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Review

Who and how are children selected for early autism intervention

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ABSTRACT

Early Intensive Behavioral Interventions (EIBI) has become a well recognized treatment for autism spectrum disorders (ASD). Nonetheless, many questions remain about how to best administer these interventions and tailor treatments to given children. For researchers to make the best decisions regarding treatment, client populations must be precisely defined and described. Thus, the correct methods for client selection need to be described and used. The purpose of this paper is to take stock of methods of client selection for EIBI research. This paper reviews 34 studies which focus on this treatment model. Methods and procedures used in these studies are discussed. At present, they fall short of optimal standards.

Contents

Autism spectrum disorders (ASD) are debilitating, life-long conditions. ASD is increasing in the number of cases being identified putting further urgency on its treatment (Isaksen, Diseth, Schjøberg, & Skjeldal, 2012; Li, Chen, Song, Du, & Zheng, 2011; Lin, Lin, & Wu; 2009; Matson, González, Wilkins, & Rivet, 2008; Matson & Kozlowski, 2011). Marked deficits include core features such as communication and social behaviors (Fodstad, Matson, Hess, & Neal, 2009; Matson, LeBlanc, & Weinheimer, 1999; Matson & Wilkins, 2009; Smith & Matson, 2010a, 2010b, 2010c). Excesses such as stereotypies and rituals also characterize the disorder (DiGennaro-Reed, Hirst, & Hyman, 2012; Lanovas, Robertson, Soerono, & Watkins, 2013; Wilke, Tarbox, Kenzer, Bishop, & Kakavand, 2012). Comorbid adaptive skill deficits, behavior problems and psychopathology are also common (Matson, Dempsey, & Fodstad, 2009a, 2009b; Matson & Kuhn, 2001; Matson & Rivet, 2008; Smith & Matson, 2010a, 2010b, 2010c).

A host of interventions have been tried, but medications and particularly applied behavior analysis have the best empirical support (Matson & LoVullo, 2008; Matson & Neal, 2009; Matson & Wilkins, 2008; Singh, Matson, Cooper, Dixon, &

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Sturney, 2005). The general thinking is that the earlier the intervention the better (Matson, Mahan, & Matson, 2009; Matson, Tureck, Turygin, Beighley, & Rieske, 2012). The acceptance of this concept points to the use of psychological interventions versus medication for very young children (Matson & LoVullo, 2009).

Early Intensive Behavioral Interventions (EIBI) have become more popular with time. This approach dates to interventions first described in the 1960s. Lovaas (1987) published a study that combined a variety of behavioral interventions, over 40 hours a week over a year's time. Multiple behaviors were treated simultaneously in a one to one format. This general methodology with some modifications still constitutes the core of EIBI methods. Newer trends recognize that not only are the comorbid conditions common and debilitating, but chronic as well. Thus, it is also recognized that EIBI must take into account, and intervene not only on core symptoms and independent living skills, but on comorbid disorders as well.

Treatment for EIBI programs tends to occur for children 2–5 years of age (Matson, Wilkins et al., 2009). Obviously, this is a very large commitment not only for the child but for the family and the clinicians. A large expenditure in time, money, and resources are required. As a result, how these children are screened and selected for interventions is very important. Additionally, who is likely to respond to these interventions should factor into this decision. The purpose of this paper was to analyze the current state of the client selection process for EIBI research studies.

Method

A search of Scopus was made. A subsequent additional cross check of references from these papers was conducted to provide a more comprehensive review. The search terms were autism and Early Intensive Behavioral Intervention. Papers that were descriptions of intervention or designed to identify predictor variables in EIBI studies were included. This approach was taken since the goal of the study was to analyze methods and procedures researchers have used to identify and select children from treatment. Furthermore, this approach resulted in the identification of a larger overall sample.

Result

The first EIBI paper included was the frequently cited manuscript published by Lovaas in 1987. It was the only paper published on EIBI that year and was the only manuscript for some time. This paper had many methodological flaws and thus drew a good deal of skepticism from the scientific community. From that point forward, a small but steady stream of papers has been published demonstrating the efficacy of the treatment model. This trend is not surprising. First, the Lovaas study was based on thousands of studies done by many pioneering researchers for decades. Thus, while the conclusions of Lovaas may have been a bit of an overreach, the conclusions were based on a very sound database. Second, the small volume of papers is related to the extremely labor intensive nature of these EIBI studies. The intervention is typically 20–40 h a week for upwards of a year. Thus, there is a very large expense associated with this enterprise. To carry out EIBI research, external funding is required or the research team needs the support of a large private agency (Fig. 1). These opportunities at this writing are few and far between.

Thirty-four studies were identified which used EIBI interventions. Of this group, 25 papers had recruited children who previously had received an autism or Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) diagnosis. Where these initial diagnoses had already been made, many researchers stressed that this approach allowed for an

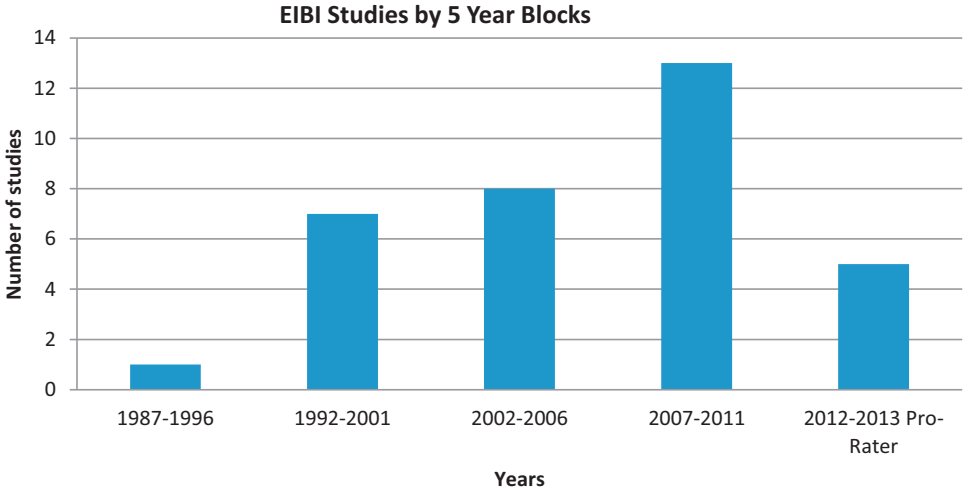

Fig. 1. EIBI studies published between 1987 and 2013.