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EVALUATION OF AUTISM AND THE COMMUNICATION DISABILITIES: ASSESSING THE REMEDIES IN THE 21ST CENTURY

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ABSTRACT

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). The major causes of communication disorder are physical or organic–malfunction in a specific organ or body part; and Functional disorder not directly attributed to physical conditions possibly caused by environmental influences. 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 conclusion, ASD represents a major public health concern as a prevalent neuro-developmental disorder with pronounced risk for failure of adaptation across social, educational, and psychological outcomes. The study recommended therefore that in handling autistic students in school, proper teaching and instructional materials should be administered to ensure learning.

KEYWORDS: Autism, Communication Disabilities, 21st century.

INTRODUCTION

According to Carlson (2013), 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. Communications disorder may be evident in the process of hearing, language and/or speech.

Matson, Matson and Rivet (2007) posit that autism is a severe developmental disorder that begins at birth or within the first two-and-a-half years of life. In addition to impaired communication, 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.

CONCEPT OF COMMUNICATION DISORDER

Communication disorders may run in families (e.g., there may be a genetic component to some communication disorders). They are more frequently diagnosed in boys than in girls and are

more common among younger children than older children. Although the characteristics described above are common among all Communication disorders, there are also a wide range of subtypes and varying levels of severity among these disorders (Carlson, 2013).

Forms of Communication disorder

1. Articulation disorder
2. Language impairments

Articulation disorders (also called phonetic disorders or simply "artic disorders" for short) are based on difficulty in learning to physically produce the intended phonemes. It shows that one cannot produce a given sound physically. Articulation disorders have to do with the main articulators which are the lips, teeth, alveolar ridge, hard palate, velum, glottis, and the tongue. If the disorder has anything to do with any of these articulators, then it is an articulation disorder. There are usually fewer errors than with a phonemic disorder, and distortions are more likely (though any omissions, additions, and substitutions may also be present). They are often treated by teaching the child how to physically produce the sound and having them practice its production until it (hopefully) becomes natural. Articulation disorders should not be confused with motor speech disorders, such as dysarthria (in which there is actual paralysis of the speech musculature) or developmental verbal dyspraxia (in which motor planning is severely impaired).

Language Impairment: 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). The communicative aspect of language permits each individual to participate in many different situations. It is through language that we express our feelings, discuss ideas or present a point of view. Through it we can share our experiences with others by describing for them things we have seen, places we have been or people we have met. Wood (1997) added that through language we can speak or write about an object without the necessity of having the object present and we can understand an abstract idea with which we can have no personal experience.

Language Components

Language is composed of many interrelated factors. The major dimensions of language as viewed by linguists, who scientifically study language, are phonology (phonemes), morphology (morphemes), syntax and semantics, phonology is concerned with the phonemes or speech sound of a language. The child learning language must first learn the phonemes of the language. The phonemic elements within a word are also important for the child learning to read. Phonics is the method of teaching reading in which the key units taught to children are letter-sound relationship.

Problems Associated with Language Impairment

Language impairment is a specific impairment in understanding and sharing thoughts and ideas, i.e. a disorder that involves the processing of linguistic information, problems that may be experienced can involve the form of language, including grammar, morphology, syntax; and the functional aspects of language, including semantics and pragmatics. This involves problems in phonology (phonological disorder), morphology, syntax, semantics, and/or pragmatics; usually classified as either receptive or expressive.

Phonological Disorder

A Phonological Disorder (phonemic disorder) occurs when a child fails to use speech sounds that are appropriate for their age, dialect, and developmental level or when the child has problem learning the sound system of the language, failing to recognize which sound-contrasts also contrast meaning. For example, the sounds /k/ and /t/ may not be recognized as having different meanings, so "call" and "tall" might be treated as homophones, both being pronounced as "tall" and therefore omits the consonant at the beginning of the word. This is called phoneme collapse, and in some cases many sounds may all be represented by one - e.g., /d/ might replace /t/, /k/, and /g/. As a result, the number of error sounds is often (though not always) greater than with articulation disorders and substitutions are usually the most common error. Phonemic disorders are often treated using minimal pairs (two words that differ by only one sound) to draw the child's attention to the difference and its effect on communication. Phonological process disorder or speech mistakes may be common in young children learning speech skills, but when they persist past a certain age, it may be a disorder. Signs of a phonological process disorder can include:

- Developmental delays in speech sound production
- Age-inappropriate difficulty with regard to articulation and expression
- Making sound substitutions or omissions (e.g., use of /t/ sound for /k/)
- Saying only one syllable in a word (example: "bay" instead of "baby")
- Simplifying a word by repeating two syllables (example: "baba" instead of "bottle")
- Leaving out a consonant sound (example: "at" or "ba" instead of "bat")
- Changing certain consonant sounds (example: "tat" instead of "cat")

Some children with phonemic disorders may seem to be able to hear phoneme distinctions in the speech of others but not their own. This is called the fis phenomenon based on scenario in which a speech pathologist will say, "Did you say 'fis,' don't you mean 'fish'?" To which the child responds, "No, I didn't say 'fis,' I said 'fis'." In some cases, the sounds produced by the child are actually acoustically different, but not significantly enough for others to distinguish– because those sounds are not phonemically unique to speakers of the language. Though phonemic disorders are often considered language disorders in that it is the language system that is affected, they are also speech sound disorders in that the errors relate to the use of phonemes.

This makes them different from specific language impairment, which is primarily a disorder of the syntax (grammar) and usage of language rather than the sound system. However, the two can coexist, affecting the same person.

EXPRESSIVE LANGUAGE DISORDER

As eluded earlier, children with Expressive Language Disorder have difficulties with speech and vocabulary and have word finding problems. As a result, they speak using simplified sentences (Vander Schuit, Segers, van Balkom, & Verhoeven, 2011). Symptoms of Expressive Language Disorder include: Problems recalling words; Limited vocabulary; Frequent errors in correctly producing the proper tense of words (e.g., using "goes" instead of "went" for past tense); Difficulty finding a proper or desired word to use in a sentence; Difficulty with producing sentences appropriate in length and complexity for the child's age. According to the DSM, an Expressive Language Disorder is diagnosed when children's scores on tests of expressive language (i.e, speaking and communicating verbally) are significantly lower than their scores on tests of nonverbal intellectual ability (e.g., pattern matching) and receptive language development (i.e., ability to understand spoken language).

MIXED RECEPTIVE-EXPRESSIVE LANGUAGE DISORDER

This disorder occurs when a child has problems both in understanding and expressing language. Children with this disorder display symptoms consistent with expressive language disorders, and also have difficulty understanding words, sentences, or certain types of words (e.g., words related to time, such as "hours, minutes, days" or "when, now, later"). This mixed language disorder is often a prelude to later significant learning problems because of how difficult it is to learn when they can't understand or communicate easily with teachers and peers. 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. They may also have memory or sequencing difficulties (i.e., problems understanding directions, or problems remembering which direction in a set of directions to execute first).

According to the DSM, a Mixed-Receptive Language Disorder is diagnosed when children's receptive and expressive language test scores are both significantly lower than their scores on tests of nonverbal intellectual abilities. The mixed language difficulties must not be better accounted for by a Pervasive Developmental Disorder (a PPD) such as Autism or Asperger's Disorder which also manifest as difficulties with social interactions, language and communication (Vander Schuit, Segers, van Balkom, & Verhoeven, 2011).

CONCEPT OF 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. Savant syndrome occurs when a person demonstrates extraordinary abilities in a particular field, such as playing a musical instrument, calculating extremely complex sums at high speed, reading two pages of a book simultaneously, or being able to memorize vast amounts of knowledge.

IDENTIFYING CHILDREN WITH AUTISM

People with autism thrive on routine, and the ability to predict the outcomes of certain behaviors and places. A break in routine or exposure to loud, over-stimulating environments can overwhelm a person with ASD, leading to outbursts of anger, frustration, distress, or sadness. No specific test can diagnose autism (Stevenson, 1998). Instead, doctors reach a diagnosis through parental reports of behavior, observation, and by ruling out other conditions. 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. According to Kulage, Smaldone, Cohn (2014), less severe cases may be diagnosed with Pervasive Developmental Disorder (PDD) or with Asperger's Syndrome (children with normal speech, but with many "autistic" social and behavioural problems).

CAUSES OF AUTISM

Autism is a complex disorder with many contributing factors. 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. Emerging research supports this fact, making it clear that autism is a whole-body illness triggering a biological brain disorder and ARI continues investigating various possible causal factors. While there are no answers yet, the risk can be decreased on younger children and future pregnancies by ensuring protection of family members from known dangers like environmental toxins.

CHARACTERISTICS OF AUTISM

As earlier discussed, 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.

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. 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.

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:

- Students with disabilities who are unable to take or read notes have the right to record class lectures only for their personal study.
- Lectures taped for personal study may not he 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.

N/B. 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.

Terms Associated with Communication Disorders

Apraxia of speech- Apraxia of speech is the acquired form of motor speech disorder caused by brain injury, stroke or dementia.

Developmental verbal dyspraxia- Developmental verbal dyspraxia refers specifically to a motor speech disorder. This is a neurological disorder. Individuals suffering from developmental verbal apraxia encounter difficulty saying sounds, syllables, and words. The difficulties are not due to weakness of muscles, but rather on coordination between the brain and the specific parts of the body (Souza, Payão & Costa (2009), ("Child Speech and Language", 2009).

Dysarthria- Dysarthria is a motor speech disorder that results from a neurological injury. Some stem from central damage, while other stem from peripheral nerve damage. Difficulties may be encountered in respiratory problems, vocal fold function, or velopharyngeal closure, for example.

Orofacial myofunctional disorders - Orofacial myofunctional disorders refers to problems encountered when the tongue thrusts forward inappropriately during speech. While this is typical in infants, most children outgrow this. Children that continue to exaggerate the tongue movement may incorrectly produce speech sounds, such as /s/, /z/, /ʃ/, /tʃ/, and /dʒ/. For example, the word, "some," might be pronounced as "thumb" ("Child Speech and Language", 2009).

Selective Mutism- Selective mutism is a disorder that manifests in a child that does not speak in at least one social setting, despite being able to speak in other situations. Selective mutism is normally discovered when the child first starts school (Ibid).

Aphasia - Aphasia refers to a family of language disorders that usually stem from injury, lesion, or atrophy to the left side of the brain that result in reception, perception, and recall of language; in addition, language formation and expressive capacities may be inhibited.

Acquired disorders - Acquired disorders result from brain injury, stroke or atrophy, many of these issues are included under the Aphasia umbrella. Brain damage, for example, may result in various forms of aphasia if critical areas of the brain such as Broca's or Wernicke's area are damaged by lesions or atrophy as part of a dementia.

CONCLUSION

ASD represents a major public health concern as a prevalent neurodevelopmental disorder with pronounced risk for failure of adaptation across social, educational, and psychological outcomes. True recovery of autism is not reported in the literature, but educational measures for teaching autistic students are highlighted.

RECOMMENDATIONS

1. Because the identification of delays and deviations of ASD is possible as early as 18-24 months of age, pediatricians should strive to identify and begin intervention in children with ASD as soon as signs are manifest.

2. Specific scales and instruments should be used to assess clinical manifestations and guide the construction and monitoring of comprehensive treatment programs.

3. The complex and pervasive nature of ASD requires a team of multiple professionals for accurate diagnosis and clinical care.

4. In handling autistic students in school, proper teaching and instructional materials should be administered to ensure learning.

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