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[Archived] The Effect of Early Intervention on the Social and Emotional Development of Young Children (0-5) with Autism

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Introduction

Autism is an increasingly common severe developmental disability that affects three major areas of development: communication, socialization and behaviour/play. Child outcomes vary from child to child and may depend heavily on the age at which intervention begins, since children who start intervention prior to or at age three have significantly better outcomes compared to older children.[1,2,3]

Subject

A growing body of literature suggests that early intensive intervention may greatly enhance outcomes for children with autism. Studies on the effects of behaviourally oriented interventions

with preschoolers with autism have documented positive short- and long-term effects.[1,4-9] These outcomes have ranged from partial to nearly complete remediation of symptoms[1,6,7,10-13] (the most optimistic figures suggest approximately a 50% complete recovery with intensive early intervention), with progress sometimes defined in terms of gains on standardized pre-post test scores and sometimes in terms of behavioural outcomes. Furthermore, although early estimates suggested only half of all children would learn to use functional speech,[14] more recent estimates based on children who participated in early intervention indicate that at least as many as 85 to 90% of children with autism can learn to use functional speech if intervention begins in the preschool years.[15-17]

Problems

Difficulty with reciprocal social interactions lies at the heart of the autism disorder and is therefore an important goal of early intervention. However, since most interventions focus on child-adult interactions, relatively few studies to date have focused on improving social competence in peer groups and with siblings.[18] A second issue emerging from the literature is that early intervention outcome measures need to better reflect a child's true functioning in his or her natural environment. Some studies have included only changes in IQ scores and post-intervention placements, but these obviously would be of more value if they included social and behavioural measures.[19] Finally, relatively few studies on the effects of early intervention have been published to date that include children under three years of age, since it has only recently become more common for practitioners to diagnose autism prior to age three.

Research Context

The effects of early intervention are usually studied through single subject design studies. To date, few controlled group studies have been published.[20,21] Recently, some studies that have begun to follow children over longer periods of time have depicted children's developmental trajectories during baseline and intervention, possibly providing supplemental valuable information.[22,23]

Key Research Questions

One of the key questions emerging from the literature is the identification of child characteristics that predict not only outcomes, but which type of intervention is the best match for that particular child.[24] Similarly, some researchers are beginning to identify parent characteristics or skills that

may be more conducive to child progress.[25] Finally, as more children are included in regular education preschools, researchers are beginning to identify early intervention target behaviours reflective of child functioning within inclusive school settings, and to compare these behaviours to those of typically developing peers in similar settings.[6,20]

Recent Research Results

Child characteristics that have been most frequently studied in terms of outcome are age and IQ at entry into program. These studies suggest that an earlier age and a higher IQ at the beginning of intervention may be predictors of better outcomes.[26,2] More recently, the child's level of peer social avoidance (meaning how often the child actively avoids being near peers) was identified as a significant predictor of intervention outcome in terms of language use and peer avoidance after six months of intervention.[27] Other studies have shown significant associations between a child's use of joint attention behaviours (such as eye gaze alternation and pointing) and later expressive language development.[28] Finally, Koegel and colleagues[29] demonstrated that child initiations (defined as the child beginning a new interaction or changing the direction of an interaction) at program entry predicted highly favourable treatment outcomes. Interestingly, these last three target behaviours, peer avoidance, joint attention and initiations, could be viewed as highly similar in nature. Such studies may further help to identify important, even pivotal, intervention target behaviours.

The current literature is also beginning to identify parental characteristics and skills that could augment the impact of early intervention. A large body of literature exists that supports the use of parent education as a way to relieve stress and empower parents. Parental optimism, as well as the amount of stress a parent is experiencing as a result of the child's disability,[30] may be important factors in a child's outcome. Another parental behaviour that has been identified as influential is parental sensitivity in terms of following the child's focus of attention.[25] This study showed that higher levels of following the child's lead were associated with better joint attention and better language use. Finally, research shows that it may be important to teach parents in a partnership model rather than in a clinician-directed format.[31] For example, Brookman-Frazee showed that parent affect is higher and parental stress lower during parent education sessions that use a partnership model.[30]

Several studies have begun to investigate early intervention outcomes for children in inclusive school settings. Stahmer and Ingersoll[22] report comprehensive outcomes on standardized

assessments as well as communication skills, social interaction skills and play skills of 20 children with autism in an inclusive setting, with 90% of children using a functional communication system at exit compared to 50% at entry. McGee and colleagues[32] reported on improvements in proximity of the child with autism to typical peers, with 71% of children showing improvement on this measure. A recent study by Koegel and colleagues[18] showed that compared to typical peers, children with autism interacted just as much with adults in the classroom, but that they rarely interacted with other children. However, Koegel and colleagues[29] showed that children with autism could be taught to initiate interaction with adults and peers and that overall outcomes for these children were much better than for children with autism who initiated at low levels.

Conclusions

Research is beginning to identify child and parent variables related to outcomes for very young children with autism. These studies are important because they may provide us with valuable information about possible pivotal child behaviours, such as child initiations. It appears from the current body of literature, for example, that it is extremely important to teach a child to initiate interaction with peers and adults so that the child can create his or her own learning opportunities throughout the day. Furthermore, the current literature suggests support for parent education and parent empowerment in a partnership model to help relieve stress and help parents feel more optimistic about their child's outcome. Finally, the current data lend support for an inclusive school model, even for very young children with autism. Over time and with intervention, these children benefit from typical peer proximity, especially if they are taught to initiate towards them.

Implications

The primary implication for policy-makers is the need to support early intervention. Diagnosis at 18 months, or shortly after, increases the likelihood that intervention can begin earlier and that outcomes will improve. The fear of labelling a child less than three years old is understandable; however, withholding much needed *specialized* treatment may have extensive and long-term consequences for not only the child, but also the child's family and community. Moreover, the current outcome research for children with autism suggests that with appropriate and specialized intervention, children with autism *can* thrive in their families, communities and regular education preschools. It is up to us as a community to make it possible.

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