[Archived] Autism Intervention

Sandra L. Harris, PhD

Rutgers, The State University of New Jersey, USA

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Introduction

Early intensive intervention has a significant impact on the functioning of many young children with autism. It enables some to be full participants in the regular education system, while others, despite substantial progress, are still left with significant symptoms. Although educational and language gains are easier to achieve than social/emotional skills, there has been important progress in modifying complex interpersonal behaviours as well. Research has documented significant improvements in social/emotional behaviours for young children with autism following intensive treatment.

Subject

Difficulties in social/emotional functioning are intrinsic to the diagnosis of autism. These include problems with the use of non-verbal behaviours such as eye-to-face gaze and the communicative use of gestures, facial expressions and body posture. Young children with autism have problems developing age-appropriate friendships and may have minimal motivation to do so. They are challenged in demonstrating joint attention (using coordinated vocalization, eye contact and gesture to draw someone's attention to an object or responding to these behaviours by another),

and may not bring, show or point out objects that interest them. Recent research indicates it is possible to measure and track some of these behaviours in infants and toddlers at risk for autism[1] . As a group, young children show a limited capacity for empathy or understanding that their view of the world differs from others'.

Problems

Difficulties in the social and interpersonal attunement of the young child with autism make interactions with others a stressful challenge. They seem to prefer isolated activity, standing by and watching others, or engaging in problematic behaviours rather than in social interaction.[2] Children with autism interact less with, and keep a greater distance from,their peers. They also spend more time in seemingly purposeless behaviour than do other children.[2] Appropriate social behaviour does not come without active teaching and even then, their social skills may retain a lack of ease that distinguishes them from their peers.

Research Context

Studies of the effects of intervention on the social/emotional behaviour of young children with autism have employed two approaches. One uses group designs with a comparison of two or more different treatments to assess the impact of intervention. The other uses single-subject designs, most often a reversal or multiple baseline design, in which a small number of participants are systematically exposed to two or more different conditions to examine the impact on skill acquisition. In a reversal design, a baseline condition is followed by the treatment, then a return to baseline and, if it was effective, a return to the treatment condition. In a multiple baseline design, a treatment is systematically evaluated across several different children, settings or behaviours, one at a time. Studies of social/emotional behaviour are most often done in small group settings or classrooms appropriate to the skill being taught, although some private "coaching" may occur prior to entering the group.

Key Research Questions

The first tier of research questions concerns techniques to teach the fundamentals of the broad gamut of social skills to young children with autism. The more complex questions concern how to teach these skills to ensure their generalized use with many people in many contexts, to enhance the child's ability to use the skills fluently and to learn new skills from observation of peers.

Recent Research Results

Lovaas[3] performed the most influential group study of the outcome of early intensive Applied Behaviour Analysis (ABA) intervention of children with autism. Although that study did not describe systematic assessment of social/emotional functioning, it did report that among children who received ABA intensive treatment, nearly half achieved normal educational and intellectual functioning. A long-term follow-up of participants who had achieved this good initial outcome was done in early adolescence and examined social and emotional functioning.[4] Nine children who were classified as “best-outcome” during the initial study continued to show average levels of intelligence and adaptive functioning and, with the exception of one youngster, were described as “normal-functioning.” This research suggests that some, but not all, children receiving intensive behavioural intervention showed major social gains.

One important thread of social-skills teaching has focused on the role of peers. This work shows that physical proximity alone is insufficient to support interactions, but when peers learn to encourage social behaviours from the children with autism, there are beneficial effects.[5] McGee[6] et al. taught typical preschoolers to request responses from the child with autism and to praise appropriate behaviours during free play. Initial adult support can be used to teach children with autism to begin an interaction[7,8] or teach a peer to initiate to the child with autism[6] and then adult intervention is faded because continued intrusion has an adverse impact on the child-to-child exchange.[9] In a kindergarten-wide intervention, Laushey and Heflin[10] arranged a peer buddy system that included two children with autism such that each child in the class had a different “buddy” every day. The children, including the youngsters with autism, were taught to stay close to, talk to and play with their buddy each day. This system, which eliminated the stigma that might be attached to being the only child with a buddy, increased positive social interactions of the children with autism and increased the likelihood that they would generalize their behaviour with all of their peers, rather than a select few.

Among the factors that impact on social behaviour are ensuring that the child has the necessary skills for a particular play activity, teaching the child with autism how to initiate and respond to a peer, and training peers to persist in efforts to join with the child with autism[2]. Beyond the basic teaching methods for young children used in ABA, other specific instructional methods that are beneficial for learning social behaviours include pivotal response training,[11] in which key behaviours like social initiations or independent responding are taught, and script-fading, in which a child is given a written, auditory or pictorial script to follow.[12] Hwang and Hughes,[13] in a review of

the literature on social interactive training with young children, found that the use of time delay in which an adult waits a few seconds before offering a prompt to respond, environmental arrangement in which materials are arranged to facilitate interaction, the use of naturally occurring reinforcement inherent in the activity, and contingent imitation (copying) of the child may all serve to enhance the child's interaction with an adult. Bernard-Opitz and colleagues[14] demonstrated the feasibility of computer-assisted instruction to teach preschool-aged children with autism to generate increasing numbers of alternative solutions to social problems.

Conclusions

There is modest evidence to document the benefits of early intensive intervention for the acquisition of generalized use of appropriate social and emotional skills by children with autism. Many group studies have failed to include social and emotional functioning as an outcome measure, perhaps because of the complexity of measuring these skills. Most of the single-subject research looking at discrete social skills has found ABA teaching methods helpful in teaching children with autism initiations and responses to other children, specific play skills and other behaviours that lend themselves to behavioural measurement. Regardless of the theoretical orientation of the intervention, there is a need for long-term, rigorous studies tracking the development of social and emotional skills in young children who participate in intensive treatment.

Implications

Early intensive treatment should include a social/emotional component integrated through the day, as well as having specific planned "lessons." Much of toddlers' early interaction is with adults, but intervention should include systematic involvement with children the same age or slightly older who are able to follow simple directions for engaging the child with autism. For preschool-aged children, such exposure should be expanded as rapidly as possible given the child's level of functioning. Multiple peers should be used, and supported in making social approaches as well as teaching the child with autism how to initiate to peers and reciprocate their social bids. Not every child with autism will be ready for extended child-to-child interaction, but issues of communication, management of challenging behaviours and increasing awareness of others may be precursors to peer-related play.

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