Journal on Developmental Disabilities
Le journal sur les handicaps du développement
JoDD
Volume 16, Number 2, 2010

BRIEF REPORT: Intensive Behavioural Intervention (IBI) Training: Cooperation and its Relationship to Language and Social Competence in Children with Autism Spectrum Disorder (ASD)

Authors

Mary Konstantareas,[1,2]
Andrea Rios,[1]
Calida Ramnarace[1]

[1] Kerry's Place Autism Services, Aurora, ON

[2] Department of Psychology, University of Guelph, Guelph, ON

Correspondence

mkonstan@uoguelph.ca

Keywords

intensive behavioural intervention,
cooperation,
ABLLS-R,
autism spectrum disorder

Abstract

This study attempted to determine the relationship between Cooperation and the Language and Social domains of Assessment of Basic Language and Learning Skills (ABLLS-R). Data on 18 children diagnosed with Autism Spectrum Disorder (ASD) who were exposed to Intensive Behavioural Intervention (IBI) training were used. Results revealed that Cooperation at the time of program entry was related to Cooperation, Receptive Language, Social Interaction and Play and Leisure skills post-program. Limited or complete absence of spoken language may account for the lack of relationship between Cooperation and the three expressive language domains examined. Results are discussed for their relevance to IBI training among persons with ASD.

It is well recognized that Intensive Behavioural Intervention (IBI) is effective with children meeting criteria for Autism Spectrum Disorder (ASD) (Smith, 2001). Although it has been shown that almost all children exposed to it can benefit, degree of improvement as a function of a number of variables upon the child's entry into the program has not been systematically examined. This pilot study attempted to determine the relevance of what has been called "Cooperation and Reinforcement Effectiveness" in the Assessment of Basic Language and Learning Skills (ABLLS-R; Partington, 2006) on the children's gains at program termination or at a later point in their training, with the minimum being one year. Specifically, the study attempted to see how the children's willingness to cooperate with the instructors and to respond to reward upon entry to the program related to their abilities in all key dimensions of competence as assessed by the ABLLS. Of particular relevance were the language and social variables. It was hypothesized that high cooperation ability at program entry would translate into measurable gains at program outcome, although it was not clear which of the targeted skills were more likely to be affected.

Method

Eighteen children, who have the diagnosis of ASD as determined by an independent assessment, attended an in-centre IBI program for twenty hours per week (four hours per day for five days per week). The children ranged in age from 3 to 11 years and all met the eligibility criteria for the Ontario IBI program within the Central West Region. ABLLS-R Functional curriculum assessments were conducted upon program entry

and every 6 months afterwards. Daily probe data was collected for all teaching targets. Each four-hour session consisted of three hours of intensive 1:1 therapy, and one hour of following daily routines (classroom and personal care), structured small group, and snack time. In addition to attending the IBI program, all children were enrolled in school for half-days and attended either morning or afternoon IBI sessions each day, Monday to Friday. All children who participated attended the program for a minimum of one year. The data reported here were collected as part of regular clinical practice and analyzed anonymously.

Results

Data were collected and summarized for the following seven domains of the ABLLS at both pre and post program: Cooperation and Reinforcement Effectiveness, Receptive Language, Labeling (Expressive Language), Conversation, Requests, Play and Leisure and Social Interaction. A series of pairwise t tests were used to compare pre-program data on Cooperation with post-program data on the remaining domains. Significant effects were found for the following comparisons: Cooperation ($t = -5.84.$, $df = 15$, $p < .000$), Receptive Language ($t = -6.58$, $df = 15$, $p < .000$), Social Interaction ($t = 2.00$, $df = 15$, $p < .06$) and Play and Leisure Skills ($t = -3.224$, $df = 15$, $p < .006$). No relationship with Requesting, Labeling, or Conversation was found.

Discussion

The present results are interesting in a variety of ways. It is logical to assume that the child's cooperation when he/she enters the program would be associated with cooperation at program completion, since this is thought to be a stable characteristic in the child, likely related to temperamental factors. Thus, this effect was expected, and it supports the stability of cooperation across time for children with ASD. The finding that cooperation at program entry is significantly related to play and social interaction at post is also intuitively understandable since children who cooperate with their therapists are likely to also relate well to other children. Considering how important cooperation is to outcome, it is worth considering how to optimize it any ABA/IBI intervention (Lavie & Sturmey, 2002). That cooperation with the therapist and focusing attention are of key importance to IBI success was also shown in a recent study by Kasari, Paparella, Freeman, & Jahromi (2008).

What was surprising was that cooperation was also related to receptive language skills post-program. An examination as to whether it also related to receptive language at program entry yielded a significant effect for the two means in a pairwise comparison ($t = -2.89$, $df = 15$, $p < .01$). Thus, to the extent that the two were related pre-program, it is not surprising that they are also post-program. Why this is the case for receptive language but not for the three categories of expressive language (i.e., Requesting, Labeling and Conversation) is unclear at present. One possible explanation may be that expressive language hinges on other variables, such as the child's ability to employ verbal language. It is well known that a large number of children with ASD are nonverbal, something true of half the children in our sample. However, the small sample size precludes using statistical means to explore this hypothesis.

Conclusion

In conclusion, the child's cooperation ability has clear links to his/her receptive and expressive language as well as social interaction and play. Helping children with ASD to improve their ability to cooperate when they enter an IBI program should therefore be a priority for therapists. Reinforcement preference schedules should be repeated at regular intervals to ensure that the child is motivated to collaborate with the therapists for engaging in the various demanding tasks of an IBI curriculum.

References

Kasari, C., Paparella, T., Freeman, S., & Jahromi, L. B. (2008). Language outcome in autism: Randomized comparison of joint attention and play interventions. *Journal of Consulting and Clinical Psychology, 76*, 125–137.

Lavie, T., & Sturmey, P. (2002). Training staff to conduct a paired-stimulus preference assessment. *Journal of Applied Behavior Analysis, 35*, 209–211.

Partington, J. (2006). The assessment of basic language and learning skills – Revised. Pleasant Hills: Behavior Analysts, Inc.

Smith, T. (2001). Discrete trial training in the treatment of Autism. *Focus on Autism and other developmental disabilities, 16*, 85–92.