NEUROLINGUISTICS PERSPECTIVE ON LEXICAL PERCEPTION AND SEMANTIC DISORDER OF AUTISM SPECTRUM DISORDER

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Abstract

Autism patients get suffer from language disorder that can be identified from the late of speaking, the problems in processing linguistic information and understanding the speech meaning. This triggers to the learning problems that is worsened by attention disorder. The language acquisition is also affected by the limited vocabularies, starting from lexical perception up to vocabularies that are parts of semantic acquisition. In neurolinguistics perspective, complexity of language disorder for the spectrum autism can be explained based on the perceptual information management and the domination of his brain hemisphere. Linguistic information is processed in monoprocessing due to different hemisphere domination that happens after the process of brain lateralizes that ends up to the base of different lexicon perceptual system and the semantic acquisition for spectrum autism so that his expressive language skill reaches far beyond his receptive language. This strengthen the argumentation that language pathology is based on the relation between brain and linguistic mechanism.

Keywords

Neurolinguistics, Lexical Perception, Semantic Disorder, Autism Spectrum Disorder

Introduction

Autism has been a current issue related to Specific Language Impairment (SLI) a term introduced by speech pathologist referring to difficulties in communication characterized by speech delay and other symptom of language disorder (Gleason & Ratner, 1998). Autistic children suffer from language disorder or specifically from language delay involving the disability in processing linguistic information and difficulties in comprehending the meaning of utterances.

This condition results in learning difficulties worsened by the difficulties to concentrate which occur in most of children with Autism Spectrum Disorder (ASD). In addition, their language acquisition phonologically, morphologically, syntactically and semantically can be interfered by their tendency of being echolalic or repeating utterance they heard. Therefore, their language acquisition, particularly of lexical perception and semantics, becomes interesting to decipher.

In Indonesia, very few studies are done on the language acquisition of children with ASD particularly related to neurolinguistics perspective. In addition, the development of early intervention of autism has not been socialized thoroughly despite the high number of autism prevalence today. Therefore, analyzing more on the language disorder of ASD children belongs to an important step to contribute for comprehending autism in depth so that in turns it leads to better early intervention for them.

This study focuses on the neurolinguistics perspective of the language disorder of a child with language delay diagnosed as ASD specifically on his lexical perception and semantic disorder. It describes what actually the reason behind the difficulties to percept lexicon and comprehend meaning by using the neurolinguistics bases.

Conclusion

This study analyzes the lexical perception and semantic disorder of the ASD subject demonstrating different ability between perceptions and labeling the targeted lexicons. The analysis is then discussed further from the neurolinguistic point of view.

Based on the result of the analysis, the ASD subject shows semantic disorder in the level of vocabulary enrichment. The echolalic expression substituted the communication strategies as response to instruction or yes/no question. The idiosyncratic characteristic in vocabulary enrichment cannot be completed automatically without the establishment of conducive training like speech therapy employing effective method such as the use of pictures. This will encourage a perfect condition for better perception as the perceptual stage employed by the ASD subject is monoprocessing. It also facilitates his comprehension to eliminate his semantic disorder such as extreme literalness or one word one meaning.

The perception level of the ASD subject is much better than his ability to label some lexicons correctly and appropriately. He can listen to correct examples but cannot imitate the pronunciation correctly. In other context the subject failed in getting the meaning of the targeted lexicon which may result in the increasing emotion worsened by difficulty of making eye-contact. This is also as the outcome of the monoprocessing perceptual stage of ASD.

Another neurolinguistic explanation of the ASD subject semantic ability deals with special hemispheric dominance compared to normal brain. The cortical asymmetry which is related to differences in neuron number or neuron packing density in right brain support the use of non-verbal symbol especially when he communicates with the people he recognizes.

To sum up, the abnormalities of brain structure of the ASD subject result in specific areas of dysfunction namely problems with pragmatic functioning (using language appropriately in social contexts; accommodating language to the needs of the listener); high-level semantic aspects of language, and problems with the use of prosody or intonation to convey meaning.

Based on the finding of this study, some recommendations are given to educators of children with special needs to dig more on the type of language disorder to design effective speech therapy for ASD children. The ASD children's language and communication uniqueness should not hinder the teaching and learning process. To facilitate the perceptual stage, the following conditions need to be implemented: (1) the lexicons are given repetitively with clear pronunciation; (2) the eye-contact is maintained for the correct pronunciation; (3) supported by appropriate gesture to enhance communicative level; (4) correct labels are followed by reward as reinforcement; and (5) supported by context to reinforce understanding, in the form of prompt or examples using media such as pictures.

In addition, psycholinguistic researchers are also recommended to elaborate more studies on language disorder. The finding of this study s limited to an ASD subject from a specific semantic task which should be continued with more analysis on another linguistic uniqueness of individuals with different autistic spectrum such as Asperger's syndrome, Attention Deficit Disorder (ADD), Attention Deficit Hyperactive Disorder (ADHD),Pervasive Development Disorder-Not Specified (PDD-NOS), Cerebral Palsy, etc. Since this study used the neurolingusitic perspective of the language of ASD boy, another study of different gender needs to be explored for more comprehensive empirical data..

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