

## BRIEF REPORT: IBI Training: Social and Play Skills upon Entry as Predictors of Outcome in Children with Autism Spectrum Disorder

### Abstract

*This study examined the relationship between receipt of Intensive Behaviour Intervention (IBI), play and social interaction among children with Autism Spectrum Disorder. At the onset of the program, children engaged in play at a higher rate than in social interaction. After exposure to IBI for a period of at least a year, play continued to be more frequently engaged in by the children, which is consistent with the well-documented difficulties of children with this disorder in relating to their peers.*

It is well recognized that Intensive Behaviour Intervention (IBI) is an effective intervention for children meeting the criteria for Autism Spectrum Disorder (ASD) (Smith, 2001). Although it has been shown that the majority may benefit from it, the degree of improvement as a function of the children's competence levels in various components of IBI treatment has not been systematically examined. Along with other aspects of IBI training, this study examined how competence levels in play and social interaction skills changed from entry to the time of discharge from an IBI program. Of additional interest was to determine how play and social interaction were related to each other, and whether that relationship changed across time. The extent to which expressive language ability at program entry was related to play and social skills at the time of discharge was also investigated.

### Methods

The sample consisted of 16 children aged 3 to 11 years who attended a program at Kerry's Place Autism Services and had been diagnosed by one or more clinicians as meeting criteria for ASD. The children were evaluated using the Assessment of Basic Language and Learning Skills-Revised (ABLLS-R; Partington, 2006) at program entry to gain a functional assessment of their skills; the ABLLS-R was re-administered every 6 months thereafter. In particular, scales related to Play and Leisure skills, Social Interaction, and G-Labeling were considered. The data reported here were collected as part of regular clinical practice and analyzed anonymously; confidentiality was not breached.

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## Results

A set of pair-wise t tests were conducted to compare data from Play Leisure & Social Interaction at entry and discharge from the IBI program. These analyses revealed significant differences for Play and Leisure skills ( $t_{(15)} = -5.30, p < .000$ ) and for Social Interaction ( $t_{(15)} = -5.01, p < .000$ ) over time. When we compared the two scales at program onset, we found the Play and Leisure skills to be superior to Social Interaction skills,  $t_{(15)} = 3.91, p < .001$ . This relationship continued at discharge ( $t_{(15)} = 6.04, p < .000$ ). Thus, children with ASD were better at play than they were in social interaction, even though both skills improve with IBI treatment. Pair-wise t tests showed no relation between labeling and either play or social interaction; though its relationship with social interaction skills at discharge approached significance ( $t_{(15)} = -1.84, p < .085$ ).

## Discussion

These findings provide preliminary support for IBI as an effective way to improve the ability of children with ASD to engage in play, as well as to become better able to interact with others. Interestingly, we found that play is more likely to be within the children's competence when they come to the program, and to continue to be superior to social interaction after treatment. Though interesting, this is consistent with the well-documented difficulties of children with this disorder in relating to their peers, even though they may relate well to adults (American Psychiatric Association, 2000).

In examining how the ability to label objects at program entry related to the children's ability to play or socialize with peers at discharge, we found that labeling was unrelated to both, though its relationship with social interaction, the weaker skill at program entry, approached significance at discharge. It makes sense that being able to speak or communicate in general would provide some facilitate interaction with peers, though this finding is worthy of further investigation.

This study is not without its limitations. The total number of children was small, children varied in terms of their level of functioning, and were not randomly selected. Further, there was no control group available to which to

compare the group of children. In the future, studies should consider a more experimental research design to fully examine the ability of IBI to improve play and social interaction skills among children with ASD.

In sum, the present findings provide preliminary support of the effectiveness of IBI for improving children's abilities in play and social interaction, in addition to improving their communication. The ability to label objects seems to impart some improvement in social interaction, although future research should further examine the relationships found here in larger samples, as well as how other characteristics, such as speech, age, and cognitive ability might relate to play and peer interaction and the effectiveness of IBI interventions in increasing these skills.

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