

Beck, A.R., Stoner, J., & Dennis, M. (2007, September). *Using Aided Language Stimulation With Adults With Developmental Disabilities*. Paper presented at the 2007 Clinical AAC Research Conference, Lexington, KY.

Using Aided Language Stimulation With Adults With Developmental Disabilities

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Abstract

A single subject ABAB design was used to determine the efficacy of Aided Language Stimulation to teach the use of AAC techniques to adults with developmental disabilities. Sixteen participants were divided into two equal groups. In both groups, half of the participants were able to communicate functionally using spoken language and the remaining participants had complex communication needs (CCN) and did not have functional, symbolic communication systems. Both groups met twice weekly for 30 minutes a session. Researchers modeled the use of AAC and followed scripts during music based interventions. Sessions focused on social greetings, choosing songs to play, learning words and movements for the songs, and discussing the songs. Participants were encouraged to interact with each other and to facilitate each other's communications. Data taken for the participants with CCN regarding changes in their responsiveness and mode of communication used indicated improvements for all participants.

Research Description

Many adults with developmental disabilities (DD) receive residential and other types of support services. Even given these supports, however, they are "among the most vulnerable people in the nation" and "wait, sometimes for years, for funding for services and supports that will enable them to live and thrive and make contributions in their communities" (Arc and AAMR, 2001, p. 4-5). One support that is often missing, or that is limited, is access to functional communication systems. Appropriate communication and social skills are critical for self-determination and autonomy in activities of daily living.

According to ASHA (1991), AAC is an area of clinical and educational practice that provides compensatory techniques to individuals with such complex communication needs (CCN) that they are not able to communicate functionally through spoken language. Although AAC has been successfully introduced to many individuals with DD during their school years, adult service systems often fail these individuals when it comes to making successful transitions into adult life (Blackstone, 2005). According to Wehmeyer (1998), AAC techniques (e.g., synthesized speech devices, picture books, touch or point systems) remain underutilized by adults with DD and CCN despite the fact that the individuals can benefit from such technology. Reasons for this underutilization are the cost of AAC devices, lack of information about AAC

techniques and strategies, and lack of support personnel who are trained to facilitate the use of AAC. Further study into how the use of AAC techniques can be supported for adults with DD and CCN is therefore critical.

A promising intervention strategy for developing functional communication interactions is aided language stimulation (ALS; Elder & Goossens, 1996). In ALS, the facilitator models the use of AAC and follows scripted exchanges between him/herself and adults with DD. Additionally, the adults with DD are encouraged to communicate with each other. The mode of communication used by the adult with DD depends on that person's skills and abilities. While there is clinical anecdote to support the use of ALS with adults with DD, there are no empirical studies that have investigated the viability of this intervention with this population.

The current research study focused on the efficacy of utilizing ALS to support the use of functional communication by adults with DD and CCN. The specific question asked was: Can adults with DD and CCN be taught functional communication skills through the use of an AAC technique using ALS?

Participants were 16 individuals who attended a day center for adults with DD. These individuals were selected by the staff at the day center after consultation with the researchers. Participants ranged in age from early 20s to mid 60s. All were developmentally delayed. Participants were divided into two groups of 8. In each group 4 individuals could speak, and 4 had CCN.

The research design utilized was a single-subject, ABAB design. The dependent variables were number of communicative turns each participant took, whether the communication was appropriate or not, intelligible or not, the mode of communication (i.e., aided AAC, verbal, gestural, facial/body language, vocalization, or no response), and who (i.e., researcher or peer), if anyone, the participant responded to or initiated a response with during a communicative exchange. The independent variable was the use of ALS.

Each group of participants participated in two sessions a week held in the same activity room in the host facility that lasted approximately 30 minutes. All sessions and interventions focused on music group activities. Participants were engaged in scripted conversations specific to music activities. In order to obtain baseline measures of each dependent variable, ALS was not utilized during the initial four sessions. Following baseline, intervention was initiated. During intervention, researchers modeled the use of picture boards using an enlarged communication board while following scripted conversations. The participants were asked to use either their own speech, if possible, or the AAC techniques of individual pictures, picture boards, or an inexpensive, low technology AAC device to initiate a communication or to respond to a communication partner. After approximately 2 months, all treatment was withdrawn for 6 weeks (winter break). When the sessions were initiated for the spring semester, baseline measurements were taken again. Following the second baseline period, intervention was reinstated. Approximately half way through the spring semester, participants were demonstrating knowledge of the scripts and ALS was withdrawn. Music sessions continued and data were taken of the dependent variables defined above. Staff members from the facility were present during a

majority of sessions and were trained in the use of ALS so that they could facilitate communication when researchers were not present.

To assure that ALS was being appropriately conducted, procedural fidelity was assessed at random times during the intervention sessions; the researcher who was leading the intervention at the time did not know when procedural fidelity was being assessed. During the fall semester, procedural fidelity was conducted nine times, spread across the semester, for each group. During the spring semester, procedural fidelity was conducted three times for each group during the first half of the semester. As described, by the middle of the spring semester, ALS was no longer used and so procedural fidelity was not assessed in the second half of the spring semester.

Data were taken only on the individuals with CCN. After the first baseline measurements were completed, one participant demonstrated use of AAC 100% of the time. Because of the agreement made with the facility, this participant continued to be included in the sessions, but his data are not discussed in the conclusion. Additionally, one other participant had highly inconsistent attendance and, when she did attend, her behavior was disruptive to the other participants. This participant was therefore removed from the group after the first semester and received individual intervention instead. Inter-rater agreement was assessed for each of the remaining 6 participants during baseline and intervention sessions by having two members of the research team independently score the participant's responses for all sessions. The number of agreements was tallied and divided by the number of agreements + disagreements and then multiplied by 100. Inter-rater agreement was as follows (names used are pseudonyms): Rita, 86%; Craig, 92%; James, 93%; Jane, 98%; Jennifer, 92%; Randy, 95%.

Although patterns of change varied slightly across participants, all participants were found to increase their use of AAC over baseline measures during the use of ALS and ALS was thereby found to be an effective intervention for these individuals. Additionally, family members and/or staff who worked with the participants were asked to comment on improvement noted in communication skills of participants and on the use of ALS at the end of the project. Comments were overall very positive regarding changes in participants providing social validity for the intervention.

References

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