

Effect of Sensitized Coaching on Self-Efficacy of Parents of Children with Autism

Abstract

Information is lacking on the capacity of coaching models to alter parental self-efficacy, especially for parents of children with autism. This gap is worth investigating, considering the significant challenges this group of parents face in parent-child interactions and the impact these challenges may have on parental cognitions. To address this gap, this study proposed a sensitized model of parent coaching. Results on the relative efficacies of this sensitized model to alter self-efficacy of parents of children with autism are provided and compared to a traditional model of parent coaching. Implications for programs for children with autism are discussed.

Self-efficacy can influence the quality of care that parents provide to their children as well as the degree of enjoyment they derive from the parenting experience; however, clinicians working with parents who might be experiencing challenges in their parental self-efficacy may not be fully utilizing the rich repository of information on this construct to develop intervention models for them (Coleman & Karraker, 1997). In this context, Coleman and Karraker (1997) have called for efforts to develop models of intervention for parents that have the capacity to alter parental self-efficacy. Though the authors did not specifically mention parents of children with autism, interventions that target parental self-efficacy in this group are worth investigating.

Research is conclusive about families of children with autism reporting a greater number of stressors when compared with families of children with other disabilities (McGrath, 2006), and about the children's state being a key factor behind their families' high levels of stress (Fleischmann, 2005). Parental self-efficacy, or sense of competence, could be an area of particular vulnerability when child characteristics are chronic and result in special challenges (Kazak & Marvin, 1984). This information underlines the need to develop parent-coaching models with the explicit purpose of influencing self-efficacy of parents of children with autism.

Parent training/coaching is an essential component of successful intervention programs for children diagnosed with autism (National Research Council, 2001). A number of studies have reported parents of children with autism gaining skills in facilitating functional social-communication and in managing challenging behaviours through parent coaching (e.g., Aldred, Green, & Adams, 2004; Feldman & Werner, 2002; Wetherby & Woods, 2006). However, most of the avail-

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able parent-coaching models were not designed with the goal of enhancing the self-efficacy of parents of children with autism. In order to target the lacuna identified by Coleman and Karraker (1997), it is essential to infuse more sensitivity into the traditional coaching practices of modeling, rehearsal, and feedback.

This study attempts to address the gap identified (Coleman & Karraker, 1997; Jones & Prinz, 2005) by focusing on interventions targeting the self-efficacy of parents of children with autism. An existing parent-coaching model used at the participating agency was compared to a “sensitized model” (i.e., an enhanced version of the existing model that contained specific sensitivities infused into the coaching practices of modeling, rehearsal, and feedback). The goal was to investigate and compare the relative efficacies of the two models of parent coaching in altering both task-specific and domain-general self-efficacy of parents of children with autism. This was accomplished by using both models to coach parents to facilitate their children’s mands; the mand (or request) is recommended as the first type of language to teach a child with a language deficit, as is the case of most children with autism (Sundberg & Partington, 1998). When the parent responds to his/her child’s mand, he/she becomes paired with the delivery of reinforcement related to the specific mand, which further enhances parent-child interactions (Cooper, Heron, & Heward, 2007). Therefore, the parents’ experiences with facilitating their children’s mands have the capacity to influence not only the sense of competence related to this specific task (i.e., task-specific self-efficacy), but also the sense of global parenting competence (i.e., domain-general self-efficacy). It was hypothesized that, compared to the existing coaching model, the sensitized coaching model would lead to higher levels of both parental task-specific and domain-general self-efficacy.

Method

Participants

A total of 30 mothers aged between 30 and 40 years participated in the study. All of them had a child between the ages of four and eight years who had been diagnosed with autism and received services from the participating agency. While the children had a system of communica-

tion in place, they exhibited low rates of mands (i.e., less than ten times per hour, independently, in parent-child interactive situations). The predominant topography of manding for the children was vocalization, though a small proportion used signs or exchanged pictures. None of the children exhibited aggression towards others or self-injurious behaviours. Mothers had less than five facilitations of mands, as observed during one half hour of interactions.

Study Design

The study question was investigated using a between-subjects comparison design. The study involved two parent groups: parents in group 1 (n = 15) were coached using the existing model of parent coaching at the participating agency, and parents in group 2 (n = 15) received sensitized coaching. Parents in group 1 received coaching first, followed by parents in group 2 due to the ethical implications of simultaneously providing two kinds of services (i.e., coaching models) to parents in the same clinical setting.

Measures

Parents in each group reported on domain-general and task-specific self-efficacy, both before and after receiving parent coaching.

Domain-general parental self-efficacy was measured using Johnston and Mash’s (1989) version of Gibaud-Wallston and Wandersman’s (1978) Parenting Sense of Competence Scale (PSOC), which is in the public domain. Each item on the PSOC scale is answered on a 6-point scale with response options ranging from strongly disagree to strongly agree. This measure has two subscales related to Efficacy and Satisfaction; only the 7-item Efficacy subscale was used in this study. Higher scores on the Efficacy scale reflect higher self-efficacy. Johnston and Mash (1989), have reported adequate psychometric properties for this scale. In addition, Ohan, Leung, and Johnston (2000), Rogers and Matthews (2004), and Gilmore and Cuskelly (2009) have substantiated the scale’s factor structure.

Task-specific parental self-efficacy in facilitating child’s mands was measured using the Task-Specific Self-Efficacy Scale developed for this study. Input from several practitioners was solicited for the development of the items, thus

enhancing its face validity. This scale comprises 15 items that are linked to factors that determine quality of functioning in the task of facilitating mand training for the child with autism (e.g., capturing motivation, contriving motivation, providing prompts, fading prompts, differentially reinforcing child's mands, making sure that inappropriate behaviours that precede or accompany targeted mands are not reinforced, and providing multiple opportunities for child to mand). The items are worded in the first person, from the perspective of the parent, for example: "I am able to create many opportunities for my child to request, in a day"; "I feel that I am persistent in my attempts to interact with my child"; and "I do not find it difficult to restrict my child from freely accessing toys and activities." Each item is answered on a 6-point scale with response options ranging from strongly disagree to strongly agree. Higher scores reflect higher self-efficacy in facilitating child's mands. Based on a sample of 51 mothers of children with autism from the participating agency in this study, the Cronbach's alpha coefficient for this scale is .89.

Procedures

Parent coaching is routinely offered to all parents of children in the autism program at the participating agency. On behalf of the research team, Senior Therapists (STs) provided information on the study to parents who would soon be receiving coaching on facilitating mands for their children. All participating parents gave informed consent. Approval to conduct this study was provided by the Client Services Management Committee at the participating agency and the Board of Studies in Psychology at the University of Mysore, Karnataka, India.

Participating parents were randomly assigned to groups 1 and 2; each parent reported on the two self-efficacy measures just before and immediately after receiving the coaching interventions. The measures were distributed to the parents by the STs, who also collected the completed questionnaires and delivered them to the research team in sealed envelopes.

All coaches were Instructor Therapists (ITs) working for the agency, were supervised by STs, and received training on the coaching model at the agency. The coaches were matched on the following variables: gender, education,

time per day spent in delivering intensive intervention services to children with autism, and duration of employment with the agency.

The following provisions were in place to counter extraneous factors which could have potentially acted as confounds on the dependent variables: (a) training was provided to the coaches on the sensitized model only after they finished implementing coaching with group 1 using the existing model; (b) both models were identified as 'parent coaching' to limit any implications that one model might be inherently superior to the other; (c) coaches were not familiarized with the concept of self-efficacy; and (d) all coaches had equal opportunities to establish rapport with the children and the parents before starting parent coaching.

Interventions

Every parent who participated in this study received 1:1 coaching in the presence of the child for two hours on a specific day of the week.

The existing parent coaching model at the participating agency identified sub-skills related to adult competencies, such as: (a) capture child's motivation; (b) contrive child's motivation; and (c) provide prompts to the child. The coach modeled each of the sub-skills, created rehearsal opportunities for the parent to practice them, and provided supportive feedback on the parent's performance. The coach maintained anecdotal data on the parent's performance to guide the sessions. The coach faded the models across sessions as the parent's competency increased for the targeted sub-skills. Parents in group 1 received three months of coaching based on this model.

The literature has shown that change in parental self-efficacy depends on changes in the ratio of successes to failures in parenting and in the subsequent reappraisal of competencies (Bandura, 1981). The existing model of parent coaching is limited in its capacity to provide these opportunities, and hence the sensitized coaching model incorporated them into the practices of modeling, rehearsal, and feedback.

In the sensitized model, each sub-skill in facilitating the child's mand is operationally defined in observable and measurable terms. For example: (a) the parent identifies the child's moti-

vation at a given time, communicates it to the coach, and uses this information to initiate an interaction with the child; (b) the parent creates an opportunity for the child to mand by keeping an item that is motivating for the child in view, but out of reach; and (c) the parent evokes the mand from the child by providing the correct word, or helping him/her to form the sign for the item or exchange a picture representing the item. Coaching is provided through modeling; however, the coach fades the model within each session and across sessions, by adhering to a 2:1 ratio of models vs. opportunities for independent attempts on the sub-skills by the parent. Thus, the coach encourages the parent to try a sub-skill independently after the skill has been modeled a maximum of two times. At the independent attempt, if the parent shows signs of not being able to follow through, the coach models the skill again for a maximum of two times, and then again encourages the parent to try the skill independently. The coach makes sure that at least half of the rehearsal opportunities involve generalization of skills by the parent to facilitate child's mands across time and place. Therefore, a parent who facilitates the child's mand to "swing" in the backyard of their house must generalize this skill to the community park in the presence of the coach. The coach keeps track of parental performance based on the operational definitions of each sub-skill, in the form of quantitative data. The data is shared with the parent to help in self-appraisal of competence. Accordingly, the parent has to acquire each sub-skill with the coach's

support, and maintain it in a novel context without the coach's support. Pre-existing criteria are established for acquisition and maintenance of sub-skills. Unlike the existing model of coaching, the sensitized coaching is not time-limited; rather, it is criterion-based.

Fidelity of Implementation of Coaching

STs observed and gave feedback to the coaches on both models of coaching in-vivo or through videos on the coaching, on an average of two times per month. In addition, the supervising STs rated a random sample of coaches on procedural integrity for implementing the sensitized model of coaching on two separate occasions during the course of the intervention using a rating scale of eight items developed by the research team. The results indicated that on each occasion, all coaches had 80% or above adherence to the prescribed procedures.

Data Analysis

Descriptive statistics were used to report the mean and standard deviation scores of the two groups of parents on the two measures of self-efficacy, before and after the interventions. Repeated measures between-subjects ANOVA was used to gather information on the interaction effect of the two coaching models on parental self-efficacy.

Table 1. Mean and Standard Deviation Scores of Groups on Self-Efficacy, Before and After Intervention

Variables	Group 1		Group 2	
	M	SD	M	SD
Task-specific self-efficacy (pre-intervention)	65.47	5.79	64.07	9.21
Task-specific self-efficacy (post-intervention)	68.20	8.84	74.07	7.60
Domain-general self-efficacy (pre-intervention)	31.87	5.96	31.80	4.20
Domain general self-efficacy (post-intervention)	31.00	3.87	34.60	4.60

Results

Table 1 summarizes the descriptive statistics on the sample. Parents in group 1 had an increase of 2.73 points in their mean score on task-specific self-efficacy after the coaching intervention, whereas parents in group 2 who received sensitized coaching experienced a 10-point increase. With respect to domain-general self-efficacy, group 1 experienced a slight decrease in the mean score after the intervention, whereas group 2 experienced an increase of 2.80

points. Results of Levene's Test for Equality of Variances indicate that the two groups exhibited homogeneity of variance in their pre-intervention scores for task-specific ($p = .057$) and domain-general ($p = .051$) self-efficacy.

The main effect of intervention on task-specific self-efficacy was statistically significant ($F_{(1,28)} = 21.674; p = .000$) as was the group by intervention interaction ($F_{(1,28)} = 7.059; p = .013$), where group 2 exhibited a significant increase

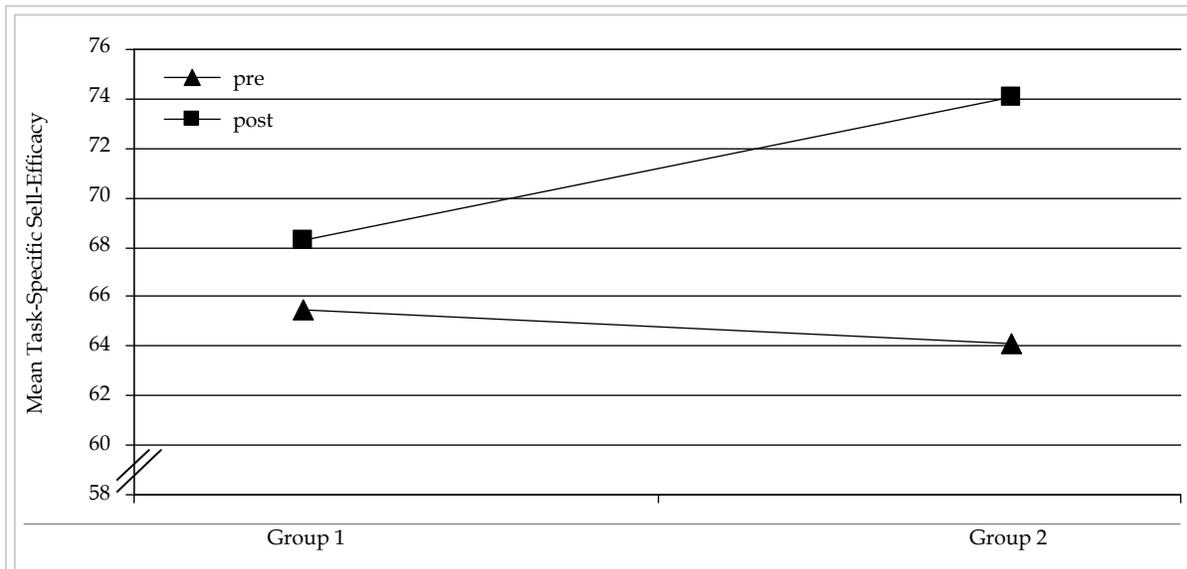


Figure 1 Interaction effect between the groups and task-specific self-efficacy.

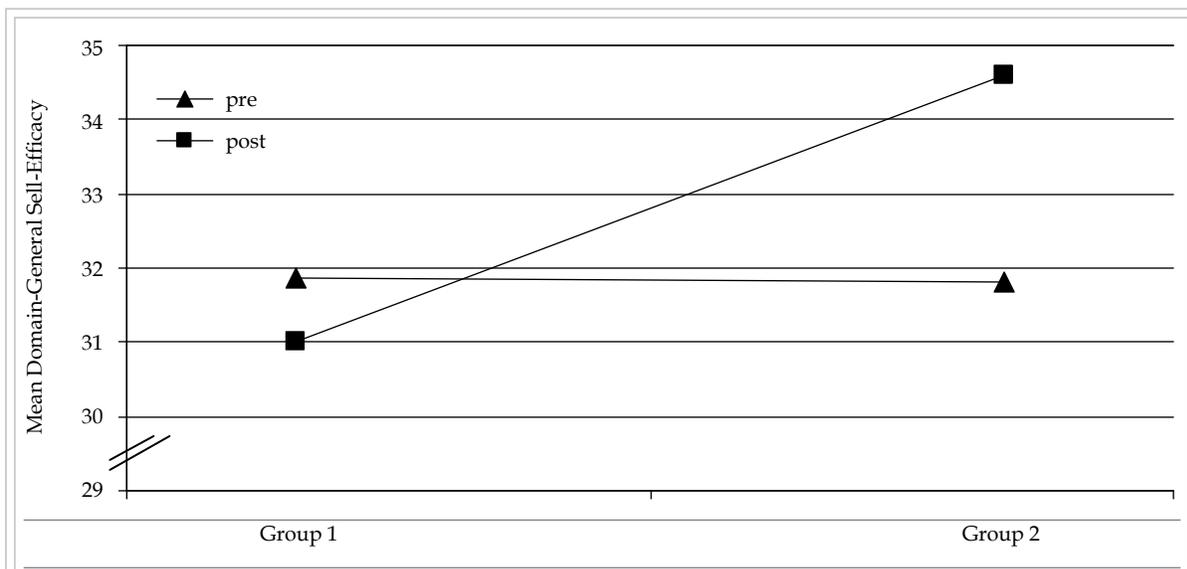


Figure 2 Interaction effect between the groups and domain-general self-efficacy

in task-specific self-efficacy compared to group 1 (Figure 1).

The main effect of intervention on domain-general self-efficacy was not statistically significant ($F_{(1,28)} = 2.335; p = .138$), therefore intervention did not have a significant effect on domain-general self-efficacy. However, the group by treatment interaction was statistically significant ($F_{(1,28)} = 8.399; p = .007$), where parents in group 2 exhibited a significant increase in domain-general self-efficacy compared to those in group 1 (Figure 2).

Discussion

Learning environments that construe ability as an acquirable skill are well suited to build a sense of self-efficacy (Bandura, 1993). In the sensitized coaching model, each sub-skill was operationally defined in a measurable and achievable way. Thus, both the parent and the coach had a road map of how to acquire the final target skill through small, achievable sub-skills. The sensitized model trained coaches to fade their support systematically, thereby supporting the parent to experience repeated success on tasks in order to raise their perception of competence (Bandura, 1977), while at the same time buffering dependence on the coach.

The coach's feedback to parents in the sensitized model was supplemented by data that parents could use for self-appraisal of competence. According to Bandura (1993), seeing oneself gain progressive mastery strengthens perceived self-efficacy, fosters efficient thinking, and enhances performance. While both models provided opportunities for parents to rehearse sub-skills, only the sensitized model provided opportunities for generalization to further allow parents to experience success in different contexts and locations, and at different times.

The sensitized model had less of an impact on domain-general self-efficacy than on task-specific self-efficacy. In comparison to the norms from a neighbourhood sample of mothers of typical 4- to 6-year-old children (Johnston & Mash, 1989), mothers in both groups in the current study had higher pre-coaching mean self-efficacy on the PSOC scale. Therefore, the tool might not have had the sensitivity to measure

subtle changes in domain-general self-efficacy. Another factor at play here could have been the effect of vicarious experiences on pre-coaching level of parental self-efficacy, which, according to Bandura (1977), have a significant influence on the development of self-efficacy. All mothers in this study had observed therapy sessions on a regular basis before the introduction of parent coaching; thus, they would have vicariously lived the experiences of the therapists in sessions. This in-turn might have established a higher level of domain-general self-efficacy for these mothers, limiting the capacity of the intervention to further impact domain-general self-efficacy.

Overall, the results of this study support the use of sensitizing parent-coaching models with mothers of children with autism to enhance their task-specific self-efficacy. However, this study involved a small convenience sample of mothers; therefore, it will be necessary to apply the sensitized model to a larger sample of parents, and across different programs for children with autism to better understand its strengths and weaknesses. The participants in this study were mothers of young children with autism. Further investigation is also needed to understand the impact of the sensitized coaching model on self-efficacy of fathers of children with autism, and also of parents (mothers and fathers) of older children with autism. As maintenance of parental self-efficacy over time was not investigated in this study, the long-term efficiency of the sensitized model, specific to parents maintaining their post-intervention levels of self-efficacy over time, is also an important area of future investigation. In addition, the sensitized model should be applied to additional tasks to confirm its robustness.

Programs for children with autism, especially behavioural intervention programs, are increasing efforts to involve parents in the treatment of their children. Self-efficacy has been identified as the strongest predictor of parent involvement in treatment (Solish & Perry, 2008). Parents who are more confident that they can make an effective contribution and a difference in the lives of their children tend to be more involved in the intervention. This involvement results in positive outcomes for their children (Lovaas, 2003). Clinicians working with families of children with autism often make the observation

that parents who express a sense of competence tend to perceive the transition and discharge of their children from autism programs as less threatening compared to parents who express concerns with their ability to manage their children's problems. In addition, the impact of enhanced self-efficacy on parental well-being cannot be overlooked, as interventions focused on increasing feelings of self-efficacy in parents of children with autism have positive effects on their mental health (Hastings & Brown, 2002).

Based on the results of this study, it may prove beneficial for autism programs to invest in designing, applying, and validating interventions, such as sensitized coaching, that target parenting behaviour through parenting cognitions. At a time when programs are competing for scant resources, those that promote interventions with far-reaching impact on parental involvement in interventions and well-being may also be better poised to receive funding.

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