

## **Quadrant II – Transcript and Related Materials**

**Programme: Bachelor of Arts**

**Subject: Psychology**

**Course Code: PSG 102**

**Course Title: Psychology of Adolescence**

**Unit: I Nature of Adolescence**

**Module Name: Puberty: Growth Spurt, Sexual Maturation – Part II**

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### **Notes**

#### **GROWTH SPURT**

Growth slows throughout childhood, and then puberty brings forth the most rapid increases in growth since infancy. Growth spurt associated with puberty occurs approximately two years earlier for girls than for boys. For girls, the mean beginning of the growth spurt is 9 years of age; for boys, it is 11 years of age. The peak of pubertal change occurs at 11½ years for girls and 13½ years for boys. During their growth spurt, girls increase in height about 3½ inches per year; boys, about 4 inches. An individual's ultimate height is often a midpoint between the biological mother's and the biological father's height, adjusted a few inches down for a female and a few inches up for a male. The growth spurt typically begins before menarche and ends earlier for girls. The growth spurt for boys, as indicated earlier, begins later and ends later than it does for girls. Boys and girls who are shorter or taller than their peers before adolescence are likely to remain so during adolescence. At the beginning of adolescence, girls tend to be as tall as or taller than boys of their age, but by the end of the middle school years most boys have caught up with them, or in many cases even surpassed them in height. Though height in elementary school is a good predictor of height later in adolescence, as much as 30 percent of an individual's height in late adolescence is unexplained by the child's height in elementary school. The rate at which adolescents gain weight follows approximately the same developmental timetable as the rate at which they gain height. Marked weight gains coincide

with the onset of puberty. Fifty percent of adult body weight is gained during adolescence. At the peak of this weight gain, girls gain an average of 18 pounds in one year at roughly 12 years of age (approximately six months after their peak height increase). Boys' peak weight gain per year (20 pounds) occurs about the same time as their peak increase in height, about 13 to 14 years of age. During early adolescence, girls tend to outweigh boys, but—just as with height—by about 14 years of age, boys begin to surpass girls in weight. In addition to increases in height and weight, puberty brings changes in hip and shoulder width. Girls experience a spurt in hip width, whereas boys undergo an increase in shoulder width. In girls, increased hip width is linked with an increase in estrogen. In boys, increased shoulder width is associated with an increase in testosterone. Finally, the later growth spurt of boys produces a greater leg length in boys than in girls. In many cases, boys' facial structure becomes more angular during puberty, whereas girls' facial structure becomes rounder and softer.

## **SEXUAL MATURATION**

Think back to the onset of your puberty. Of the striking changes that were taking place in your body, what was the first that occurred? Researchers have found that male pubertal characteristics develop in this order: increased penis and testicle size; appearance of straight pubic hair; minor voice change; first ejaculation (spermarche—this usually occurs through masturbation or a wet dream); appearance of kinky pubic hair; onset of maximum growth; growth of hair in armpits; more detectable voice changes; and growth of facial hair. Three of the most noticeable signs of sexual maturation in boys are penis elongation, testes development, and growth of facial hair. The normal range and average age of development for these sexual characteristics, along with height spurt. A recent longitudinal study revealed that on average, boys' genital development preceded their pubic hair development by about 4 months. In this study, African American boys and girls began puberty almost one year earlier than non-Latino White boys and girls. What is the order of appearance of physical changes in females? On average, breast development occurs first, followed by the appearance of pubic hair. Later, hair appears in the armpits. As these changes occur, the female grows in height, and her hips become wider than her shoulders. Her first menstruation (menarche) occurs rather late in the pubertal cycle. Initially, her menstrual cycles may be highly irregular, and for the first several years she might not ovulate every cycle. In some instances, a female does not become fertile until two years after her period begins. No voice

changes occur that are comparable to those in pubertal males. By the end of puberty, the female's breasts have become more fully rounded. Two of the most noticeable aspects of female pubertal change are pubic hair and breast development. A longitudinal study revealed that on average, girls' breast development preceded their pubic hair development by about two months. Note that there may be wide individual variations in the onset and progression of puberty. For boys, the pubertal sequence may begin as early as 10 years of age or as late as 13½. It may end as early as 13 years or as late as 17. The normal range is wide enough that given two boys of the same chronological age, one might complete the pubertal sequence before the other one has begun it. For girls, the normal age range for menarche is even wider, between 9 and 15 years of age. Precocious puberty is the term used to describe the very early onset and rapid progression of puberty. Judith Blakemore and her colleagues described the following characteristics of precocious puberty. Precocious puberty is usually diagnosed when pubertal onset occurs before 8 years of age in girls and before 9 years of age in boys. Precocious puberty occurs approximately 10 times more often in girls than in boys. When precocious puberty occurs, it usually is treated by medically suppressing gonadotropic secretions, which temporarily stops pubertal change. The reason for this treatment is that children who experience precocious puberty are ultimately likely to have short stature, early sexual capability, and the potential for engaging in age-inappropriate behavior.

## **References**

1. Santrock, J.W. (2015). *Adolescence*. (16th Ed.). New York: Tata McGraw Hill.