Chapter 4.22
Autism and Family Interventions through Technology:
A Description of a Web–Based Tool to Educate Fathers of Children with Autism

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ABSTRACT

Most research on family interventions of children with autism has focused on the role of the mother, and little is known about the effects of training fathers. Through a series of National Institutes of Health–funded studies we have demonstrated treatment success by focusing on fathers who are trained at home. Although our research has been successful, this work introduces questions related to how best to train fathers when on-site, in-home training is not a viable option due to geographical distance or a variety of other logistical constraints. This article describes the development and initial use of an Internet-based tool to offer this training more broadly. We briefly describe past research

as well as the need for the implementation of an Internet-based tool. We then describe the system, document early indicators of success, and discuss metrics we are using with our fathers. The article concludes with a discussion of future goals and research needs.

INTRODUCTION

Recent research has indicated that 1 of every 150 children is diagnosed with autism (http://www.autism.com). The developmental disorder has become so commonly diagnosed that April has been designated Autism Awareness Month, and April 2 is World Autism Awareness Day (http://www.worldautismawarenessday.org). Although there are a wide variety of treatment options for autism, including educational and behavioral interventions, medications, and therapies, some may lead to great improvement while others may have little or no effect (Elder, 2002). As the number of reported cases of autism has increased, the amount of autism-related research has also increased (Rapin, 2002). In addition to research related to the possible causes of autism, researchers are also interested in finding successful and appropriate ways to help children with autism learn and function better in society.

Understanding the Involvement of the Family

One significant area of current research is the involvement of the family. Calabrese (2006) reports that, in general, when schools, parents and students communicate and work together, children benefit academically, socially, and emotionally, leading to a young child's success in school. Children whose parents are involved in their academic life have a more positive attitude about school, improved attendance, and show better homework habits than other students with less involved parents. Also, parents involved in school related activities report

having more self-confidence in parenting as well as an expanding understanding of the home as an environment for student learning (Calabrese, 2006). Lastly, teachers more involved with parents report a greater understanding of a family's culture and a deeper appreciation of parents' time and abilities.

This is also true for research on autism. While it was once common to separate parents and children in order to focus treatment, now the role of the parent is emphasized as an important part of a child's treatment (Harris, 1984; Harris & Glasberg, 2003). Researchers discovered parental involvement in home intervention programs were successful, especially in helping children with autism function more independently in the community as adults (Ozonoff & Cathcart, 1998). Children with autism appear to be more likely to benefit from interventions that are initiated at an early age, are intensive in frequency and duration, target various developmental areas including language, behavior management, and social skills, *and include the children's parents[1]*, who can facilitate the generalization process of learned skills (Levy, Kim, & Olive, 2006). It has also been shown that children in intervention programs with parental involvement benefited from increases in their measured intelligence, which in turn improved their ability to participate in general education (Levy et al., 2006).

Parents are effective intervention agents for multiple reasons. First, parents can provide additional hours of treatment at low cost. Also, while it is impossible for a child's therapist or agency to provide service throughout a child's lifetime, a parent can be involved for many years, providing consistency that is needed (Ozonoff & Cathcart, 1998). Lastly, parents involved in their child's intervention report increased feelings of competence and success, as well as decreased feelings of depression, stress, and ineffectiveness (Ozonoff & Cathcart, 1998).

Much of the research on parental involvement has come from examining mothers as the primary

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