Educators' Response to Facilitating a Parent-Mediated Intervention for Challenging Behaviour in Children with Autism

Effets sur les éducateurs facilitant un programme de gestion des comportements problématiques médié par les parents d'enfants autistes

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Abstract

The challenging behaviours (CB) often displayed by children with autism spectrum disorder (ASD) can have a negative impact on educators who work with them, such as increased levels of stress, emotional fatigue, and frequent occupational injuries. Educators have expressed a clear need for training and supervision to manage CB as part of a program. This study was part of a larger project that aims to assess the implementation of the Prevent-Teach-Reinforce for Young Children (PTR-YC) with specialized educators as facilitators. It examined the effects of training, supervision, and implementation of the program on educators' well-being and perception of CB. Over the course of 12 weeks, educators were trained and supervised remotely in facilitating the PTR-YC among parents. Data on educators' burnout symptoms, emotional reactions, and beliefs regarding CB were collected before and after implementation; social validity was assessed at the end of implementation. Educators displayed a significant decrease in negative emotional responses and a significant increase in positive emotional responses to CB. Participants indicated that the program had good social validity, mainly regarding its appropriateness for children's difficulties and their own willingness to implement it again.

Résumé

Les enfants ayant un trouble du spectre de l'autisme (TSA) manifestent souvent des comportements problématiques (CP). Ces comportements peuvent avoir un impact négatif sur les éducateurs qui travaillent avec eux, comme l'augmentation des niveaux de stress, la fatigue émotionnelle et les accidents de travail fréquents. Ces éducateurs ont exprimé le besoin d'être formés et supervisés dans la mise en place d'un programme de gestion des CP. Dans le cadre d'une plus large étude visant à évaluer la mise en œuvre du programme Prévenir-Enseigner-Renforcer (PER) par des éducateurs auprès de familles d'enfants ayant un TSA, cette étude a examiné les effets qu'ont eu la formation, la supervision et la mise en œuvre du PER sur le bien-être des éducateurs et leur perception des CP. Après avoir été formés, les éducateurs ont été supervisés à distance pendant qu'ils agissaient comme facilitateurs auprès des parents durant une période de 12 semaines. Des données sur les symptômes d'épuisement professionnel, les réactions émotionnelles et les croyances des éducateurs en matière de CP ont été recueillies avant et après cette période. La validité sociale a été évaluée à la fin de l'implantation. Les éducateurs ont montré une diminution significative des réactions émotionnelles négatives et une augmentation significative des réactions émotionnelles positives à l'égard de la CP. Les participants ont indiqué que le programme avait une bonne validité sociale, principalement en ce qui concerne son adéquation aux difficultés des enfants et leur volonté à réutiliser le programme.

      Mots-clés : comportement problématique, troubles du spectre de l'autisme, Prévenir-Enseigner-Renforcer, soutien au comportement positif, formation de professionnels.

List of Abbreviations

Autism spectrum disorder (ASD); Challenging behaviour (CB); Challenging Behavior Attributions scale (CHABA); Early Intensive Behavioral Intervention (EIBI); Emotional Reactions to Challenging Behaviors scale (ERCB); Maslach Burnout Inventory-Educators Survey (MBI-ES); Positive Behaviour Support (PBS); Prevent-Teach-Reinforce (PTR); Prevent-Teach-Reinforce for Young Children (PTR-YC); Treatment Acceptability Rating Form-Revised (TARF-R)

Introduction

Despite advances on research and intervention in the field of autism spectrum disorder (ASD), challenging behaviours (CB) remain a frequent comorbidity (Maskey et al., 2013; Ooi et al., 2011). Such behaviours encompass any action that, by its frequency, intensity, or duration, interferes with the child's ability to engage in positive relationships and learn the expected skills for their age (Dunlap et al., 2010). Examples of CB include namely aggression (hitting, biting, pushing), emotional outbursts (screaming, crying, tantrums), non-compliance or oppositional behaviours, self-injurious behaviours, and withdrawal or social avoidance.

CB can have several repercussions across individuals' life environments (Baker-Ericzén et al., 2005; Blacher et al., 2005; Hastings & Brown, 2002, McGill et al., 2018; Mitchell & Hastings, 2001). For instance, school staff, teachers, and educators who encounter CB in their work display increased levels of stress, emotional fatigue, and job dissatisfaction as well as a higher incidence occupational injury (Flynn et al., 2018; Hastings & Brown 2002; Lambrechts et al., 2009; Mitchell & Hastings, 2001; National Task Force on Violence Against Social Care Staff, 2001; Rose, 2011). Conversely, service providers' knowledge and attitudes toward CB can positively affect their behavioural management practices, and thus influence how effectively they respond to these behaviours (Hastings, 2002, 2005; Lambrechts et al., 2008, 2009; McGill et al., 2018; Rose, 2011). Furthermore, service providers have identified CB as an obstacle to children's learning and as a major contributor to parents' stress and availability to attend to their child's needs (Estes et al., 2013; Kim et al., 2016; Lecavalier, 2006; Zaidman-Zait et al., 2014).

Since 2003, the government of Québec (Canada) has mandated public agencies across the province to provide free early intensive behavioural intervention (EIBI) to children with ASD under age seven. Specialized educators dispense this intervention in the child's daycare or at home at a given intensity (i.e., hours per week) according to the child's needs. EIBI is recognized as best practice for young children with ASD (e.g., see meta-analyses by Eldevik et al., 2009; Reichow, 2012). However, CB have been identified and documented as a major obstacle to its implementation (Symes et al, 2006). Previous studies conducted in Québec have yielded results consistent with this literature in terms of the effectiveness of EIBI (Dionne et al., 2016; Rivard et al., 2014; 2015a) as well as the obstacles posed by CB in this context (Rivard et al., 2015b). Specifically, a survey among EIBI educators by Rivard and colleagues (2015b) indicated that the presence of CB in children hindered effective interventions. It was a source of difficulties with parents and tended to limit their ability to participate in the intervention. It was also seen as a challenge for educators, who reported not being well-equipped to help parents address CB. Educators in this survey also expressed a need for training and supervision in relation to CB and for tools that would help them assess CB and assist parents in intervening directly on these behaviours (see also: Chung & Harding, 2009; Rose, 2011; Rose et al., 2004). Importantly, these resources should be integrated within a program that is congruent with their existing practices, namely in EIBI (Jang et al., 2011; Rivard et al., 2015b).

Positive Behaviour Support

The current state of knowledge on programs to address CB favours the adoption of the Positive Behaviour Support model (PBS; Carr et al., 2002) to act on the broader context within which CB arise (Fox et al., 2002; Sailor et al., 2009). This model seeks to improve the person's quality of life by not only reducing CB and fostering the development of functionally equivalent alternative behaviours, but also by addressing the systems (e.g., school, family) in which they exist and the individuals (e.g., parents, siblings, teachers, educators) with whom the person interacts (MacDonald & McGill, 2013). Several studies have demonstrated the impact of PBS programs, dispensed in supportive housing or schools, on service providers' behaviour and emotional responses toward CB, their practices and strategies, and their confidence at work (Gore & Umizawa, 2011; Horner et al., 2009; MacDonald & McGill, 2013; McGill et al., 2018; Reynolds et al., 2011).

Nevertheless, the body of work on CB and PBS has yet to include educators who work within specialized early childhood services for ASD. Furthermore, there has been little attention to the potential outcomes of PBS on educators acting as facilitators with parents who directly intervene on their child's CB. Educators have expressed a need for this type of program, developed specifically for early childhood intervention settings (Jang et al., 2011; Rivard et al., 2015b).

Prevent-Teach-Reinforce

The Prevent-Teach-Reinforce (PTR; Dunlap et al., 2010, Dunlap et al., 2018a) is a PBS-based intervention model initially developed to help primary school teachers or other school personnel address CB in classrooms. The program seeks to reduce CB and teach appropriate alternative behaviours that fulfill the same function through structured reinforcement schedules (Dunlap et al., 2018a). The PTR model guides teachers through an individualized process to define intervention objectives, consolidate the intervention team, perform a functional behaviour assessment, collect data, and develop and implement an intervention plan informed by the functional assessment. Several studies have provided empirical support for the positive impact of PTR in managing CB in school settings (Barnes et al., 2020; DeJager & Filter, 2015; Iovannone et al., 2009; Strain et al., 2011; Sullivan et al., 2020).

Two similar programs stemmed from the original PTR: PTR for young children (PTR-YC; Dunlap et al., 2013) and PTR for families (Dunlap et al., 2017). Both follow the same process and steps but are designed for daycare- and parent-implemented interventions, respectively. At the time of designing the protocol for the present study, PTR for families was not available. Thus, the PTR-YC program was adapted for implementation as a parent-delivered intervention. In its original form, PTR-YC was not specifically designed for implementation in a family setting but encouraged family involvement and participation in every step of the process.

PTR-YC is based on the PTR process but has been adapted to young children's developmental characteristics and the needs of early childhood service providers (Dunlap et al., 2013). With the guidance of a qualified facilitator, PTR-YC participants will 1) identify and define which behaviours to reduce and to increase; 2) formulate a hypothesis based on a functional behaviour assessment; 3) create and implement a behavioural intervention plan; 4) guide and support the child's family in its implementation; 5) monitor the child's response to the intervention and make decisions based on objective data (Barnes et al., 2020; Dunlap et al., 2018b). PTR-YC provides tools to ensure a standardized process, such as a manual, observation schedules, and user-friendly forms for data collection and functional behaviour assessment. A second version of the PTR-YC has been published since the present study took place (Dunlap et al., 2022).

To date, two studies have provided evidence of PTR-YC's benefits (Dunlap et al., 2018b; Harvey et al., 2021). In a randomized controlled trial, Dunlap et al. (2018b) evaluated the effect of this intervention model on 169 preschool-aged children who displayed CB. For a three- to four-month period, 89 early childhood educators were guided by a member of the research team who acted as PTR-YC facilitator. This person had extensive training in applied behaviour analysis, PBS, and PTR, as well as five years of experience in training and coaching. The experimental group displayed a significant reduction in CB and an increase in prosocial behaviour compared to the control group (Dunlap et al., 2018b). Harvey et al. (2021) used a single-case design to assess the effectiveness of PTR-YC among three preschool-aged children receiving special education services in public preschool classrooms. Their teachers had PBS

experience and were guided by the first author throughout the PTR-YC process. All three children displayed a decrease in PB, an increase in appropriate alternative behaviours, and more prosocial interactions with teachers. The intervention was also perceived as socially valid by parents and teachers (Harvey et al., 2021).

Context of the Study

Following a literature review and consultations with community-based ASD service providers, PTR-YC was retained as an intervention model for preschool-aged children. It was found to be consistent with best practices, to present benefits for children who display CB and their parents, and to cohere with existing EIBI approaches. Additionally, this model was poised to provide a realistic response to the needs and situation of early childhood ASD service providers in Québec. For instance, the EIBI educators who provide community-based early childhood services for ASD in the province are technicians who typically hold a two-year postsecondary degree and have not received specific training in functional behaviour assessment. They receive on-the-job training in applying behavioural education programs that do not require advanced knowledge in applied behaviour analysis or functional behaviour assessment. Thus, the fact that PTR-YC required limited prior knowledge or experience, required only a brief training period, and included user-friendly supporting documentation made this program a good fit for these EIBI educators. Additionally, the way in which the participating public agency operated made it possible, and even desirable, to implement remote supervision. This offered a realistic way to provide simultaneous supervision to a large number of educators serving clients over a wide geographical area.

As per the Medical Research Council guidelines on evaluating complex interventions (Craig et al., 2008), our research team launched an investigation to evaluate the feasibility, acceptability, and effectiveness of an implementation PTR-YC with EIBI educators acting as facilitators. The present study is part of a larger project to assess the implementation of PTR-YC within public services. The protocol was approved by the University of Québec in Montreal's Institutional Research Ethics Committee and was devised in partnership with a public health agency. One article stemming from this project reported on the effect of PTR-YC on children and parents when facilitated by EIBI educators (Rivard et al., 2021). Moderate effect sizes were observed for the reduction of children's CB and parenting stress. The intervention was perceived as having high acceptability and social validity according to the participating parents.

The present study aimed to assess the effect of training and supervision to act as PTR-YC facilitator with parents of children with ASD on EIBI educators. In doing so, it sought to address a gap in research on the experiences of service providers. Advances in this area could be instrumental in supporting their professional development and well-being (Romano & Schnurr, 2020).

Objectives

The present study aimed to 1) document burnout symptoms, emotional reactions toward CB, and beliefs regarding CB among EIBI educators as well as the relations between these outcomes; 2) evaluate the impact of PTR-YC training, supervision, and implementation on these same three

outcomes; and 3) assess the social validity of PTR-YC according to EIBI educators acting as PTR-YC facilitators.

Materials and Methods

Participants

Recruitment took place through the participating public agency's EIBI program, which provided a list of families currently receiving EIBI whose child presented CB. In order to be considered for inclusion in the PTR-YC project, these CBs had to have been reported by the family and witnessed by the EIBI educator. A research assistant made a phone call to parents on this list in random order and introduced the general goals and procedures of the project. They also contacted the designated EIBI educator for each family who expressed interest in the study. This process continued until a total of 40 parent-educator dyads were recruited. A research assistant then met with parents to present the study in more detail and to obtain their written consent to participate. Their educators similarly participated in these informed consent procedures at the beginning of their PTR-YC training. Of the 40 dyads who were initially recruited, 35 began the intervention: three dropped out of the study before beginning PTR-YC and another two families had completed EIBI by the time the implementation of PTR-YC had begun. Another five families dropped out of the study partway through the intervention: two dropped out because of time constraints, one because their child was no longer displaying CB, one because the participating parent was injured, and one because their therapist had to go on medical leave during the period allocated to PTR-YC. Therefore, 30 families completed the PTR-YC process. For parents' and children's sociodemographic characteristics, see Rivard et al. (2021).

Twenty-seven EIBI educators completed and returned all study documents and could therefore be included in the present study. Inclusion criteria for educators were to: 1) be employed as an EIBI educator within the public agency; 2) work at least five hours per week with a child who was diagnosed with ASD and presented with CB; and 3) be the primary educator assigned to that child's case. Educators who had received training on PTR-YC or PBS prior to the study were excluded. Educators were aged between 25 and 45 years ($M = 38.4$, $SD = 5.9$) and all but one (96%) were women. They averaged 8.5 years of experience ($SD = 4.6$) in EIBI with young children with ASD. Twenty-two (81%) had a two-year postsecondary degree and five (19%) had a four-year undergraduate degree in psychoeducation. All spoke French.

Measures

Burnout Symptoms

The Maslach Burnout Inventory-Educators Survey (MBI-ES; Maslach et al., 1996) assesses burnout through 22 items rated using a 7-point Likert scale. These items comprise three subscales, each with its own clinical cutoff: personal accomplishment (high > 37), emotional exhaustion (low < 16), and depersonalization (low < 8). These three subscales respectively measure feelings of competence and successful achievement, feelings of being emotionally overextended and exhausted by one's work, and unfeeling or impersonal response toward the intervention recipient. The French translation used in the present study was previously found to

have good internal consistency (Cronbach's α = .90, .64, and .74, respectively) and test-retest reliability across all three subscales (r = .46, .56, and .50, respectively; Dion & Tessier, 1994).

Challenging Behaviour Attributions

The Challenging Behaviour Attributions scale (CHABA; Hastings, 1997) measures the cognitive component of respondents' attitudes toward CB. Respondents are presented with a statement describing a CB (either aggressive or stereotyped behaviour) and asked to rate the likelihood, on a 5-point scale, of 33 possible causes corresponding to five types of attributions: 1) learned behaviour, 2) biomedical factors, 3) emotional factors, 4) environmental factors, and 5) self-stimulation. This instrument had moderate to very good internal consistency (α = .65 to .87) across these five dimensions and good content, criterion, and construct validity (Hastings, 1997).

Emotional Reactions to Challenging Behaviours

The Emotional Reactions to Challenging Behaviours scale (ERCB; Mitchell & Hastings, 1998) measures the affective component of respondents' attitudes toward CB. It consists of four subscales: depression/anger, fear/anxiety, confidence/comfort, and cheerfulness/excitement. Respondents rate the extent to which they tend to experience 23 emotions (15 negative and 8 positive) when working with individuals who display CB on a 4-point Likert scale ranging from 0 (*never*) to 3 (*very frequently*). Internal consistency was good to very good for the fear/anxiety and confidence/comfort subscales (α = .75 and .86, respectively) and moderate for the depression/anger and cheerfulness/excitement subscales (α = .62 and .67, respectively; Lambrechts et al., 2009). Furthermore, the ERCB presented good construct validity and test-retest reliability and seemed unaffected by social desirability (Mitchell & Hastings, 1998).

Treatment Acceptability

The Treatment Acceptability Rating Form-Revised (TARF-R; Reimers et al., 1991; Turgeon et al., 2020) assesses the acceptability of a clinical treatment or intervention. It consists of 20 items, of which 17 directly assess acceptability whereas two relate to the severity of the problem being treated and one queries the respondent's understanding of the treatment. All items are rated with a 5-point scale that uses different labels based on the wording of each item; responses are coded (or reverse-coded) such that a high total score indicates a high level of acceptability of the intervention. This instrument has excellent internal consistency (α = .92; Reimers et al., 1991).

Design and Procedure

The PTR-YC program was implemented and assessed within the participating agency over a total period of 12 months, during which three cohorts took part in the intervention. The first cohort included 10 families and their respective educator who took part in the program over the course of 3 months, from September to November. The second cohort included 11 parent-educator dyads whose participation took place between January and March. The third cohort included 9 dyads who implemented the intervention from April to June. Figure 1 depicts the steps of the PTR-YC process for each of these cohorts.

A pre-post design was used to evaluate the impact of the intervention on EIBI educators in their roles as facilitators. Educators completed the primary outcome measures on two occasions: prior to receiving training (T1) and 12 weeks later, after the implementation of the PTR-YC was terminated (T2). During this last assessment, educators also completed the TARF-R.

Figure 1
Implementation Timeline for Each Cohort
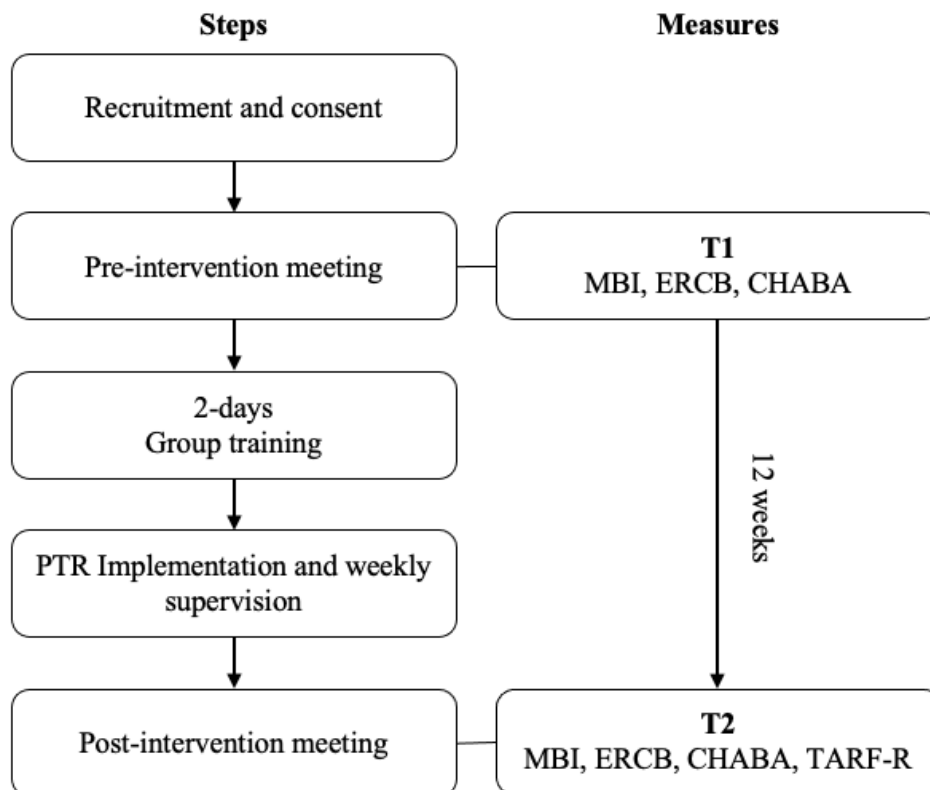
Supervisor Training

Four members of the research team were responsible for training and supervising the EIBI educators in the use of PTR-YC and in their role as facilitator of the program among families. The supervision team included a psychologist (PhD) who specialized in ASD and had over 10 years of experience in supervising EIBI and CB management programs, two doctoral students in educational psychology who both had experience in program evaluation and had previously worked as EIBI educators, and a board-certified behaviour analyst (BCBA). All four members received in-person training from one of the primary authors of PTR-YC over the course of two days prior to the beginning of the study. They then piloted the intervention with two parent-educator dyads. During the piloting phase (3 months) and throughout their training and supervision of the first cohort (3 months), the four members of the supervisory team were themselves supervised by the person who provided them with the initial PTR-YC training through hour-long, weekly virtual meetings (for a total duration of 6 months).

Educator Training

Each cohort of participating educators received 12 hours of in-person group training on PTR-YC provided by the supervision team over the course of two days. This training included: 1) a brief introduction on the foundations of PBS and the Pyramid Model (Fox et al., 2002); 2) a detailed presentation of the five steps of the PTR-YC; 3) explanations of the PTR-YC clinical process and the strategies that might comprise the intervention; 4) coaching methods to use with parents; 5) the timeline and process for implementing the intervention; and 6) the forms to use during the intervention. During this training, the group participated in application exercises to ensure participants' understanding of operational definitions of target behaviours; their options for, and use of, scoring grids; how to interpret a functional assessment; and the descriptions and implementation of behavioural intervention strategies.

Implementation of the Program

Following the group training sessions, each educator acted as a PTR-YC facilitator with one family. They guided and coached parents through each of the program's steps over the course of weekly in-home meetings that lasted approximately one hour (the child did not have to be present). Thus, educators acted as facilitators while parents were the primary intervention agents in implementing PTR-YC at home with their child. Educators used the tools (i.e., training, forms, manual, etc.) at their disposal to guide parents through the steps of the PTR-YC over the course of approximately 10 weeks, with a minimum of 8 weeks and a maximum of 12 weeks. Because the intervention was implemented and evaluated in a real-world setting, the actual duration of the intervention or number of sessions could vary, for example, due to scheduling conflicts, family emergencies, or a parent or educator's illness. In order to promote the consistency of parents' implementation of the program, educators could refer to the French version of the PTR-YC manual (Dunlap et al., 2013; 2019), the documentation they received during their own training, the forms associated with each step of the program, an implementation checklist developed for the present study, and a secure file sharing server for use by educators and supervisors. The latter also enabled supervisors to monitor each child's progress in real time over the course of the study.

Supervision

Throughout their implementation of PTR-YC, educators received weekly remote supervision by the four members of the research team who provided their initial training. Educators were paired with one supervisor for the duration of the program. The public agencies that comprise the network of ASD services in the province of Québec tend to cover large geographic areas, which is a sizeable obstacle to providing uniform supervision to large numbers of educator. Therefore, most supervisory meetings took over the phone and relied on supervisors accessing records electronically through a secure server.

Statistical Analysis

Baseline data were first examined descriptively, then through correlational analyses, to address the first objective of the study. The second objective was assessed through paired-samples t-tests

that compared scores obtained before and after the intervention on each instrument or subscale. For the third objective, descriptive statistics were used to assess the social validity of PTR-YC according to educators.

Results

Table 1 presents educators' scores on the three questionnaires administered at baseline. Relative to the cutoffs provided with the MBI-ES, respondents displayed low levels of work-related stress, specifically a high sense of personal accomplishment ($M = 36.7$, $SD = 6.4$; cutoff > 31), low emotional exhaustion ($M = 11.8$, $SD = 6.9$; cutoff < 16), and low depersonalization ($M = 2.0$, $SD = 3.2$; cutoff < 8). Based on their mean CHABA ratings, from highest to lowest, educators attributed CB to causes such as learned behaviour ($M = 4.4$, $SD = 0.4$), emotional ($M = 4.0$, $SD = 0.5$), biomedical ($M = 4.0$, $SD = 0.5$), physical environment ($M = 4.0$, $SD = 0.6$), and stimulation ($M = 3.4$, $SD = 0.7$). As evidenced by the mean ratings ($M = 4.4$) for the two positive emotion subscales (confidence/comfort and cheerfulness/excitement) compared to the mean ratings ($M = 5.6$) for the two negative emotion subscales (depression/anger and fear/anxiety), educators' emotional reactions to CB tended to be more negative than positive.

Table 1

Educators' Outcomes Before and After Implementation of the PTR-YC Model

Measures and subscales	Pre		Post		Pre-post comparison		
	M	*SD*	*M*	SD	*t*	*p*	*d*
Maslach Burnout Inventory							
Personal accomplishment	36.7	6.4	37.6	5.0	-0.96	.350	0.15
Emotional exhaustion	11.8	6.9	10.9	6.3	0.80	.430	-0.13
Depersonalization	2.0	3.2	1.1	1.1	1.64	.112	-0.40
Challenging Behavior Attributions Scale							
Learned	4.3	0.4	4.1	0.5	1.81	.082	-0.32
Biomedical	3.7	0.5	3.7	0.5	0.28	.786	-0.08
Emotional	4.0	0.5	3.8	0.4	1.20	.243	-0.29
Physical environment	3.7	0.6	3.5	0.5	1.10	.284	-0.28
Stimulation	3.4	0.7	3.3	0.6	0.55	.585	-0.19
Emotional Reactions to Challenging Behaviors Scale							
Depression/anger	5.9	4.3	5.1	2.9	1.36	.186	-0.22
Fear/anxiety	5.3	2.2	4.2	2.3	3.36	**.002**	-0.47
Confidence/ comfort	5.8	1.9	7.3	1.5	-4.65	**.001**	0.88
Cheerfulness/excitement	3.0	2.9	3.9	3.4	-1.44	.162	0.27

At baseline, no significant correlations were observed between any subscales of the CHABA and the ERCB. However, depersonalization on the MBI-ES was significantly and negatively correlated with environmental attributions, as well as significantly and positively correlated with depression and anger, as shown in Table 2.

Table 2
Correlations Between Educator's Outcomes at Baseline

	Maslach Burnout Inventory		
	Personal accomplishment	Emotional exhaustion	Depersonalization
Challenging Behavior Attributions Scale			
Learned	.23	-.19	-.11
Biomedical	.38	-.32	-.14
Emotional	.18	-.18	-.08
Physical environment	.13	-.36	-.42*
Stimulation	.01	-.23	-.29
Emotional Reactions to Challenging Behaviors Scale			
Depression/anger	-.31	.36	.44*
Fear/anxiety	-.28	.28	.15
Confidence/comfort	.10	-.25	-.10
Cheerfulness/excitement	.02	.08	.23

Note. MBI = Maslach Burnout Inventory, CHABA = Challenging Behavior Attributions scale, ERCB = Emotional Reactions to Challenging Behaviors scale. * two-tailed $p < .05$

Response to PTR-YC Training, Supervision, and Implementation

Data collected after the implementation of PTR-YC were compared to baseline responses to assess potential impacts of the intervention. A significant decrease in fear/anxiety emotional responses ($d = -0.47$, $p = .002$) and an increase in confidence/comfort responses were observed ($d = 0.88$, $p = .001$).

Social Validity of PTR-YC

Educators' responses to items of the TARF-R are summarized in Table 3. Overall, the intervention displayed high social validity, with 17 out of 18 items (94%) being rated above the neutral point of the response scale (i.e., 3) and 10 (56%) being rated higher than 4 out of 5. Educators expressed a positive appreciation of the program's appropriateness for children's difficulties and of its potential positive impacts on children. They were also highly willing to implement the intervention again. The only item which obtained a negative response (i.e., below 3) pertained to the time educators had to allocate to the intervention.

Table 3

Educators' Treatment Acceptability Ratings Ranked from Highest to Lowest

Treatment Acceptability Rating Form-Revised-French Version Item	M	SD
How acceptable do you find the program to be regarding your concerns about your child?	4.4	0.6
How likely is this program to make permanent improvements in your child's behaviour?	4.4	0.6
How willing are you to implement this program?	4.4	0.6
Given your child's behavioural problems, how reasonable do you find the program to be?	4.3	0.8
How confident are you that this program will be effective?	4.3	0.6
How much do you like the procedures in the proposed program?	4.3	0.7
How well will implementing this program fit into the family routine?	4.3	0.6
How clear is your understanding of this program?	4.2	0.5
How effective is this treatment likely to be for your child?	4.2	0.6
How willing would you be to change your family routine to implement this program?	4.1	0.8
How costly will it be to implement this program?	4.0	1.0
How disruptive will it be to the family (in general) to implement this program?	4.0	0.8
How affordable is this program for your family?	4.0	0.8
To what extent are undesirable side effects likely to result from this program?	4.0	0.6
How willing will other family members be to help implement this program?	3.8	1.0
To what extent do you think there might be disadvantages in implementing this program?	3.6	0.9
How much discomfort is your child likely to experience during the course of this program?	3.3	1.0
How much time will be needed each day for you to implement this program?	2.2	0.6

Discussion

The present study sought to address a research-to-practice gap on the impact of PBS training on staff in real-life settings (Romano & Schnurr, 2020). Indeed, there is a need for studies that account for the situations faced in specific clinical contexts (Snyder et al., 2012), such as early intervention services for ASD provided by EIBI educators within public agencies.

In contrast to what was observed in adult populations who display CB (e.g., Flynn et al., 2018, National Task Force on Violence Against Social Care Staff, 2001), the results of the present study suggest that educators did not show signs of burnout. Rather, they displayed fairly high levels of work-related personal accomplishment and low levels of emotional exhaustion and depersonalization. In the present clinical context, these educators work with very young children exclusively: it is likely that the CB they encounter are less intense or severe (e.g., less likely to

result in injury) than their colleagues who work with adult populations. It is also possible that their behavioural training and the fact that they function within an intervention team may act as protective factors. However, it should be noted that studies conducted with providers who work with adults also suggest that CB are not necessarily associated with burnout (Flynn et al., 2018; Mutkins et al., 2011).

The statistical association between environmental attributions of CB and the depersonalization subscale of the MBI-ES, at baseline, suggests that educators who felt more detached from their clients were less likely to believe that the child's CB were caused by their physical environment and, by extension, were more likely to attribute it to causes intrinsic to the child. Depersonalization was also positively correlated with angry or depressed reactions to CB. This observation indicates that educators who have a more distant or impersonal relationship with the child are also more likely to have negative emotional responses to the child's CB. This is consistent with other work showing that staff's psychological characteristics, such as beliefs and burnout symptoms, can have repercussions for the quality of the services they provide (Rose, 2011). In response to this issue, Flynn et al. (2019) examined training for social services providers that directly targeted their empathy for, and attitude toward, persons with CB. They found a small positive effect of this intervention on empathy and moderate effects on other outcomes such as positive empowerment and work motivation (Flynn et al., 2019).

Following PTR-YC, educators showed increased positive affect (confidence/comfort) and decreased negative affect (fear/anxiety) in response to CB. These findings are encouraging inasmuch as they suggest that, through its significant impact on emotional reactions, the intervention could potentially modify educators' behavioural and cognitive responses to CB (Hastings, 2002, 2005; Lambrechts et al., 2008, 2009; McGill et al., 2018; Rose, 2011). This is consistent with Hastings' (2005) model, which suggests that intervening on staff's negative emotional reactions could impact their behaviours toward CB, such as their selection and implementation of appropriate strategies.

At the end of the program, educators' responses to the TARF-R indicated that they perceived the intervention as socially valid. The aspects of the program that they viewed most favourably pertained to its effectiveness relative to the child's needs and its anticipated long-term effects. Such findings were to be expected because the intervention and the present study were in large part motivated by earlier research on EIBI educators' needs for training and supervision to help them address CB directly (Rivard et al., 2015b). Although the effectiveness of PTR-YC was demonstrated empirically in previous research (Dunlap et al., 2018b), the present findings indicate that the intervention is also suited to the context within which these educators provide EIBI and to the needs of the children and families they work with. However, educators had a negative and neutral appraisal of the time needed to implement the intervention and the discomfort that may be experienced by the child, respectively. Although PTR-YC follows a standardized process outlined by the intervention manual and is based on PBS, it is nevertheless focused on CB. These behaviours are, by definition, a cause of distress and considerable time and expertise are required to elicit satisfactory changes.

This study presented several limitations. First, the small sample size precluded the use of more complex statistical analyses that would account for other factors such as educators' experience and the type of CB displayed by children. Second, it was not possible to create a control group due to organizational factors at the participating agency. It is therefore not possible to rule out that some of the impacts attributed to PTR-YC were in fact due to maturation effects or other

threats to internal validity. For similar reasons, it was also not possible to collect intervention fidelity or follow-up data (e.g., months after the intervention) to investigate whether PTR-YC had lasting effects on educators' attitudes.

The PTR-YC program offers a standardized intervention model based on best practices that nevertheless supports the development of an individualized intervention plan. Future studies should systematically examine the effects of this type of PBS-based training on educators and assess implementation in real-life settings. It would be beneficial for future research to examine and control for potential protective factors on the well-being of educators who work with young children who display CB (e.g., level of training and knowledge of applied behaviour analysis, working within a team rather than alone). Furthermore, a randomized controlled trial with longitudinal data collection would enable a better understanding of its effects on staff behaviours and well-being and how these are maintained over time.

Key Messages From This Article

Families: This program offers a way to get you involved in addressing your child's challenging behaviour with the support of a professional who knows you and your family.

Professionals: This paper suggests that your peers enjoyed the PTR-YC program and experienced positive effects on their reaction towards challenging behaviours.

Policymakers: Implementing a positive behaviour support program in the context of public services provides benefits to staff and ongoing support to families.

Messages clés de cet article

Pour les familles : Ce programme vous permet de vous impliquer dans la gestion des comportements problématiques de votre enfant avec le soutien d'un professionnel qui prend en compte la réalité de votre famille.

Pour les professionnels : Vos pairs ont apprécié le programme PER et ont bénéficié d'effets positifs au niveau de leur réaction émotionnelle face aux comportements difficiles.

Pour les décideurs politiques : La mise en œuvre d'un programme de soutien au comportement positif dans le contexte des services publics permet de soutenir les professionnels

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