

The Educational Needs of Children with Autism Spectrum Disorder

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Abstract: Autism spectrum disorder (ASD) has become a major concern for parents and educators in recent years. Autism spectrum disorder is a serious neurodevelopment disorder that impairs a child's ability to communicate and interact with others. It also includes restricted repetitive behaviours, interests and activities. These issues cause significant impairment in social, occupational and other areas of functioning. It is known that individuals with autism spectrum disorder vary in language ability, ranging from absent speech to fluent language, and in cognitive development, ranging from high intellectual disability to above – average intellectual functioning. As the numbers of persons who are diagnosed with autism spectrum disorder grow, education has focused on how to help them learn in classroom settings with peers. There are numerous strategies that can be utilized in early adolescents to create an affective transition program that enables individuals with autism spectrum disorder to learn successful adult lives after they graduate from secondary or high school. However, the inclusion of young person with ASD in regular primary and secondary education can be advantageous for all students if it is done in an appropriate manner with adequate professional support.

Keywords: children, autism spectrum disorder, cognitive maturity, educational needs, integration, inclusion.

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I. INTRODUCTION

Autism spectrum disorder is a serious neurodevelopment disorder that impairs a child's ability to communicate and interact with others. It also includes restricted repetitive behaviours, interests and activities. These issues cause significant impairment in social, occupational and other areas of functioning. Autism spectrum disorder, which is often referred to be as ASD, is the term used to describe a group of disorders that includes: autism, Asperger's syndrome, childhood disintegrative disorder and pervasive development disorder. The symptoms associated with autism spectrum disorder appear early in a child's development and this is why it is considered to be a "development disorder". Recent research suggests that on average, one in 160 children will be diagnosed with autism spectrum disorder, with boys outnumbering girls four on one (Centres for Disease Control, 2008). It is estimated that about 60 per 10,000 children worldwide are diagnosed with autism (National Autistic Society, 2014). As this number continues to increase, this is an even greater need to research successful strategies to help children with autism spectrum disorder. Researchers have learned more about effective interventions and children with autism spectrum disorder are being included in child care, recreational and educational programs more frequently.

Inclusive education, interpreted as a child's presence in the mainstream settings, indicates that physical positioning of children with ASD in mainstream classes is sufficient. The observation of educational practices showed that children with ASD experience rejection if the environment is not adequately prepared. Adequate preparation encompasses the presence of positive attitudes of preschool teachers, peers and parents towards autistic children, an individual program based on child's developing skills and abilities, and functional didactic materials (Busses, Wesley @ Keyes, 2008).

1. The biological and psychological pathways of autism spectrum disorder

It is known that individuals with autism spectrum disorder vary in language ability, ranging from absent speech to fluent language, and in cognitive development, ranging from high intellectual disability to above – average intellectual functioning. Individuals may show associated co-morbidities including epilepsy and minor physical anomalies, as well as psychiatric co-morbidities, thus showing a wide clinical heterogeneity. The clinical heterogeneity of autism has long been a way to understanding the pathophysiological mechanisms

involved. The results suggest that autism may be caused by a multitude of genetic alterations that ultimately affect biological pathways of brain development and plasticity (Mules, Trentacoste & Rapine, 2004).

Because of the high heritability a major focus research in autism has been on finding the underlying genetic causes with less emphasis on potential environmental triggers or causes. Although remarkable advances in our knowledge of genetic causes have resulted from these great efforts made in the field of genetics, research debates about increasing prevalence (Weintraub, 2011) or heritability (Halmahera et al., 2011) have highlighted the necessity to expand the research on environmental factors. In fact, both genetics and environment may play a role.

* Genetic problems

Several different genes appear to be involved in autistic spectrum disorder. For some children, autistic spectrum disorder can be associated with a genetic disorder, such as Rett syndrome or fragile X syndrome, or cytogenetic abnormalities (Samaria, 2007). The genetic alterations, such as the 15 q1-q13 duplication of the maternal allele, associated with autism spectrum disorder affect synaptic plasticity (Bryson, Rogers & Fomnonne, 2003). For others children genetic changes may make a child more susceptible to autism spectrum disorder in create environmental risk factors. Still other genes may affect brain development or the way that brain cells communicate or they may determine the severity of symptoms. Some genetic problems seem to be inherited, while others happen spontaneously.

* Environmental factors

Researchers are currently exploring whether such factors as viral infections, complications during pregnancy, parents age, and socioeconomic status of family, drug or toxic exposure play a role in triggering autistic spectrum disorder.

* Gene-environment interaction

The existence of interactions between genetic background and environmental factors in autism first suggested for prenatal and postnatal complications. Children with autism may react differently in the same environmental stimuli and have less tolerance to the prenatal or postnatal experience. Studies of animal models have suggested that genetic defects in synaptic function may alter sensitivity to the environment (Bryson, Rogers. & Fomnonne, 2003).

2. Autism in early childhood

Autism spectrum disorder impacts how a child perceives and socializes with others, causing problems in crucial areas of development-social interaction, communication and behaviour.

Some children show signs of autism spectrum disorder in early infancy. Other children may normally for the first few months of years of life, but suddenly become withdrawn or aggression or lose language skills they have already acquired.

One of the unique qualities of autism spectrum disorder is the manifestation of behaviours. Autism spectrum disorder is considered as neurodevelopment disorder where according to the DSM-V criteria the diagnosis of symptoms occurs before the age of three years (Capps, Kerens. & Sigman, 1998). In early childhood children who are diagnosed with autism spectrum disorder display certain behaviours and educators, parents and teachers might observe. For children with autism spectrum disorders they will display various developmental delays, delays in their communicative development, and difficulties in their social development/social functioning (Voilkmar, Chewers & Kline, 2005).

In fact children with autism spectrum disorder often have difficulty following social rules, which may make them appear unfriendly. When interact with others, those with autism disorder may not follow common social behaviours. So we can see that children with autism spectrum disorder have trouble with person-to-person behaviours, such as turning taking with peers, eyes contact, not engage in play or social interactions with their fiends. As the same time they have difficulty in acquiring language, communicate less frequently with people and use non-verbal gestures (Sulzer-Azaroff & Mayer, 1991).

Communication skills vary depending on the intellectual and social development of the individual child. Some children with autism spectrum disorder have little, but the others appear to have normal speech. But those that do have speech often find it difficult to communicate effectively. Usually children with autism understand non-verbal communication such as facial expressions and hand gestures including printing.

Children with autism spectrum disorder rarely play or engage in imaginative play (Baron-Cohen, 1988). They may use toys and other objects in unusual ways. They can become observed with an item such as a pick of string or a pencil and carry it around constantly and may collect objects. Usually children with autism spectrum disorder avoid participating in interactions with their peers (Ravioli, Gossiping, & Walter, 2012). They play alone; have unusually gazes, speech from other individuals. It becomes very difficult for peers and adults when he/she enters kindergarten and grade school.

3. Education of children with autism spectrum disorder

As the numbers of persons who are diagnosed with autism spectrum disorder grow, education has focused on how to help them learn in classroom settings with peers (Humphrey & Sykes, 2010). There are numerous strategies that can be utilized in early adolescents to create an affective transition program that enables individuals with autism spectrum disorder to learn successful adult lives after they graduate from secondary or high school.

In the past, many of students with autism spectrum disorder would have been placed in special education classrooms that were separate from the mainstream. As our educational system has improved dramatically over the last years, education for young persons with autism spectrum disorder, both developmental and behavioural, has become more inclusive. Mainstream education teachers are better trained, and supports for students with autism spectrum disorder are much understood and available (Boutros & Bryant, 2005). The inclusion of students with autism spectrum disorder can be advantageous for all students if it is done in an appropriate manner with adequate professional support. According to the Kuangparichat (2010) integration of students with autism has two clear goals. The first is to honour the right of all members of a community to take full part in its day-to-day life. The secondary goal is to improve the quality of children's social intervention and academic development through daily contact with typically developing peers.

This is to allow them to participate in their society while they advance their academic and social skills. Inclusion gives students with autism spectrum disorder the opportunity to look at their developing peers as role models. The young person with autism can emulate their peer's behaviour and follow their lead in order to complete tasks in a more socially acceptable manner.

The researchers found that children who had adaptive behaviour and knowledge skills had more high academic skills such as reading comprehension, writing passages for expressive communication and solving word problems (Ozonoff, Goodie-Jones & Solomon, 2005; Simpson, De Beer-Opt & Smith-Myles, 2003). During high school young person with autism spectrum disorder have special education teachers or other school professionals to provide support and help guide their educational needs.

4. Benefits of inclusive education

Inclusive education brings all students together in one classroom and community, regardless of their strengths or weaknesses in any area and seeks to maximize the potential of all students.

- Inclusion is an effort to make sure that diverse learners—those with disabilities, different languages and cultures, different homes and family lives, different interests and ways of learning—are exposed to teaching strategies that reach them as individual learners.
- Inclusive schools ask teachers to provide appropriate individualized supports and services to all students without the stigmatization which comes with separation.
- Teachers in inclusive classrooms vary their styles to enhance learning for all students.

The purpose of education is to ensure that all students gain access to knowledge, skills and information that will prepare them to contribute to communities and workplaces. The central purpose becomes more challenging as schools accommodate students with increasingly diverse backgrounds and abilities. As we strive to meet these challenges, the involvement and cooperation of educators, parents and community leaders is vital for the creation of better and more inclusive schools. Research shows that most students learn and perform better when exposed to the richness of the general education curriculum, as long as the appropriate strategies and accommodations are in place (Lindsey, 2007; Reef @ Reimburse, 2006).

The benefits of inclusive education are numerous for students with autism spectrum disorder. For example some of them are:

- Gives a sense of belonging
- Increased social interactions, relationships and networks
- Greater access to general curriculum
- Warm and caring friendships
- Involvement in identity as a marker of community
- Development of personal principles
- High degree of autonomy and independence.

A major factor that educators need to take into consideration for adolescents with autism spectrum disorder is the quality of life each individual has after they transition into adulthood. These include independence, family supports, social and employment related skills, and build a profile of how his or her life has progressed up to success (Free, 2010).

II. CONCLUSION

Educating children with ASD is a modern-day challenge for the people of the world. Only a small proportion of the children with special needs have really access to schooling and those who do typically must attend a segregate school. Almost every one of these children now has the opportunity to attend a regular community school with non-disabled peer. There is growing evidence that children with autism spectrum disorder learn better when they are allowed to go to a mainstream school within their friends Often it is the only realistic opportunity they will have to receive an education (Boutros. & Bryant, 2005).

The rights of students with autism spectrum disorder to be educated in their local mainstream school is becoming more and more accepted in most countries and many reforms are being put in place for achieve this goal. Further, there is no reason for segregate students with autism in public education system. Instead, education system need to e reconsidered to meet the needs of all students. Inclusion was a complete integration of general and special education to meet the specific educational, physical and emotional needs to each child. The purpose of education is to ensure that all students gain access to knowledge, skills and information that will prepare them to contribute to communities and workplaces. In the words of Sangria (2007): "J would like to see the distinction between words like "special education", "regular education" and inclusive education disappear. The practice in these movements will be absorbed in the world education. Children who learn together, learn to live together".

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