
Autism- Intervention Strategies through Learning and Teaching

BY

John King, KINGSTON, *Ph.D*
Department of Early and Special Education
Faculty of Education
Heriot-Watt University
United Kingdom

ABSTRACT

Most autistic children are perfectly normal in appearance, but spend their time engaged in puzzling and disturbing behaviours which are markedly different from those of typical children. They don't want to just learn about nature, they want to literally dig in and get their hands dirty. They love being outdoors and have a strong preference for hands-on experiences. The risk of autism as a disability can be decreased on younger children and future pregnancies. There are technologies known as Alternative and Augmentative Communication (AAC) used as assistive devices that can help victims of communication disorder cope up with life. Some autism is treated by teaching the child how to physically produce the sound and having them practice its production until it (hopefully) becomes natural. There's no cure for autism. But early treatment can make a big difference in development for a child with autism. Intervention strategies through learning and teaching should be adopted for autistic students. Teachers should have enough knowledge about the disability observed by his/her students so as to be able to understand the level of disability in victim students. Knowing the gift and talent of disabled students and also helping them improve in their talent is an important task to be accomplished by the teachers and guidance of these students.

KEYWORDS: Autism, Intervention Strategies, Learning and Teaching

Introduction

Language is a system of verbal symbols used for human communication. The verbal symbols we use are commonly called words. Language is uniquely human and very different from the communication systems used by other forms of life (Wardhaugh, 1972). Stuttering, also known as stammering, is a speech disorder in which the flow of speech is disrupted by involuntary repetitions and prolongations of sounds, syllables, words or phrases as well as involuntary silent pauses or blocks in which the person who stutters is unable to produce sounds.

Communication disorder is a disorder such as stuttering, impaired articulation, language impairment, or a voice impairment that adversely affect a child's educational performance. Communication disorder could be physical (malfunction in a specific organ or body part) or functional (not directly attributed to physical conditions possibly caused by environmental influences). Impairment can be reflected in the ability to receive, send, process, and comprehend concepts or verbal, non- verbal and graphic symbols systems.

Autism is a severe developmental disorder that begins at birth or within the first two-and-a-half years of life. Autism Spectrum Disorder (ASD) may have a number of effects on a

person's social interaction and communication, including: adoption of unusual speech patterns, such as using a robot-like tone, avoiding eye contact with others, not babbling or cooing to parents as an infant, not responding to their name, late development of speech skills, having difficulty with maintaining conversation, frequently repeating phrases, apparent difficulty in understanding feelings and expressing their own. In addition to While there are many theories as to the cause of the increase, Autism Research Institute (ARI) believes that environmental factors including unprecedented exposure to toxic substances and over-vaccination of infants and young children are the key factors triggering this devastating epidemic.

Statement of Problem

A person with autism may also display repetitive or unusual behaviours like: becoming so invested in a topic that it seems to consume them, such as cars, train timetables or planes, becoming preoccupied with objects, such as a toy or household object, engaging in repetitive motions, such as rocking side to side, lining up or arranging toys or objects in very orderly ways. Autism is a complex disorder with many contributing factors. Children demonstrating symptoms of Mixed-Receptive Language Disorder may sometimes appear to be deaf or inattentive, and they may have problems understanding and/or following with verbal directions. In the world, approximately four times as many men as women stutter, encompassing 70 million people worldwide or about 1% of the world's population.

Conceptual Review

Autism

Around 1 in every 10 people with autism exhibits signs of savant syndrome, although this condition might also occur in people with other developmental conditions or nervous system injuries. According to Ghaneshirazi, (2018), autism is a neuropsychiatric disorder characterised by severe and sustained impairment in social interaction, deviance in communication, and patterns of behaviour and interest that are restricted, stereotyped, or both. Onset is generally before age 3 years (Kanner, 1992). Autism spectrum disorder (ASD) and autism are both general terms for a cluster of complex disorders of brain development. These disorders are categorized, in varying degrees, by having problems in social interaction, verbal and nonverbal communication and repetitive behaviors” (Frith, 1991).



Figure 5: *HelpGuide.org*

Both children and adults with autism characteristically show difficulties in verbal and non-verbal communication, social interactions, and leisure or play activities (Adams, 2011). Autistic behaviors continue into adulthood, but the consequences of the disorder diverge from little speech and poor daily living skills throughout life to the accomplishment of college

degrees and independent functioning (Frith, 1991). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), a guide created by the American Psychiatric Association used to diagnose mental disorders, people with ASD have:

- Difficulty with communication and interaction with other people
- Restricted interests and repetitive behaviors
- Symptoms that affect the person's ability to function in school, work, and other areas of life.

People with autism have trouble with communication. They have trouble understanding what other people think and feel. This makes it hard for them to express themselves, either with words or through gestures, facial expressions, and touch. People with autism might have problems with learning. Their skills might develop unevenly. For example, they could have trouble communicating but be unusually good at art, music, math, or memory. Because of this, they might do especially well on tests of analysis or problem-solving. More children are diagnosed with autism now than ever before. But the latest numbers could be higher because of changes in how it's diagnosed, not because more children have a disorder. Symptoms of autism usually appear before a child turns 3. Some people show signs from birth.

Autism is known as a "spectrum" disorder because there is wide variation in the type and severity of symptoms people experience. ASD occurs in all ethnic, racial, and economic groups. Although ASD can be a lifelong disorder, treatments and services can improve a person's symptoms and ability to function. The American Academy of Pediatrics recommends that all children be screened for autism. All caregivers should talk to their child's doctor about ASD screening or evaluation.

These types were once thought to be separate conditions. Now, they fall under the range of autism spectrum disorders. They include (WebMD, 2020):

Asperger's Syndrome: These children don't have a problem with language; in fact, they tend to score in the average or above-average range on intelligence tests. But they have social problems and a narrow scope of interests.

Autistic disorder: This is what most people think of when they hear the word "autism." It refers to problems with social interactions, communication, and play in children younger than 3 years.

Childhood Disintegrative Disorder: These children have typical development for at least 2 years and then lose some or most of their communication and social skills.

Pervasive Developmental Disorder (PDD or Atypical Autism): Your doctor might use this term if your child has some autistic behavior, like delays in social and communication skills, but doesn't fit into another category.

Characteristics of Autism

As earlier discussed, according to National Institute of Mental Health (NIH) (2018), children who exhibit behaviours such as listed below can be said to have ASD:

Insistence on sameness; resistance to change, Difficulty in expressing needs; using gestures or pointing instead of words, Repeating words or phrases in place of normal, responsive language, Laughing (and/or crying) for no apparent reason; showing distress for reasons not apparent to others, Preference to being alone; aloof manner, Tantrums, Difficulty in mixing with others, Not wanting to cuddle or be cuddled, Little or no eye contact, Unresponsive to normal teaching methods, Sustained odd play, Spinning objects, Obsessive attachment to objects, apparent over-sensitivity or under-sensitivity to pain, No real fears of danger, Noticeable physical over-activity or extreme under-activity, Uneven gross/fine motor skills, and Non-responsive to verbal cues; acts as if deaf, although hearing tests are in normal range.

Symptoms of Autism

Behavior

The major problem associated with autism is social skills. People with autism have lack of understanding reciprocal verbal and nonverbal communication. They also have low range of interest and hobbies (Ghaneshirazi, 2018). Unlike as it seems, they may not lack affection, but they would not necessarily show their affection or reciprocate it. Being said, they can have unprovoked aggressive behaviours. If it is not take care of early on, it could lead to requirement of heavy medication and/or institutionalization. In the case of children with autism, shyness, liability mood, and shyness may lead to depression or detachment. In terms of their dependency, the kids with autism are reported by parents to be in practice independency and are proud of it.

Communication

In terms of communication, kids with autism usually lack the ability to fully comprehend and use speech and gestures for their communication. These kids have language disorders. The reason for this can be mainly due to the autistic children's inability to characterize speech. The ability to characterize speech requires the ability to decode the rapid autistic stimuli which is compromised in children with autism. All these circumstances lead to the most devastating language disorder. These disorders include verbal auditory agnosia or verbal deafness. As autism has a spectrum, less affected children may better comprehension than expression. This is why they may have poorly articulated, agrammatical and spare speech. Others who have the ability to improve their communication are able to form complete and fluent sentences, but their communication would be around repetitive phrases and words. Very low level of intuition would be used in their communication (Ghaneshirazi, 2018).

Cognition

75 percent of the children with autism are cognitively underdeveloped. Their level of cognitive ability is deeply dependent on the severity of their autistic symptoms. IQ test during preschool years are not a good measure of the cognitive state of children with autism. This is due to the reason that some of them may be able improve significantly through specialized treatment programs. Also as it was said, they are usually limited in term of intuition. With being said, some group of the children with autism has good musical, mathematical, and visual-spatial abilities.

Causes of Autism

Exactly why autism happens isn't clear. It could stem from problems in parts of your brain that interpret sensory input and process language (WebMD, 2020).

- Autism is four times more common in boys than in girls. It can happen in people of any race, ethnicity, or social background. Family income, lifestyle, or educational level doesn't affect a child's risk of autism.
- Autism runs in families, so certain combinations of genes may increase a child's risk.
- A child with an older parent has a higher risk of autism.
- If a pregnant woman is exposed to certain drugs or chemicals, like alcohol or anti-seizure medications, her child is more likely to be autistic. Other risk factors include maternal metabolic conditions such as diabetes and obesity. Research has also linked autism to untreated phenylketonuria (also called PKU, a metabolic disorder caused by the absence of an enzyme) and rubella (German measles).
- There is no evidence that vaccinations cause autism.

Autism Treatment

There's no cure for autism. But early treatment can make a big difference in development for a child with autism. If you think your child shows symptoms of ASD, tell your doctor as soon as possible (WebMD, 2020). What works for one person might not work for another. Your doctor should tailor treatment for you or your child. The two main types of treatments are:

- Behavioral and communication therapy to help with structure and organization. Applied Behavior Analysis (ABA) is one of these treatments; it promotes positive behavior and discourages negative behavior. Occupational therapy can help with life skills like dressing, eating, and relating to people. Sensory integration therapy might help someone who has problems with being touched or with sights or sounds. Speech therapy improves communication skills.
- Medications to help with symptoms of ASD, like attention problems, hyperactivity, or anxiety.

Intervention Strategies through Learning and Teaching for Autistic Students

Learning Styles:

- Spatial, Musical, Possible Naturalist

Spatial: The visual-spatial learning style is one of eight types of learning styles defined in Howard Gardner's Theory of Multiple Intelligences. Visual-spatial learning style, or visual-spatial intelligence, refers to a person's ability to perceive, analyze, and understand visual information in the world around them. Essentially, they can picture concepts with their mind's eye.

People with this learning style tend to think visually and often prefer learning the same way. They are good at seeing the "big picture," but they sometimes overlook the details.

Musical: People who have strong musical intelligence are good at thinking in patterns, rhythms, and sounds. They have a strong appreciation for music and are often good at musical composition and performance.

Naturalistic Learner: Those with the naturalistic learning style have an uncanny ability to make observations and distinctions about nature. For example, they can easily tell the difference between one plant and another, the names of different cloud formations, and so on. Naturalistic learners share a few similarities with kinesthetic learners in the sense that they thrive on holding and touching things.

Teaching Strategies:

- Allow Students to Tape Lectures

Can an instructor forbid a student with a disability to use a tape recorder in class? No, not if it has been approved as an accommodation for the student's disability in providing meaningful access to the educational experience. Tape recorders are one of the accommodations specifically mentioned in Section 504 of the Rehabilitation Act of 1973.

According to the regulations:

- Lectures taped for personal study may not be shared with other people without the consent of the lecturer.
- Tape-recorded lectures may not be used in any way against the faculty member, other lecturers, or students whose classroom comments are taped as part of the class activity.
- Information contained in the tape-recorded lecture is protected under federal copyright laws and may not be published or quoted without the express consent of the lecturer and without giving proper identity and credit to the lecturer.

Instructor's right to privacy in the classroom: If an instructor objects to the use of a tape recorder, it is typically because they maintain that their right to privacy of information discussed in the classroom is being violated. The instructor's right to privacy does not override the student's right to accommodation.

Other Strategies include:

- Providing interpreter
- Maintain contact with student
- Be Patient, show acceptance and understanding
- Be a good listener
- Provide extra time to answer questions
- One on one conversations- encourage speech practice
- Keep lessons clear, simple, pronounced, in proper syntax
- Make eye contact with students when listening and speaking
- Repeat mispronounced words properly as a question so it does not seem like criticism.
- Model an atmosphere of acceptance and understanding in the classroom.

Conclusions

1. The risk of having autism can be decreased on younger children and future pregnancies by ensuring protection of family members from known dangers like environmental toxins.
2. In all Communication Disorders, a child's communication ability resembles that of a much younger child, which creates problems at school, at home and with peers (particularly in school).
3. People with autism have trouble with communication. They have trouble understanding what other people think and feel. This makes it hard for them to express themselves, either with words or through gestures, facial expressions, and touch.

Recommendations

1. Teachers should have enough knowledge about the disability observed by his/her students so as to be able to understand the level of disability in victim students.
2. Teachers should also adopt the best strategy to teach students that are victim of autism and communication disorder.
3. Knowing the gift and talent of disabled students and also helping them improve in their talent is an important task to be accomplished by the teachers and guidance of these students.
4. The use of Alternative and Augmentative Communication (AAC) is highly recommended for those who need it to assist them.

REFERENCES

- Adams, J. B., Johansen, L. J., Powell, L. D., Quig, D., & Rubin, R. A. (2011). Gastrointestinal flora and gastrointestinal status in children with autism – comparisons to typical children and correlation with autism severity. *BMC Gastroenterology*, 11(1), 11-22
- Carlson, N. (2013). *Human Communication*. In *Physiology of behavior* (11th ed., pp. 497–500). Boston: Allyn and Bacon.
- Frith, U. (n.d.). *Asperger and his syndrome*. *Autism and Asperger Syndrome*, 1-36. doi:10.1017/cbo9780511526770.001c
- Ghaneshirazi, Z. (2018). *Autism Spectrum Disorder*. Available at: https://www.researchgate.net/publication/329023446_Autism_Spectrum_Disorder
- Kanner, L. (1992). Follow-up Study of Eleven Autistic Children Originally Reported in 1943. *Focus on Autistic Behavior*, 7(5), 1-11. doi:10.1177/108835769200700501
- National Institute of Mental Health (NIH) (2018). *Autism Spectrum Disorder. Department of Health and Human Services*. Available at: https://www.nimh.nih.gov/health/publications/autism-spectrum-disorder/19-mh-8084-autismspecdisodr_152236.pdf
- Souza TN, PayãoMda C, Costa RC (2009). Childhood speech apraxia in focus: theoretical perspectives and present tendencies. *Pro Fono*, 21 (1): 76–80.
- Wardhaugh, R. (1972). *Proper English: Myths and Misunderstandings about Language*. Oxford.
- Watkins K.E., Smith S. M., Davis S., Howell P. (2008). Structural and functional abnormalities of the motor system in developmental stuttering. *Brain*. 131(1): 5–9.
- WebMD (2020). *What is Autism?* Available at: <https://www.webmd.com/brain/autism/understanding-autism-basics>
- Wood, R. (1997). *Doing disability research: for the benefit of the few or the good of the many?* Paper presented to the international conference of doing disability research: University of Leeds, 3-5 September.