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Effectiveness of a modified rapid toilet training workshop for parents of children with developmental disabilities

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ABSTRACT

Individuals with developmental disabilities often experience challenges in acquiring toileting skills, which highlights a need for effective toilet training strategies that can be readily disseminated to caregivers. The purpose of this multiple baseline study was to evaluate the effectiveness of a modified rapid toilet training workshop provided to the parents of six children with developmental disabilities. In the workshop, parents were taught to implement an instructional protocol that included increased fluid intake, positive reinforcement for correct toileting, scheduled toilet sittings, scheduled chair sittings to teach initiation, neutral redirection for accidents, and procedures to enhance maintenance and generalization. Following the workshop, parents implemented the toilet training protocol at home with their children for 5–8 days, with telephone support from a researcher. Results indicate that the workshop resulted in increased in-toilet urination and defecation and decreased accidents for the five children who completed the study. The results are discussed in relation to previous and future research and implications for practice.

A lack of toileting competence is a significant barrier to overall quality of life for individuals both with and without developmental disabilities. In a review of the literature in this area for typically developing children, Vermandel, Van Kampen, Van Gorp, and Wyndaele (2007) noted that late toilet training may be associated with hygiene problems, skin irritation, high expense, parental stress, frustration, social embarrassment, excessive parental dependence, and preschool inadmissability. For individuals with developmental disabilities, persistent incontinence can also mean limited socialization, restricted residential and vocational placements, and stigmatization (Kroeger & Sorensen-Burnworth, 2009).

In a recent review of 28 data-based studies aimed at teaching toileting skills to individuals with developmental disabilities, Kroeger and Sorensen-Burnworth (2009) found that most published approaches retain many of the key components of rapid toilet training (RTT), a procedure developed by Azrin and Foxx (1971). RTT incorporates multiple features to achieve continence, including: (a) establishing a data-based schedule for toilet sittings; (b) provision of increased fluid intake; (c) positive reinforcement for in-toilet elimination; (d) the use of graduated guidance to teach self-initiation; and (e) punishment (e.g., overcorrection, verbal reprimands) for toileting accidents. Interestingly, some type of punishment procedure for toileting accidents is used in almost all toilet training studies to date. Only 4 of the 28 studies in the Kroeger and Sorenson-Burnworth review included no punishment at all (Luiselli, 1994, 1996, 1997; Post & Kirkpatrick,

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2004), although several others used only mild punishment procedures such as verbal redirection to the toilet when an accident occurred (e.g., Cicero & Pfadt, 2002; Keen, Brannigan, & Cuskelly, 2007). Since that review, one additional study has also utilized verbal redirection as the only consequence for accidents, to train two boys with autism who had a history of failed training attempts (Kroeger & Sorensen, 2010). This trend toward non- or minimally aversive procedures is consistent with Cicero and Pfadt's (2002) observation that "changes in educational practices have led to greater reliance on proactive teaching procedures rather than on consequence-based behaviour reduction procedures" (p. 321).

It is interesting to note that, to date, only five toilet training studies that have involved participants with developmental disabilities have mentioned parent participation as a component of the intervention. Four of these five studies involved parents as collaborators, to various degrees. Taylor, Cipani, and Clardy (1994) implemented a modified version of RTT with a 10-year-old boy with autism whose father conducted the intervention with in vivo support at home from a researcher. Cicero and Pfadt (2002) described a procedure with three young children with autism in a school setting, where teachers were trained as the primary interventionists. The children's parents received a letter that described the training procedures used at school and provided reports on their child's toilet training successes and difficulties at home. Keen et al. (2007) taught the parents of five boys with autism and their teachers to implement a video-modeling, reinforcement-based intervention. Parents completed a reinforcer assessment and were provided with verbal and written explanations of the procedures to be used at home. LeBlanc, Carr, Crossett, Bennett, and Detweiler (2005) taught parents to toilet train three children with autism using a modified RTT procedure. The parents first observed a researcher implement the procedures in an outpatient clinic, and then gradually started implementing the protocol themselves in the clinic, with researcher feedback. By the end of one day, all parents were able to implement the procedure with fidelity and proceeded to do so at home over two more days, with researcher visits for 2 h/day. Following this, the procedures were implemented at school as well.

Kroeger and Sorensen (2010) were the first to incorporate parent training as a primary focus, by involving the parents of two children with autism as the main interventionists rather than as collaborators. At the beginning of the first training day, the researcher explained a modified RTT procedure to each child's parents and then modeled implementation with each child for 3 h in his or her home. Parents were then coached to implement the procedure over 3 additional hours, with researcher oversight and feedback. Following these 6 h of training, the researcher no longer visited the families' homes; rather, parents were instructed to contact her by phone with any questions that arose as they continued to implement the procedure. One family phoned 4 times and the other phoned 5 times over 4 days of intensive implementation of the RTT procedure. Results indicated that both parents taught their children to achieve urinary continence within a 4-day period, and the children remained continent 3 years later. Kroeger and Sorensen suggested the need for additional research examining methods for teaching toilet training skills to parents, including a workshop-based approach.

A workshop-based approach to parent toilet training has the potential to be both cost- and time-efficient for all involved. Indeed, a number of studies have documented the ability of parents to learn to implement other types of interventions with their children with developmental disabilities in a workshop format. Perhaps the best example is the Triple P Parent Training Program, a parent-training protocol with a substantial research base that aims to address a variety of concerns related to parent–child interactions. Whittingham, Sofronoff, Sheffield, and Sanders (2009) conducted a randomized control trial of Triple P's "Stepping Stones" variant to evaluate its effectiveness in teaching positive parenting practices to the parents of children with autism. The majority of instruction occurred in a group workshop format, although the participating parents were also observed working with their children and received feedback from clinicians. Results indicated significant reductions in both child behaviour problems and dysfunctional parenting styles, with decreases in problematic parenting practices such as verbosity and over-reactivity maintained at 6 month follow up. Additional examples of effective workshop-based parent training include studies aimed at (a) comparing the effectiveness of risperidone plus parent training versus risperidone alone for remediating behaviour problems in 125 children with autism spectrum disorders (Aman, Mcdougle, Scahill, Handen, Arnold, & Johnson, 2009) and (b) teaching parents of 17 children with autism to implement pivotal response training (Minjarez, Williams, Mercier, & Hardan, 2010). Results of both studies indicated that parents learned the target procedures in a workshop format and were then able to implement them to achieve the desired child outcomes. Parent training techniques in these examples included direct instruction, group discussions, modeling, role-playing, practice activities/worksheets, and videotaped examples and non-examples of the target procedures.

It is clear that the acquisition of continent toileting can be challenging for families of children with developmental disabilities and that toilet training is consistently rated by parents as an area of significant concern. Non- or minimally-punitive toilet training protocols that are derived from Azrin and Foxx's (1971) RTT approach have been shown to be successful in teaching continent toileting to individuals with a wide range of abilities. However, only five studies to date have included parent involvement and none have taught parents to toilet train their children in a workshop format. Additionally, only a few studies to date have specifically mentioned defecation training as a target (e.g., Dalrymple & Angrist, 1988; Richmond, 1983)—an omission that leaves a substantial gap in the toilet training literature for people with developmental disabilities. Hence, the present study was designed to address the following questions: (1) Is there an association between a workshop-taught, parent-implemented modified RTT intervention and the acquisition of urinary continence in children with developmental disabilities? (2) Does the parent-implemented modified RTT intervention result in generalization to defecation continence without additional focus on this area?