

Evaluating Low- and High-Tech Visual Scene Displays in Children and Adolescents with Complex Communication Needs

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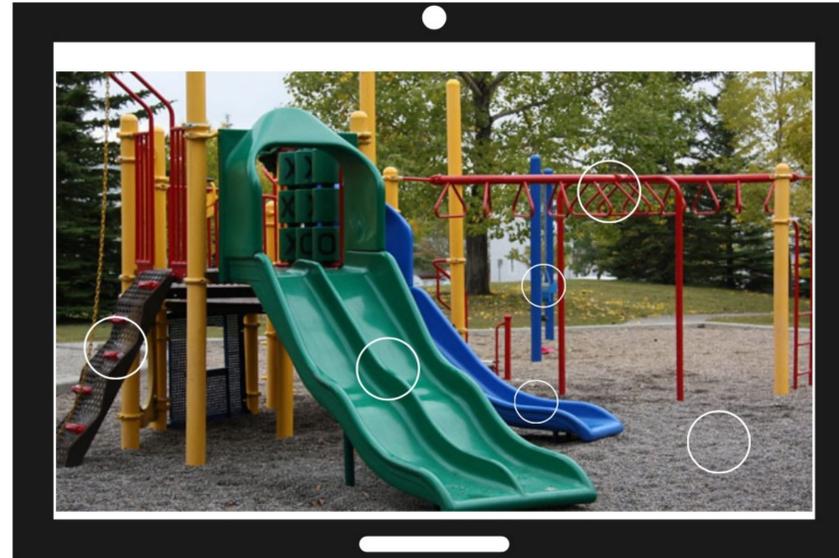
Communication Disorders

Introduction

Augmentative and Alternative Communication (AAC) systems provide a means to communicate for individuals who cannot verbally speak. There are many different types of AAC systems such as grid displays, visual scene displays, and even sign language.

Visual Scene Displays

Visual Scene Displays (VSD) are a type of AAC system used for children and adolescents with complex communication needs (CCN). VSDs differ from more traditional forms of AAC, such as grid displays, because they present communication opportunities in a contextually rich environment. This reduces the cognitive demands of the user and enriches learning opportunities.



Visual Scene Display

Methods

A comprehensive search was conducted in order to locate and review peer-reviewed literature pertaining to the efficacy of low- and high-tech VSDs. Search terms included “pediatrics, communication, AAC, VSD, technology, assessment, and intervention.” The research was assessed via an 11-point rating scale that determined the reliability and validity of each study. A total of 8 articles met criteria and were evaluated.

Clinical Implications

Individuals with Autism

VSDs have great potential to improve communication and instruction for individuals diagnosed with ASD. VSDs provide support for individuals presenting with deficits in understanding time and sequences. They support effective social interactions across environments [9]. VSDs convey greater information and trigger more associations than traditional systems which aid in comprehension during real time speech production when the content of a spoken message may not be understood [10]. Lastly, the use of VSDs for individuals with ASD helps to inform them of and clarify communication opportunities [11].

Peer Interactions

Peer interactions are difficult to maximize due to a disconnect in modalities of communication. However, the implementation of VSDs promote inclusion by reducing cognitive demands for young children as they communicate with peers [12]. VSDs make it easier for children with CCN to learn to use the technology in social interactions. Clinicians and educators can implement VSDs during play-based routines and model how children can play together in a socially appropriate manner.

Article	Eligibility criteria were specified	Subjects were randomly allocated to groups	Allocations were concealed	Similar at baseline	Blinding of subjects	Blinding of therapists	Blinding of assessors	Measures obtained from 85% of subjects	Subjects received treatment or control condition	Results reported for at least 1 outcome	Measures of validity for at least 1 measure
1	Y	N	N	Y	N	N	Y	Y	Y	Y	Y
2	Y	N	N	Y	N	N	N	Y	Y	Y	Y
3	Y	N	N	Y	N	N	N	Y	Y	Y	Y
4	Y	N	N	Y	Y	N	Y	Y	Y	Y	Y
5	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y
6	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
7	Y	N	N	N	N	N	N	Y	Y	Y	Y
8	Y	N	N	N	N	N	N	Y	Y	Y	Y

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