Autism Spectrum Disorder

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Introduction

Autism, also referred to as Autism Spectrum Disorder (ASD), consists of a variety of conditions that are often categorized by challenges emanating from behaviors that are repetitive, communication that is non-verbal and social related skills. Since autism has been found to be a spectrum disorder by medical experts, each individual with the disorder poses a different set of challenges and strengths. Several mental health issues are responsible for the onset of ASD, including attention issues, depression, and anxiety. Early signs of autism usually appear at the ages ranging between 2 to 3 years; however, developmental delay signs of autism may appear at an earlier age. Based on the fact that this disorder appears at an earlier stage of development, it greatly impacts the learning process of a child as he/she grows to adulthood. This research paper explores medical breakthroughs in autism and innovative teaching strategies instructors can utilize to teach autistic students. Furthermore, this paper examines the assessment approaches of autistic students and other areas of current research associated with autism.

Medical Breakthrough in Autism

ASD is an area of behavioral and neurological studies that has been studied thoroughly. The results of these studies are often put into practice among children tests groups in an effort to comprehend its efficiency. Recent medical breakthroughs have been established to address the potential solutions for the treatment of ASD. Not only do these medical breakthroughs directed towards possible solutions, but also to foster a far much better understanding of how to diagnose ASD symptoms that could be a fundamental part of ASD. An example of a medical breakthrough in autism is a research that was centered on metabolic and genetic studies. The chosen chromosomes genetic profiling revealed that children who are autistic comprise of a different genetic makeup of chromosome eleven. The research further indicated that glutamate receptors' development is linked closely to the chromosome's affected part (Newsmax, 2011).

Glutamine receptors are essential for the typical functioning of the mind and other processes that are related. Insufficient glutamine receptors might elaborate on some common issues that are broadly categorized under the autism spectrum in children who, in many cases, exhibit a distinct variety of signs. Some of the common symptoms of autism among children include disorders in sleeping, learning disorders, not paying attention to details, cognitive problems, and speech impairments that ranges from mild to severe. Another medical breakthrough achieved by scientists and considered an essential breakthrough is the development of a urine test, which could be vital in detecting ASD in children. This urine test shows signs of autism by proving that autistic children pose different fingerprints of metabolic urine from those children who are not autistic. After such tests, therapeutic procedures can commence immediately in order to prevent further implications later in life (Newsmax, 2011).

Innovative Teaching Strategy

Students who have autism develop and acquire knowledge and skills differently from the other students who are not autistic. As stated earlier in this paper, autistic children have distinct challenges and strengths that are often unique. These characteristics necessitate each instructor regardless of the learning environment to consider their needs and challenges during the learning process. It is quite undebatable that autistic students struggle with communication capabilities and social skills. This makes it harder for them to grasp content taught and maintain focus during the learning process in an environment that is overstimulating. However, teaching students who are autistic can be a challenging job but a rewarding experience. Therefore, it is essential to better learning processes for all by utilizing teaching strategies that have been put in place to aid autistic students (Sprout, n.d).

While various learners present varying strengths and situations, the following teaching strategies could be vital in ensuring all learners, including autistic students, benefit from the learning sessions. First, avoiding techniques that overload the sensory– "Students with autism can be distracted by unexpected things in their environment, such as bright lights, smells, and sounds" (Sprout, n.d, par.10). Instructors can achieve this by reducing the classroom's sensory stimuli by utilizing colors that are calm and avoid putting them too much on the walls. This action could be crucial in boosting the concentration abilities of those students who have autism in the classroom. Secondly, instructors can employ the use of visuals, which, in many cases, serve as reminders that are clear and quick about the classroom's items such as resources and rules. Additionally, these visuals can be used to enhance the ability of autistic students to grasp content as they appear more appealing, thus capturing attention for quite some time (Sprout, n.d).

Also, visuals support instruction procedures in the classroom because by using visuals, students are empowered with the ability to create associations between the information displayed, thus soaking up chunks of contents at a higher rate. Third, instructors should use language that is concrete during classroom sessions. Students with autism often find it challenging to comprehend a language that is figurative since, in most instances, they interpret language using terms that are concrete. Therefore by using a concrete language, these students will benefit a lot and understand even much content during class sessions. Lastly, instructors should utilize the strategy of teaching social skills in a direct manner. Curriculum ideas that improve social skills and are hidden can be too difficult and complicated for autistic students to grasp. Instructors are, therefore, supposed to teach skills that are related to social behavior directly by discussing and modeling it in an easy way to understand (Sprout, n.d).

Assessment Method

The uniqueness of the differences existing among autistic students makes it difficult for instructors to conduct an assessment of these students. All autistic children experience difficulties emanating from social interaction; however, these difficulties are distinct, and thus the social skills of each child should be assessed at an individual level. Recently, there have been quite a number of tools put in place to conduct an assessment of social skills on learners with autism, but they have not proven effective because of failure to address a high detailed level that is needed. To administer an effective assessment of children with autism, the direct child interaction method should be prioritized. This assessment method entails a one-on-one session between an autistic child and the instructor. This method consists of several sections, including social understanding, conversation, social motivation, and role play. These activities provide an instructor with useful data concerning a particular autistic individual's ability to comprehend different strategies of intervention, for instance, role-playing (Stone et al., 2010).

Social understanding as one of the activities when conducting an assessment using direct child interaction method entails different other categories, which helps in assessing a learner’s understanding of socially related skills in various contexts. These categories include an activity that involves joint attention, situation, or feeling images where a child's emotions are assessed using pictures, activities that entail perspective-taking, and those that involve using the surrounding context where various scenes in the environment are used to establish if a child can respond to particular questions. During the administration of the direct child interaction method, the examiner needs to be well acquainted with the characteristics of students with autism, the development of social skills, and communication. The intent for this requirement is to ensure this assessment is administered by educators specialized in special needs. The examiner is further required to establish a good rapport with the student. Direct child interaction assessment also needs to be conducted in an environment that is private, quiet, and free from visual and auditory distractions (Stone et al., 2010).

Other Areas of Current Research Associated with Autism

As informed by Dawson (2016), science is undertaking a further personalized approach to the methods of treating autism and comprehending the diverse causes of the disorder. Based on research conducted currently, autism has been found to be a group of conditions that are lifelong long and may emanate from a combination of both environmental and multiple genetic factors. Dawson (2016) further states that research has revealed that "in the same way that each person with ASD has a unique personality and profile of talents and disabilities, each also has a distinct developmental history shaped by a specific combination of genetic and environmental factors" (par.1). Moreover, new studies have emphasized how vital the prenatal period is in realizing how numerous factors from the surroundings, including smoking, being exposed to alcohol, and smoking increases ASD risks (Dawson, 2016).

Another research has also been done concerning autism, specifically on a developing brain. It was longitudinal research and conducted on a large scale among infants' brains, which was then compared with the minds of their autistic older siblings. About 20% of the newborns were found to be autistic. This research provided an analysis on how an autistic individual’s brain develops by using various sophisticated technologies in the medical field, revealing connections between different regions of the brain. These technologies achieved this "By examining detailed scans, which detected differences in brain circuitry in infants who later develop ASD" (Dawson, 2016, par.3). Such disparities in the circuitry of the brain are most evident during the period of the post-natal. They can help in commencing treatment procedures soon to avoid late implications in adulthood. The ultimate goal is to begin treatment as early as possible when the brain is still developing at a rapid pace (Dawson, 2016)

Conclusion

Based on the above information, it is fair to conclude that autism disorder has significantly changed the way instructors give instructions to students in a classroom session. They have to use techniques that could be beneficial to all the learners, whether autistic or not. Some of the methods employed to aid autistic learners include the use of visual aids, avoiding sensory overload, and figurative languages. In addition to changing teaching strategies, instructors are also required to be well knowledgeable on how to conduct an assessment on learners who are autistic. One of the assessment methods necessary for instructors to be familiar with is the use and interaction technique that is direct to cater for the needs of autistic learners. However, with the ever-increasing number of autistic children, researchers have made efforts and come up with various breakthroughs on autism including breakthroughs on metabolic and genetic studies and urines tests.

# References

# Dawson, G (2016). On the Brink of Breakthroughs in Diagnosing and Treating Autism. *Scientific American*. Retrieved from <https://blogs.scientificamerican.com/mind-guest-blog/on-the-brink-of-breakthroughs-in-diagnosing-and-treating-autism/>

# Newsmax (2011). Autism: The Latest Medical Breakthroughs. *Newsmax Media*. Retrieved from <https://www.newsmax.com/FastFeatures/autism-treatment-autism-symptoms/2011/01/21/id/383573/>

# Sprout (n.d). Expert-Recommended Strategies for Teaching Autistic Students. *Sprout Therapy*. Retrieved from <https://www.joinsprouttherapy.com/autism-and-education/teaching-strategies>

# Stone, W., Ruble, L., Coonrod, E., Hepburn, S., Pennington, M., Burnette, C., & Brigham, N., B (2010). TRIAD social skills assessment: Second Edition. *Treatment and Research Institute for Autism Spectrum Disorders*. Retrieved from [file:///C:/Users/user2/Downloads/tssamanual(1).pdf](file:///C%3A/Users/user2/Downloads/tssamanual%281%29.pdf)