



Autism Spectrum Disorder

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Abstract

In today's era, 1% of the world's population is suffering from autism spectrum disorder. If we further narrow it down; Pakistan recent statistical analysis (2012) revealed that 350,000 children have autism spectrum disorder. These children and their families feel odd one out from the society because of the behavioral alterations they acquire. Literature based articles that are taken to elaborate ASD ranges the references from 2007 to 2017. The classic symptoms of ASD includes impaired socialization, communication difficulties, cognitive problems and behavioral variations. As ASD is becoming prevalent these days, it is very important that people and especially nurses have enough information regarding the causes, symptoms, diagnosis, and treatment of ASD.

Keywords: Autism Spectrum Disorder (ASD); Central Coherence Theory; Theory of Mind; Theory of Empathizing-Systemizing; Theory of Executive Dysfunction

Case Scenario

My name is Laque Youngblood. I was bullied by my classmates at the age of 12. "You're abnormal! Oh such a weird boy! Stop acting foolish!" these were the comments I get to hear every single day. You know what it feels when someone says you abnormal? When doesn't someone consider you as equal to them? I am not abnormal; I have autism spectrum disorder (ASD). Think for a moment; if you were considered different from others due to any medical or psychological issue, you'll find it helpful if the people understand you? The article discusses a case report of a child with autism spectrum disorder and integrates several social sciences theories to explain the associated behavioral variations. Lets' start with ASD.

Introduction

ASD is a developmental disorder of the brain because of which the child finds it hard to socially interact with people, facing communication problems either verbal or non-verbal, restricted interest and repetitive behavior (Autism Society of America, 2014). The first signs which are noticed usually by parents occur at the age of 18 months to 3 years. The parents more often report that they see something unusual in their kid when they don't speak like other kids of same age, and they often find their child playing solitary games and not interacting with the people surrounding them [1].

Is ASD a genetic disease? Researchers have proven that genetics is one of the risk factor which increases the likelihood of developing ASD [2]. Other risk factors include: mother taking harmful

drugs during the tenure of her pregnancy like valporic acid and thalidomide, if the person have other medical issue and infection during pregnancy (CDC, 2014). One point that needs to be cleared here is parenting style have no significant role in developing ASD in children (Autism Society of America, 2014). Furthermore, studies have shown that the critical period for the development of ASD occurs prenatally.

Developmental Variations

The person with ASD faces a huge difficulty in the acquisition of ADL (activity of daily living). As mentioned earlier, it's a developmental disorder; the child finds it hard to learn things and this in turn increase their dependency on others. Although ASD children have social interaction, communication, behavioral and cognition problems, not all ASD sufferers experiences all these symptoms. Some may have intellectual disability, and some may not [3]. They are often misunderstood with introvert, but actually it's hard for them to make friends; therefore they engage in activities which are solitary. ASD children tend to focus on objects rather than people, and they make poor eye contact with others. A study was conducted to track the gaze of ASD children with a control group. Normal children were watching the movie by looking into person's eye, whereas an ASD child was gazing at the mouth and the shoulder, and the one at the end of the spectrum gazing at the light and fan [4].

Types of ASD

Autism spectrum disorder is divided into 3 types: first being autistic disorder in which the child has interaction problem, communication problem, unusual interests and behavior. Most of the people in this type have intellectual disability. Second is Asperger Syndrome which is milder form of autistic disorder with similar characteristics, but they don't have intellectual disability. Third is Pervasive Development Disorder or Atypical Autism has less and more milder symptoms than in Asperger syndrome i.e. they only have interaction and communication difficulties (Autism Society of America, 2014).

Impact

"Autism is changing the world for everybody". Silberman and Kuszewski when asked in an interview about ASD pointed out that autism is now accepted in the developed world, and it's considered normal to talk about it. Previously, the children with ASD were considered nerds, but today many of them are symbol of pride. People with ASD are paving new paths of alternative and creative business and technologies which is not only nurturing them, but is useful for other people [5]. The inventor of Pokémon namely Satoshi Tajiri also had autistic disorder, but had made a positive impact in our society. These people are inspiration and a source of hope to those who are suffering from autism. Beside all the positive impact, families of ASD children face a huge difficulties raising their child and even more difficult if they have other children too. Moreover, ASD children themselves have the biggest share of impact in their own life. Due to their learning problem, they are unable to perform simple tasks; they are self-care deficit and are more often dependent on others.

Theoretical Framework

Theory of Mind

This theory was given by Simon Baron-Cohen, Alan Leslie and Uta Frith in 1985 gives the explanation of the first criteria of ASD in DSM-V which is on social interaction and communication problems. This theory says that people with no mental disorder have the ability to focus on social cues and interact with the people. This ability is innately present in the child's early developmental stage, and develops at around 4-5 years of age [6]. Children with ASD lack this ability. This ability helps us to predict what you're thinking and what the person sitting next to you is thinking. Inclusive of thinking, this ability also helps us to dream, cheat, know about others, belief etc. This requires emotional empathy to put into people's place and feel what they are going through, to anticipate their thoughts and reflect why they are thinking this way. ASD children find it very difficult to socially interact because they lack the ability required according to theory of mind; therefore, to understand the social behavior, they have to splice these into smaller pieces and only then they'll be able to learn. Despite of the fact that individual with ASD lacks social interaction ability; they are also not good at guessing what others perceive, think and believe .

The Theory of Empathizing-Systemizing

This theory was given by Simon Baron-Cohen in 2009. They further expanded the theory of mind and explain the reason for communication and social interaction deficits in ASD people. They said that there are two kinds of brain. One is extremely empathetic while the other systematic. Those with extreme empathetic brain overly put themselves in other people's circumstances and lack systemization skills [6]. On the contrary, people with overly systematic brain always look for rules and regulations to run a system or to invent something new and lacks empathizing skills. According to this theory, people with ASD possess systemizing brain and lack neuronal empathy capacity. They show interest in things like numerical (looks in calendar), motor activity i.e. they may like jumping on jumping jag, they may be interested in exploring how the machines work. They also have tendency to make room for themselves in things which are not systemizing, but since they lack empathy, they find it hard to interact and communicate with people. However, they can learn empathy which is termed as "cognitive empathy", but this will never resemble to the innate empathy which a normal person possess.

Central Coherence Theory

Central coherence theory (1989) explains that the individuals with ASD are unable to extract the general meanings of things; rather they focus on their minute details. This theory focuses on two parts: perceptual and contextual. The former means that the ASD individuals focus on small things before thinking on a general level, yet, the latter explains that ASD individual are unable to recall their previous knowledge and situation [6]. Like, if they experience a situation they had previously experienced, they'll not be able to recall. "Therefore, people with ASD are local information processors, and people with normal development are global processors" (Autism, 2016). Weak central coherence depicts both strengths and deficits. Example, think of a situation where you have to extract the global meaning of a thing, in this situation an ASD individual are at question, but if you have to extract the chunk of a global task, than ASD individual would definitely nail it.

Theory of Executive Dysfunction

This theory explains the second criteria for ASD in DSM-V on restricted and repetitive behaviors, and interests in activities [7]. Executive function is the collection of cognitive skills such as impulse control i.e. controlling inappropriate behavior and responses, planning, organizing, and maintaining focus. Temple Grandin said: "I cannot hold one piece of information in my mind while I manipulate the next step in the sequence" (Autism Speaks, 2018). Executive dysfunction can be seen in many ways: some people focuses on small details and miss out global meaning as mentioned earlier, some find it hard to pay attention on one thing for a period of time, some might find it difficult to hold a series of thoughts at one point and list goes on. Additionally, executive functioning also involves working memory which has two types. One is the Verbal Working Memory in which the person has a self-talk to regulate his behavior and another is Non-verbal Working Memory, in which

person's past experience works as a guide tool and it only develops through retrospective approach. ASD individual lacks all these cognitive skills; therefore, they find it really hard to self-regulate.

Prevalence

According to CDC (2014) research, 1% of the world population is suffering from ASD. In United States, 1 in 189 girls and 1 in 42 boys have ASD. The recent statistical analysis held in Pakistan in 2012 revealed that 350,000 children have autism spectrum disorder. Since parents hide about their children who have ASD, and don't seek help from health professionals, awareness is important.

Diagnosis and Treatment

DSM V is used to diagnose ASD. As mentioned earlier, parents are the one who notice symptoms of the child. In addition to this, schools are also the site which identifies children with ASD through performance (NCBI, 2017). Rural communities specifically face these challenges than urban communities. This is because they don't have access to the services, they don't rely on health care professionals, and cultural restrains due to which they fail to identify that their child is suffering from ASD. We are aware of it that early detection is very crucial for improving functionality in ASD children, rural communities' faces obstacle in diagnosis (NCBI, 2017). Since ASD is a spectrum disorder, children show different symptoms and therefore treatment is given according to the individual needs. However, the focus of treatment is to reduce the symptoms and improve developmental and learning skills. Applied Behavior Analysis (ABA) is a behavioral treatment which aims to make the child learn about positive behavior. It includes Discrete Trail Training (DTT) which uses positive reinforcement and simple lessons, Pivotal Response Training (PRT) develops the motivation to communicate and learn, and Verbal Behavior Intervention (VBI) aims to improve child's language skills [8].

Recommendations

There is always a debate on whether an ASD child should go to a normal school or different school? ASD children needs special attention and trained teachers for which they should have a different school; however, if they are going to a normal school they should be given task in sequential order, use very specific and concrete language, don't give them multiple choices, restate your statement when find an ASD child with blank stare, and avoid phrasing idioms etc. (NCBI, n.d.). As a parent of an ASD child, you should try to keep a consistent routine, a consistent environment to reinforce the learning, give recognition/reward for good behavior, stay conscious towards their non-verbal cues, pay attention towards

their activities (sensory and motor), and have a fun time with your child because that keeps your child smiling and happy [9-13].

For the betterment of the family and the ASD child, they should join a support group where they can meet other families to support each other emotionally. Also they should have an interlude temporary caregiver so that the parents can have some rest for few hours, and also the family should seek counseling if required. In a nutshell, ASD is a neurodevelopmental disorder in which the child is unable to socially interact, have communication problem, shows repetitive behavior, restricted interest and intellectual disability depending on which stage of spectrum the child is. ASD individuals are not abnormal; however, they have some learning problems. Parents, schools and healthcare providers serve a major role in diagnosis of ASD [13-19].

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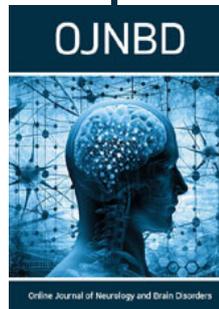
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