

Introducing Autism Spectrum Disorder

Autism, also referred to as autism spectrum disorder, accounts for various groups of conditions related to neurodevelopment of the brain. According to the World Health Organization (WHO), about 1 in 100 children has Autism and according to the Centers for Disease Control and Prevention (CDC), approximately 1 in 36 children in the United States is diagnosed with autism. This displays that important notice has to be imposed with this disorder as it is getting more common among our domestic and global population. What is Autism specifically? Autism spectrum disorder is characterized by continuous deficits in social communication and interaction and restricted patterns of behavior in talking, functioning, and activities of daily living. While the term Autistic spectrum disorder (ASD) is an umbrella word that surrounds a range of varieties of neurodevelopmental conditions, including autism. "Spectrum" is used to highlight the wide disparity range of symptoms and challenges that individuals with ASD may experience. This paper focuses on introducing Autism disorder, explaining what it is, the brief causes and effects of this disorder, improvement about the treatment of this disorder, and the importance of an inclusive world that understands neurodiversity.

Definition Of Autism:

Autism Spectrum Disorders are a variety of disability conditions on neurological development. Patients are usually distinguished by some stage of difficulty with social interaction and transmission. Some have unusual patterns of activities and behaviors like difficulty with communication from one activity to another and a center on detail uncommon

reactions to sensations. These characteristics often emerge from early childhood and can range

from fine to severe, affecting an individual or a group of people's ability for daily functioning. So far, there is no complete cure found for Autism. However, many individuals with Autism still persist with unique strengths and roles in this society. Such as high attention to details, extraordinary memory, and much creativity. Therefore it is important to understand these strengths besides the challenges they face are crucial for acceptance and support.

Global Impact and Stats of Autism:

The prevalence of Autism has been increasing significantly in the current decades. Some due to improved diagnosed methods and improvement in healthcare with increased awareness. It is estimated that 1-2% of the population globally is diagnosed with Autism. But the statistics differ across countries. Research shows that boys are diagnosed with autism more frequently than girls. However, According to Donna M Werling and Daniel H Geschwind's research on gender differences in ASD published by National Library of Medicine, "Recent studies continue to report a male bias in ASD prevalence, but also suggest that sex differences in phenotypic presentation, including fewer restricted and repetitive behaviors and externalizing behavioral problems in females, may contribute to this bias." This indicates that the global statistics of autism between genders are unstable or needs more further research.

The impact of Autism extends beyond individuals to families, communities, and societies. Families that are affected by autism usually face challenges such related to care taking, education, anxiety, conversation difficulties, social relation, and access to resources. Therefore,

this is why it is important to for the public to address barriers to inclusion and grow the social awareness of how struggling it can be for individuals and families in the autism spectrum. It is also important to note the recognition of the need for systemic changes to support individuals or communities on the spectrum.

Possible causes of Autism:

According to NIH National Institute of Environmental Health Sciences, “Studies have shown that the rate of autism is rising, but the causes are not well understood. Scientists have found rare gene changes, or mutations as well as small common genetic variations in people with autism, implying a genetic component.” Research suggests that autism spectrum disorder develops from a combination of genetic influence and environmental influences, such as social factors. These factors appear to increase the risk of autism and shape the type of autism that an individual will develop. However an increased risk is not the same as a cause. Some gene changes linked to autism are also present in individuals who do not have the condition. No single gene or mutation has been found to account for all cases of autism. Similarly, being exposed to certain environmental risk factors does not certainly lead to autism, as the majority of people with this exposure do not develop the disorder.

Environmental factors that are associated with autism include:

- Advanced parental age at time of conception
- Before birth exposure to air pollutants or some pesticides
- Maternal obesity, diabetes, or immune system disorders

- Extreme weakness at birth or very low birth weight
 - Any birth difficulty leading to oxygen deprivation to baby's brain
- However, these factors by itself are unlikely to cause autism. They seem to increase a child's chance for developing autism when combined with genetic factors.

Characteristics of Autism

Autism has different effects in each individual but common characteristics include but not all, social communication challenges, restricted interest and repetitive behaviors and sensory differences. Social communication challenges such as understanding social signals, maintaining consistent eye contact, or participating in discussions. Some individuals may have delayed speech development or the use of alternative forms of communication, such as sign language. Individuals with autism often have intense interest in specific topics or activities. which they may devote themselves to with a deep focus. Many individuals with autism also have amazing talents. Repetitive behaviors such as hand flapping or lining up objects are also common which may serve as a source of comfort. Many individuals on the spectrum experience high or low levels of sensitivity to sensory input. For example, bright lights, loud sounds, or certain textures may be overwhelming.

Importance of early intervention

According to NIH (National Institutes of Health), research shows that early diagnosis and interventions are more likely to have positive effects on symptoms and later skills. Early interventions occur at or before preschool age, as early as 2-3 years old, some even under 2. Because in this period the child's brain is still developing it is more changeable than at older

ages. Early intervention not only gives children the best start of the treatment possible, but it also gives them the best chance of developing to their full potential. It means a greater chance for learning and progress.

What we are doing

Autism spectrum disorder is a complex intricate condition that affects millions of individuals worldwide. Our research center is a program that promotes the understanding of autism while studying autism symptoms from a scientific perspective and opinions that hope to contribute to later research on autism spectrum disorder. By encouraging early intervention, promoting inclusion, and letting more people know more about neurodiversity we can create a society that values and supports individuals with disabilities and disorders. As we do further research and expand our topics revolving around autism, it is our responsibility to ensure that this knowledge converts into meaningful change to help families and individuals with ASD.

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