

Adolescence in Autism Spectrum Disorder and Challenges Encountered

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Abstract

Adolescence and puberty are the most important stage in an individual's transition from childhood to the world of an adult. The changes he goes through are radical and significant for what he knows about himself and introduces to others. Physical, psychological and social changes characterize and accompany adolescents throughout this journey. The way each of them copes with these changes is different based on personal characteristics as well as gender and cultural ones. But mostly on the basis of the presence of a possible disorder such as autism. As a stage that is present during a lifetime period in every person without exception, the ones with ASD go through a serie of challenges and difficulties that need to be focused on during this process.

Keywords: adolescent, puberty, development, autism, challenges

1. Overview of Adolescence and Puberty

Adolescence is that stage of development in which the individual is capable of reproducing, reorganizing, and restoring gender, and the unfolding of adult sexual behavior. We can say that it is a complex timeline and often too difficult interaction between biological and sociopsychological influences. Adolescence is a period of life with specific health and developmental needs. It is also a time when knowledge and skills are developed, one learns to manage emotions and relationships with people, as well as acquires attributes which help to enjoy this growth process and to pass in a healthy way into the role of an adult.

All societies in the world recognize and accept that there is a transitional period between being a child and being an adult, but how this transition is defined varies from culture to culture as well as changes over time. For example, in some societies this period was faster, while nowadays adolescence includes more years until the age that is considered adult, however this has changed everywhere (Lerner, Richard M., and Laurence Steinberg, 2009). The World Health Organization defines adolescence as involving the age of 10-19 years but also considering every individual under the age of 18 as a child, taking into account the impact of the law, as well as making another subdivision considering the age of 10-24. if we talk about social terms ((WHO), 2011)

What accompanies adolescence is puberty. Controlling the onset of puberty is still a mystery. While neuroendocrine mechanisms are certainly involved, it has been observed that psychological, social, and nutritional factors interfere with the process. The Behavioral Transition Perspective developed by Ensminger (1987) and Rodgers & Rowe (1993) brings adolescence as a period of opportunity to expand behaviors. Adolescents begin to have choices in

their behaviors that are offered by the environment, which they did not have during childhood. Transitional behaviors are defined as behaviors that adolescents use (explicitly or implicitly) to signal the entry into adult world. These behaviors may have other purposes but at least some of them are to show the current status in society. Some of these behaviors are unhealthy or more precisely so considered in society, behaviors which can mainly be with sexual connotation due to their hormonal change. But the idea of these "rabid hormones" in teens is over-used and over-heard. For example, after studies, most adolescents are not sexually active in proportion to their "growth hormone", even adolescents who have had sexual intercourse before (Rodgers, J. L J. A. Graber, J. Brooks-Gunn, & A. C. Petersen , 1996). The right phrase to use is "hormonal change", a change which brings about fundamental physical and psychological changes and has a tremendous impact on behavioral processes. Pubertal development or puberty is not a single process or stage. Rather, it is a continuation of development that begins in the prenatal state and involves a series of interrelated hormones and physical changes that result in both the reproductive abilities of adults and the appearance of adults. Marshall and Tanner (1974) have identified 5 (five) areas in which puberty develops:

- 1. Immediate and rapid skeletal growth within a short time followed by an immediate stop as well
- 2. Increased levels of fat in the body and muscle tissue
- 3. Development of blood circulation and respiratory system (and thus increases strength and endurance)
- 4. Maturation of secondary sexual characteristics and reproductive organs
- 5. Changes in the hormonal / endocrine system that regulate and coordinate other pubertal events.

Areas that even today remain the same in the explanatory nature of this life phase.Puberty is not an overnight event, but rather requires 5 (five) to 6 (six) years for most teens. All the above mentioned processes of puberty are influenced by an interaction of genetic, nutritional and hormonal factors.

2. Physical, psychological and Social Changes

During this 5 year period of time, of the development of puberty, girls show the first sexual characteristic such as breast augmentation. Process that usually occurs from the age of 8- 13 years. The average age in girls is 9.96 years. Pubic hair growth begins shortly before the onset of breast growth.

Growth starts at the same time as breast augmentation. Rapid and immediate growth peaks during the middle of puberty and then decreases over time. While experiencing the first menstruation appears at an average age of 12.88 (Knickmeyer RC, Wheelwright S, Hoekstra R, & Baron-Cohen S, 2006)

Boys usually start developing puberty 1-2 years later than girls. Although not as noticeable on the outside as it is on girls, the initial sign of sexual development in boys is the onset of testicular growth. This occurs around the age of 11-11.5 years; however, some boys begin to develop in this area as early as 9.5 years of age. The process of pubic hair growth is similar to that of girls. Testicular enlargement is accompanied by a rapid growth spurt. This is approximately with an average at the age of 11.5 years and reaches its peak during the age of 13-14 years. The first ejaculation also occurs during this age. Other secondary sexual characteristics include thickening of the voice and protrusion of facial hair (Herman-Giddens, M. E., Slora, E. J., Wasserman, R. C., Bourdony, C. J., Bhapkar, M. V., Koch, G. G., & Hasemeier, C. M., 1997). In this relatively long process physical changes are associated with social and emotional ones.

Just as hormonal changes during puberty are important, the experience of these changes is of psychological importance to adolescents. As shown in the section above, the physical changes are dramatic but above all unexpected and unpredictable for the specifics of the final result in terms of size, length, etc. Beyond that other people respond to these teenage changes. This is reflected in the behavior or treatment as adults, the approach or interest they may have towards them even sexually. Similar to hormonal connections and the negative impact on adolescence, puberty status is also linked to mood.

Studies show that girls show symptoms of depression and anxiety right after the onset of breast augmentation as well as after the onset of the first menstrual period. Studies have been conducted with a small number of girls, but the results are sufficient to express the importance and connection of adolescence and puberty with the emotional and psychological state of female adolescents. Testosterone and estradiol levels are responsible for depression according to the findings of Angold and colleagues in 1999 (Angold, A., Costello, E. J., Erkanli, A., & Worthman, C. M., 1999). But the idea of starting a new cycle for girls brings both negative and positive feelings in some of them. While for boys it is thought that they go through the same condition as girls. But in fact they are more prone to positive feelings in terms of first and continuous ejaculation. Only a small number of them say they have been a little scared.

This shows in fact and how informed adolescent boys are about the changes their body goes through during puberty. According to some interviews, they said that they do not even share such events with their peers to discuss, but

can mention it briefly while joking. Even some of them, due to lack of information, thought that ejaculation occurred only during masturbation, and therefore linked this process, and therefore their first ejaculation with masturbation.

Meanwhile in terms of cognitive development, adolescence is exactly the stage where according to Piaget is considered the formal operational stage. A more complex level where the adolescent is able to think more abstractly, remember more and better, plan activities step by step towards a certain goal, manipulate abstract concepts as well as develop and test his theories about the world and himself. At this stage of adolescence, the individual begins to worry more about himself and his image, especially how he is seen by others in society. He thinks and reflects on the multifaceted traits of his personality and also creates the position he wants towards the family. Which often results in conflict with one or both parents, or vice versa, the adolescent seeks to resemble and usually imitate one of the parents, usually of the same sex. During this phase, neuroscientific data have shown that the brain undergoes some massive reorganization changes, especially in the prefrontal cortex and limbic regions, which shows that the adolescent brain functions more "emotionally" during this transitional phase.

While the adolescent is changing and evolving his form, one of the biggest social but also individual needs is independence. The adolescent seeks to consolidate his identity and be accepted by society, but at the same time be unique and liked by them. Harter describes how self-development during adolescence is affected and emerges from interactions with others. During early adolescence these individuals are very sensitive to the reactions of others. In middle adolescence they are more preoccupied with the thoughts that people have that are important to them, while in late adolescence adolescents have almost clearly created the image of themselves and have internalized some values that represent them and are more confident in themselves for what they present to others. But throughout this process one encounters the desire and the difficulty of gaining autonomy.

3. Adolescence and Puberty in Autism

As noted above during this article, adolescence appears in autism as a normal process just like in typical adolescents. It appears frantic in most cases due to the combination with other symptoms of autism. Although adolescence and puberty are often used interchangeably, they represent different phenomena of maturity.

Adolescence refers to the developmental transition of juvenile social and cognitive processes in their adult versions and relates more to chronological age and experience. It can also be characterized as an evolution from parental dependence to relative independence. Puberty, on the other hand, refers to the biological maturation, particularly that of the sexual systems, and the physiological effects of resulting changes in the endocrine system including activation of the hypothalamic axis of the gonadal pituitary (HPG) contributing to the development of secondary sexual characteristics (Sisk CL, & Foster DL, 2004). The age of onset of puberty is influenced by a variety of biobehavioral factors (e.g., genetic, environmental), which can result in premature or delayed onset of puberty.

Thus for example obesity can accelerate the development of puberty while anorexia or low body fat mass can slow it down. Since age is not a determinant of puberty development, careful determination of the onset of puberty is essential. It is important to try to whitewash these constructs for an expanded understanding of adolescence and environmental and physiological influencing factors. Moreover, without precise measures of pubertal development it is difficult to separate the influence of age and social context from maturity factors.

Many individuals show poor adaptation to change, including developmental transitions from adolescence to adulthood. Although relatively little attention has been paid to the transition from childhood to adolescence and puberty on this topic, the existing literature suggests that many individuals with ASD show improvement in essential symptomatology and social cognition. In addition, there is often a decrease in nervousness and hyperactivity between the ages of 9 and 18 years. In one of the largest population-based studies conducted, in which 120 individuals with ASD were followed from childhood to adulthood, approximately one-third of individuals experienced significant problems during adolescence, and by those 17% had profound deterioration during puberty (Billstedt E, Gillberg IC, & Gillberg C, 2005).

In girls with ASD, the onset of menstruation at puberty has been shown to bring significant new challenges with emotion regulation and increased sensitivity experiences. While there is considerable heterogeneity, social attraction tends to deteriorate during adolescence. Taken together, there appear to be areas of improvement and deterioration in young people with ASD.

Due to the lack of studies in this field and information have come mixed according to the literature. It was initially suggested that children with ASD have an accelerated puberty and development of puberty, and other studies have suggested the opposite so that there is a delay in puberty development in these children. Finally the latest studies of 2017 show that there is no difference in the time period when puberty occurs comparing typical children and that with ASD.

This according to observations and reports of both parents and children themselves (May T, Pang KC, O'Connell MA, & Williams K, 2017).

4. Challenges that Adolescents with Disabilities Face

Always starting from the severity degree of the adolescent's condition related to the disorder are determined the challenges that each of them faces. What is important is that the need to perform a variety of activities is similar to a typical adolescent, but their approach to these activities, people, and other social or family events are different. The main challenge is integration.

Adolescents with ASD can act in some unusual ways; however, they usually do not choose to misbehave or act specifically. They may find it difficult to control their behavior because they have difficulty understanding expectations or actions regarding the world around them. They may also not be aware of the behavior they have or what is perceived as unusual. Thus one of the main challenges these teenagers face, is building social relationships. Their shortcomings in communication, difficulty or inability to adapt to social groups, lack of understanding of vocabulary (slang), difficulty or inability to be flexible and accept someone else's rules make it difficult to create a normal and healthy social life (Anderson DK, Lord C, Risi S, DiLavore PS, Shulman C, Thurm A, 2007).

At the same time, the surrounding environment is not so inviting and warm for these teenagers as well. The egocentrism that characterizes adolescents with ASD due to their disorder and the egocentrism that characterizes typical adolescents because of their age makes the gap of creating social and supportive relationships even greater. This means that adolescents with ASD lack company on and off school premises (Anderson DK, Oti RS, Lord C, & Welch K, 2009).

Outbursts of behavior, sudden changes in mood as well as often sudden aggressive behaviors pose a danger to children and other adolescents around them. Self-harming or self-directed actions make adolescents with ASD generally frightening, weird, unpredictable, and unmanageable in public without the close supervision of a family member or caregiver. These behaviors which are uncontrollable by these teenagers put them in unequal conditions with their peers (Anderson DK, Maye MP, & Lord C, 2011).

These behaviors are often accompanied by so-called sexual behaviors and unacceptable to others, such as exposing the genitals to the public, or harassing other peers for the purpose of giving affection. These are reasons for the difficulty or impossibility in most cases of establishing emotional relationships or having a potential partner either in adolescence or throughout their lives. This deprives them of experiencing intimate sexual intercourse and channeling their sexual desires like any other individual.

Other challenges that these teens face are: involvement in events or activities that involve a lot of people, sports, courses, jobs or other environments. This is because others refuse to accept them in their environment but also because these environments are often filled with triggers that push them towards these behaviors that are disliked by others.

Categorizing the difficulties adolescents face with ASD would be as follows:

- 4.1 Verbal communication (Anderson DK, Lord C, Risi S, DiLavore PS, Shulman C, Thurm A, , 2007)
 - 1. Difficulty or inability to speak or answer social questions or questions about oneself
 - 2. Difficulty or impossibility in discussing different topics
 - 3. Frequent confusion and misunderstanding of metaphorical expressions
 - 4. Use of an unusual tone of voice
 - 5. Difficulty or inability to follow multi-command instructions

4.2 Nonverbal communication

- 1. Difficulty or inability to read body language
- 2. Difficulty or inability to understand the emotions of others
- 3. Lack of eye contact
- 4. Use very few gestures to express yourself

4.3 Developing relationships with others (Anderson DK, Maye MP, & Lord C, 2011)

- 1. Desire to be alone and away from others
- 2. Require others to perform activities according to their own rules

- 3. Difficulty or impossibility in understanding social rules
- 4. Difficulty or impossibility in creating society
- 5. Difficulty or impossibility in establishing relationships with individuals of their age (prefer either younger or older individuals)
- 6. Difficulty or inability to adapt to social situations
- 7. Interference in the personal space of others

4.4 Repetitive behavior

- 1. Unusual interests or obsessions
- 2. Compulsive behavior
- 3. Unusual attachment to specific objects
- 4. Slightly irritated to changes even the smallest ones
- 5. Unusual movements of the limbs and body
- 6. Perform different noises repeatedly

Other conditions related to autism in adolescence

Difficulty sleeping, anxiety, depression, aggressive behavior, eating disorders, refusal to attend school or therapy, gender dysphoria.

5. Conclusions

- Every individual goes through the stage of adolescence and puberty regardless of mental state
- Physical, psychological and social changes vary by gender
- Psychological and social changes vary by mental state and other similar conditions
- The trazition stage leads to independence in typical individuals which is the biggest challenge of autistic people

6. Recommendation

- It is importat to understand and be patient during this time that a person goes through
- Parents, teachers and other education institutions should provide all the information young people need before
 and during this phase.
- Autistic people should have same access to this information and extra care because they are often misunderstood.
- We should not underestimate the needs of adolescents regardless their conditions

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