costigan et al., 2007). As teens grow older, more compromise is reached between parents and teenagers (Smetana, 2011). Parents are more controlling of daughters, especially early maturing girls, than they are sons (Caspi et al., 1993). In addition, culture and ethnicity also play a role in how restrictive parents are with the daily lives of their children (Chen et al., 2013).

Having supportive, less conflict-ridden relationships with parents also benefits teenagers. Research on attachment in adolescence find that teens who are still securely attached to their parents have less emotional problems (Rawatlal et al., 2015), are less likely to engage in drug abuse and other criminal behaviors (Meeus et al., 2004), and have more positive peer relationships (Shomaker & Furman, 2009).

#### **Peers**

As children become adolescents, they usually begin spending more time with their peers and less time with their families, and these peer interactions are increasingly unsupervised by adults. Children's notions of friendship often focus on shared activities, whereas adolescents' notions of friendship increasingly focus on intimate exchanges of thoughts and feelings. During adolescence, peer groups evolve from primarily single-sex to mixed-sex. Adolescents within a peer group tend to be similar to one another in behavior and attitudes, which has been explained as a function of **homophily**, that is, *adolescents who are similar to one another choose to spend time together in a "birds of a feather flock together" way*. Adolescents who spend time together also shape each other's behavior and attitudes.



Peers can serve both positive and negative functions during adolescence. Negative peer pressure can lead adolescents to make riskier decisions or engage in more problematic behavior than they would alone or in the presence of their family. For example, adolescents are much more likely to drink alcohol, use drugs, and commit crimes when they are with their friends than when they are alone or with their family. One of the most widely studied aspects of adolescent peer influence is known as **deviant peer contagion** (Dishion & Tipsord, 2011), which is the process by which peers reinforce problem behavior by laughing or showing other signs of approval that then increase the likelihood of future problem behavior.

However, peers also serve as an important source of social support and companionship during adolescence, and adolescents with positive peer relationships are happier and better adjusted than those who are socially isolated or have conflictual peer relationships.

Crowds are an emerging level of peer relationships in adolescence. In contrast to friendships, which are reciprocal dyadic relationships, and **cliques**, which *refer to groups of individuals who interact frequently*, **crowds** are *characterized more by shared reputations or images than actual interactions* (Brown & Larson, 2009). These crowds reflect different prototypic identities, such as jocks or brains, and are often linked with adolescents' social status and peers' perceptions of their values or behaviors.

### **Romantic Relationships**

Adolescence is the developmental period during which romantic relationships typically first emerge. By the end of adolescence, most American teens have had at least one romantic relationship (Dolgin, 2011). However, culture does play a role as Asian Americans and Latinas are less likely to date than other ethnic groups (Connolly et al., 2004). Dating serves many purposes for teens, including having fun, companionship, status, socialization, sexual experimentation, intimacy, and partner selection for those in late adolescence (Dolgin, 2011).

There are several stages in the dating process beginning with engaging in mixed-sex group activities in early adolescence (Dolgin, 2011). The same-sex peer groups that were common during childhood expand into mixed-sex peer groups that are more characteristic of adolescence. Romantic relationships often form in the context of these mixed-sex peer groups (Connolly et al., 2000). Interacting in mixed-sex groups is easier for teens as they are among a supportive group of friends, can observe others interacting, and are kept safe from a too early intimate relationship. By middle adolescence teens are engaging in brief, casual dating or in group dating with established couples (Dolgin, 2011). Then in late adolescence dating involves exclusive, intense relationships. These relationships tend to be long-lasting and continue for a year or longer, however, they may also interfere with friendships.



Although romantic relationships during adolescence are often short-lived rather than long-term committed partnerships, their importance should not be minimized. Adolescents spend a great deal of time focused on romantic relationships, and their positive and negative emotions are more tied to romantic relationships, or lack thereof, than to friendships, family relationships, or school (Furman & Shaffer, 2003). Romantic relationships contribute to adolescents' identity formation, changes in family and peer relationships, and emotional and behavioral adjustment.

Furthermore, romantic relationships are centrally connected to adolescents' emerging sexuality. Parents, policymakers, and researchers have devoted a great deal of attention to adolescents' sexuality, in large part because of concerns related to sexual intercourse, contraception, and preventing teen pregnancies. However, sexuality involves more than this narrow focus. For example, adolescence is often when individuals who are lesbian, gay, bisexual, or transgender come to perceive themselves as such (Russell et al., 2009). Thus, romantic relationships are a domain in which adolescents experiment with new behaviors and identities.

However, a negative dating relationship can adversely affect an adolescent's development. Soller (2014) explored the link between relationship inauthenticity and mental health. **Relationship** inauthenticity refers to an incongruence between thoughts/feelings and actions within a relationship. Desires to gain partner approval and demands in the relationship may negatively affect an adolescent's sense of authenticity. Soller found that relationship inauthenticity was positively correlated with poor mental health, including depression, suicidal ideation and suicide attempts, especially for females.

## **COVID-19: Impact on Adolescence**

Mental Health: Since the beginning of the pandemic, as schools closed, sports involvement stopped, and hanging out with friends ceased, concerns were raised about the mental health of adolescents. To assess their impact, Van Beusekom (2021) reported on the healthcare insurance claims filed on behalf of adolescents from January 2020-November 2020 compared to those filed at the same time in 2019. Results indicated that mental health insurance claims rose sharply at the same time that medical claims decreased. Among those 13-18 years of age, insurance claims increased for the following mental health areas: self-harm, overdose-related, substance use disorders, generalized anxiety, major depressive disorder, and adjustment disorder. Mental health related conditions became the sixth most common reason for emergency room visits in 2020 and were 19% higher than in 2019.

Adolescents as Caregivers: The pandemic also increased the stress level on those adolescents who identify as caregivers. According to De Marco (2021), more than 3 million children and teens assist an ill or disabled family member, and compared to non-Hispanic white youth, Hispanic and African American youth were more likely to be caregivers. Because of COVID-19 and school closures, more youth were not able to escape from the daily home stressors of caregiving by attending school or socializing with their friends. By being denied normal social experiences, their emotional functioning and overall development may be negatively impacted. Unfortunately, many state and national caregiving programs are designed for adults and not youth, and these younger caregivers do not obtain the support they need.

College Exams: As schools closed during the pandemic, so too did SAT and ACT testing sites. Both exams are typically required for college admission applications, and consequently, colleges and universities needed to quickly move to a test-optional admission policy. As of March 2021, 1450 college and universities announced that they were moving to a test-optional policy, at least temporarily (Barber, 2021). This change for a more holistic view of applicants was endorsed by the National Association for College Admission Counseling (NACAC) and other academicians who have viewed the tests as culturally biased. For many low-income and first-generation students, the standardized tests are seen as barriers for entry into colleges due to attending lower performing high schools, as well as not having access to expensive test preparation courses or tutors. Moving forward, college admissions officers will need to determine the best way to evaluate prospective students for entry, and some may no longer include standardized exams.

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