A Case Study Implementing the PODD Communication System with an Adult Female with Angelman Syndrome

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Background
Allison is a 23-year-old female with Angelman syndrome living in a full time residential setting and working weekly at a day program. Angelman syndrome is a rare genetic disorder characterized by developmental delays, intellectual disability, receptive and expressive language impairment, seizures, and ataxia. Although individuals with Angelman syndrome typically display a happy excitable demeanor, significant challenges exist in their ability to communicate for a variety of purposes. Allison was referred for a communication evaluation because her mother and the residential staff believed she would benefit from an additional Augmentative and Alternative Communication (AAC). Communication strategies already in place included use of approximately 20 modified signs, gestures, and a picture exchange communication book consisting of approximately 20 picture symbol cards. Allison’s speech and language was evaluated using the Pragmatics Profile, Test of Aided Communication Symbol Performance, Preschool Language Scale, Fifth Edition, and caregiver report. Cognitive, language, and adaptive skills were estimated to be around 24 months.

Method
Based on evaluation results, the PODD communication book was determined to be an appropriate AAC system to trial. The PODD is an AAC system in which vocabulary presented in picture symbols is organized and selected to enable communication between individuals with complex communication needs and their communication partners. Gayle Porter, a speech language pathologist, has been developing the PODD over the last fifteen years as a means of continuous communication for a variety of purposes across a range of topics to be used in all environments. For this study, the PODD was modeled by the communication partners through use of aided language stimulation techniques, where visual and verbal language are paired by pointing to the symbol(s) and verbalizing the word(s) in conversation. This study was based on the premise that Allison’s ability to communicate specific desires with clear meaning for a variety of purposes at her day program would improve through use of the PODD. A two-hour staff training session was provided, as well as access to an individualized 20-per-page expanded function PODD for four months. Ongoing customization took place throughout the study to individualize the PODD to meet Allison’s needs.

Results
Results indicated that Allison’s overall ability to effectively communicate improved through use of the PODD system. Her interest and attention to use of the PODD noticeably increased as was documented by Allison’s ability to follow and imitate the clinician’s modeling. Based on pre- and post-intervention results, the variety of communicative functions Allison used also increased. Most notably, she began commenting on likes and dislikes. In addition, her ability to provide specific vocabulary to express intent improved from using a limited number of generic gestures with unclear meaning to selection of specific picture symbols communicating clear meaning with the communication partner. The number of times Allison expressed a specific opinion or requested a specific item/activity increased from minimal to frequent.

Discussion
This case study found that providing Allison, an adult with Angelman syndrome and complex communication needs, with a systematic means by which to communicate (the PODD) effectively increased her ability to communicate specific meaning for a variety of purposes at her day program. Although Angelman syndrome is a heterogeneous condition and results vary greatly among individuals, positive effects were seen with this individual. Challenges to this study included the high turn-over rate of staff at the day program and need for continued training, inclement weather causing decreased modeling opportunities for Allison and the staff, and consistency of PODD access and use throughout the day. Limitations exist in the ability to generalize these results to other individuals with Angelman syndrome due to the single subject case study design.

Objectives
This single subject case study sought to measure Allison’s ability to effectively communicate using a Pragmatic Organization Dynamic Display (PODD) communication system when provided a model by the communication partner. Specific communication objectives include: a) increased interest and attention to use of the PODD by a communication partner, b) increased use of a variety of communicative functions such as commenting, refusing, and requesting objects, actions, and assistance, c) an increase in the amount and type of vocabulary used to express intent.

PODD

References

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