# PARENT THERAPEUTIC FACTORS IN MENTAL HEALTH TREATMENT FOR AUTISTIC CHILDREN

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## Abstract

Cognitive behaviour therapy (CBT) is an effective treatment for many autistic children who experience mental health problems, and parents are particularly involved in their psychotherapy. The current research is the first to use a mixed-method approach to investigate how parents contribute to the therapeutic process in mental health treatment for autistic children.

Study 1 used a grounded theory-informed approach to develop a conceptual framework of the therapeutic process factors associated with successful parent involvement in CBT for autistic children. Seventeen therapists and 11 mothers participated in individual semi-structured interviews about their involvement in a CBT program for autistic children ages 8-13 years, where parents attended 10 weekly sessions with their child. The conceptual framework depicts how parent involvement varies depending on child-, parent-, and environmental factors. Parents' contributions to the therapeutic process were grouped into five main functions: logistical coordinator, co-facilitator, coach and cheerleader, companion and teammate, and complementary helper. Parents' beliefs and attitudes toward therapy (i.e., therapy commitment, criticalness, and flexibility) also influenced their involvement.

Study 2 examined the development and psychometric properties of a novel observational measure of parent therapeutic factors in parent-involved CBT for autistic children, which was developed based on Study 1's findings. Following pilot coding, two coders coded three videotaped CBT sessions for 60 parent-child dyads. The Parent Therapeutic Factors Observational Rating Scale (PTFORS) therapeutic functions subscale had adequate interrater reliability, internal consistency, and item stability. Preliminary evidence supporting content, discriminant, and predictive validity is discussed.

The current research addresses two significant gaps in the literature by identifying and defining relevant parent therapeutic factors, and creating an observational measure to examine parent involvement in therapy. With further evidence supporting its validation, the PTFORS may be a useful tool to improve our understanding of how to maximize child treatment gains in parent-involved psychotherapy for autistic children. Clinicians may also seek to use the conceptual framework to guide formulation and treatment planning in their work with families.

Keywords: autism; CBT; psychotherapy; parent; therapeutic factors

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# Chapter One: Introduction

Autistic children have difficulties with social skills and communication (American Psychiatric Association, 2013), and they often have mental health problems (e.g., anxiety, depression, and aggression) that contribute to further impairment. Large-scale surveys and interview studies indicate that approximately 71-86% of autistic children and adolescents have clinically significant mental health problems (Ooi et al., 2011; Totsika et al., 2011). Further, there is greater prevalence and severity of mental health problems among autistic children and adolescents than neurotypical youth (Dickerson Mayes et al., 2011) and those with intellectual disability (Brereton et al., 2006). These co-morbid mental health problems can have a significant impact on children's quality of life, social and school functioning (Gadow et al., 2008), as well as on the health and wellbeing of their families (Wood & Gadow, 2010).

Cognitive Behaviour Therapy (CBT) is considered a first-line treatment that has been shown to help address neurotypical and autistic children's mental health problems, including anxiety and depression (e.g., Chorpita et al., 2011; van Steensel & Bögels, 2015), yet there are aspects of CBT that can make treatment engagement challenging for autistic children. For example, core social-communicative difficulties can make forming an alliance with a therapist difficult (Anderson & Morris, 2006). Autistic children may also struggle with emotional awareness or with articulating their feelings (Griffin et al., 2016; Shalom et al., 2006), and have challenges with executive functions (e.g., inhibition, working memory, flexibility; Corbett et al., 2009). These challenges might influence their ability to engage in various aspects of CBT, such as identifying physiological sensations and emotions, completing therapy homework, and generalizing therapy skills to different contexts and situations. As a result, CBT has been adapted to fit the needs of autistic children. Common adaptations include tailoring therapy content

to children's needs, use of visual and concrete teaching aids, incorporation of specific interests, and increased parent involvement in treatment (Moree & Davis, 2010). Randomized controlled trials, meta-analyses, and community-based research suggest adapted CBT is effective in reducing anxiety symptoms (Sukhodolsky et al., 2013; van Steensel & Bögels, 2015; Wood et al., 2009). In particular, adapting CBT by increasing the level of parent involvement has been associated with better treatment outcomes for autistic children, with a recent meta-analysis finding that parent-involved CBT leads to larger decreases in anxiety symptomatology, compared to CBT interventions without parent participation (Perihan et al., 2020).

Increased parent involvement is common in therapy involving autistic children. Their involvement in CBT can vary from having parent-only psychoeducational sessions (Chalfant et al., 2007; Ehrenreich-May et al., 2014) to having parents join all of their child's therapy sessions (Reaven & Hepburn, 2003; Thomson et al., 2015) and having them take on the role of co-therapist (Sofronoff et al., 2005). The high level of parent participation in CBT should come as no surprise, given the extensive involvement of parents in supporting autistic children in other types of therapy. In early intervention for autistic toddlers and young children, parents are considered essential as the focus is on teaching social-communication skills by means of parent-mediated intervention, where therapists teach parents to conduct formal therapy sessions with their child to enhance the intensity of the treatment (Rogers & Dawson, 2010). However, the focus of the current study is on parent-involved intervention (i.e., therapy involving the presence of at least one parent or guardian for some or all of their child's therapy sessions), rather than parent-mediated intervention, or parent-centred intervention, where the focus is on building parents' knowledge and skills (e.g., parent psychoeducational interventions) rather than the child's knowledge and skills.

Considering the important ways that parents can affect mental health treatment, it is crucial that research focuses on investigating the roles that parents serve in therapy. In the general pediatric psychotherapy literature, parent participation is defined as being involved mentally or physically with therapy tasks, such as completing homework and in-session assignments, as well as discussing emotions and experiences with the therapist (Karver et al., 2005). Multiple different terms are used in the literature to refer to parent involvement, including engagement, participation, cooperation, or "parent participation engagement" (Haine-Schlagel & Walsh, 2015). Overall, parent engagement in therapy is thought to be important for facilitating session attendance, treatment adherence, and skill generalization (Karver et al., 2005).

Though not specific to therapy with autistic children, some authors have sought to develop a conceptual framework of treatment engagement. Client and parent engagement in treatment has been examined as a dynamic process that results in optimal affective, cognitive, and behavioural states, such as hopefulness, belief in the intervention and confidence to carry out intervention tasks (King et al., 2014). The construct of treatment engagement has also been broken down into two components, attitudinal engagement (belief in treatment efficacy and motivation to participate) and behavioural engagement (seeking treatment, attending sessions, and participating in therapy activities) (Staudt, 2007). A similar conceptualization of the attitudinal and behavioural components of treatment engagement was applied within the context of a parent-centred intervention for parents of children recently diagnosed with autism (Hock et al., 2015), but it is unclear how these findings might translate to parent-involved mental health treatment for autistic youth.

There is also extensive literature on common therapeutic factors that may aid our understanding of the therapeutic functions of parent involvement. Common

therapeutic factors are client, relationship, and clinician factors that account for mental health outcomes following participation in psychotherapy (Drisko, 2013). These therapeutic factors (e.g., therapeutic alliance, empathy, positive regard, goal consensus, collaboration between the therapist and client) have long been identified as contributing to treatment outcome (Karver et al., 2005), and the effectiveness of therapy likely requires the integration of both empirically supported therapy techniques and common therapeutic factors (Kazdin et al., 2006; Weinberger, 2014). One common therapeutic factor, therapeutic alliance (i.e., the bond between therapist and client, as well as their collaborative goal-directed behaviours; Hougaard, 1994), is a robust predictor of treatment outcomes for adults and youth (Horvath & Bedi, 2011; Karver et al., 2006), and may be particularly relevant in the conceptualization of parent therapeutic factors. While the core autistic social-communicative challenges can complicate the formation of a strong therapeutic alliance (Anderson & Morris, 2006; Brewe et al., 2021), developing a therapeutic relationship with autistic youth is an important aspect of the therapeutic process (Barry et al., 2015; Lerner et al., 2012) and has been associated with improvements in anxiety symptoms (Kerns et al., 2017), emotion dysregulation (Albaum et al., 2020), and dysphoria (Brewe et al., 2021). In child and adolescent psychotherapy, therapists are managing multiple therapeutic relationships (Accurso & Garland, 2015; Karver et al., 2006; Kazdin et al., 2006), yet existing therapeutic alliance research largely focuses on child- and parent-therapist relationships without accounting for the ways that parent involvement might influence the child-therapist alliance or child treatment outcomes.

Further complicating this picture is the fact that parents' roles in therapy may be influenced by the child's presenting problem and developmental level. For example, with oppositionality and conduct disorder, research with neurotypical children suggests

that parent involvement is highly warranted (e.g., Webster-Stratton & Herbert, 1994). Parent involvement may also be important for treatment success with younger children, who may not be aware of their presenting problems and are usually not self-referred (Karver et al., 2005). Yet the same level of involvement may be harmful for older adolescents who are seeking increased autonomy and independence (Karver et al., 2006; Kendall & Choudhury, 2003).

Although there is no debate about the benefits of involving parents of autistic children in mental health treatment, there is a need to investigate what their involvement entails and to identify the therapeutic functions that parents serve in CBT for autistic children. Previous research on common therapeutic factors have examined these factors from a therapist's perspective, and even though parents of autistic children often take on a 'co-therapist' role (Sofronoff et al., 2005), there is limited knowledge of how *parent* therapeutic factors contribute to the effectiveness of mental health treatment. There also lacks a valid measure of parent therapeutic functions, which is needed to empirically investigate these constructs, as well as to identify the predictors and outcomes of parent involvement in therapy.

**Research Aim**

The overall aim of this dissertation is to investigate the parent therapeutic factors that are relevant in parent-involved psychotherapy for autistic children through two studies: 1) a qualitative analysis of semi-structured parent and therapist interviews to develop a conceptual framework of parent therapeutic factors in parent-involved CBT for autistic children, and 2) the development and psychometric evaluation of an observational measure to quantify parent therapeutic factors as observed in therapy sessions. This dissertation seeks to provide a unified approach for future research through creating a shared language to describe the therapeutic functions of parent

involvement, embedding parent therapeutic factors within a framework that can be tested empirically, and provide a psychometrically sound tool with which to measure these constructs. This will also help improve clinical care for autistic children and their families, as clinicians may use the observational measure to gauge the quality of parent involvement in therapy sessions, and/or consult the conceptual framework to guide formulation and treatment planning.

## Chapter Two: Study 1 – Parent Involvement in Mental Health Treatment for Autistic Children: A Grounded Theory-Informed Qualitative Analysis

Cognitive behaviour therapy (CBT) is an evidence-based treatment that addresses children's mental health problems. The effectiveness of adapted CBT for autistic children is supported by randomized controlled trials, meta-analyses, and community-based research (Sukhodolsky et al., 2013; van Steensel & Bögels, 2015; Wood et al., 2009). Some of the main ways CBT has been modified to better address the needs of autistic youth include using visual and concrete strategies, bringing in children's specific interests, tailoring treatment to children's needs, and increased levels of parent participation (Moree & Davis, 2010). Indeed, parents are often involved in the psychotherapy that is provided to autistic children (Reaven, 2011; Sofronoff et al., 2005; Thomson et al., 2015), varying from separate parent-only sessions to teach them about child activities (Chalfant et al., 2007; Ehrenreich-May et al., 2014), to having parents accompany their child during therapy sessions (Reaven & Hepburn, 2003). During child therapy sessions, parents may express their concerns about treatment, ask the therapist questions, and participate in activities (Guan et al., 2019).

Involving parents in CBT tends to lead to better child outcomes. For example, a recent meta-analysis of CBT trials involving autistic children found that interventions with parent involvement had greater reductions in child anxiety symptoms than interventions without parent involvement (Perihan et al., 2020). It is thought that parents might contribute to treatment outcomes by means of assisting with skill generalization and by decreasing accommodation of children's emotional or behavioural problems (Moree & Davis, 2010), although this has yet to be directly investigated outside of case studies (e.g., Lehmkuhl et al., 2008; Reaven & Hepburn, 2003). Although the specific mechanisms explaining the treatment benefits of parent involvement are unknown, the

importance of incorporating parents in mental health treatment is widely acknowledged and a training program was recently developed for community mental health therapists focusing on increasing parent attendance in therapy sessions with autistic children (Dickson et al., 2020).

Relative to neurotypical peers, autistic children may benefit from higher levels of parent support in therapy settings due to the impacts of their social-communicative difficulties and associated neuropsychological challenges. Autistic children have social-communicative difficulties that can affect the formation of a strong working alliance with a therapist (Anderson & Morris, 2006) and parents may help develop and maintain that alliance. Despite having similar physiological experiences of emotions compared to non-autistic peers, autistic children may also struggle with emotional insight or with expressing their feelings (Griffin et al., 2016; Shalom et al., 2006), which might affect their ability to identify physiological sensations and emotions in CBT. Challenges with executive functioning and cognitive flexibility (Corbett et al., 2009) may also influence homework completion, and implementation of skills to different contexts and situations. To support some of these needs, parents may be asked to act as collaborators or "co-therapists," help with homework completion (Sofronoff et al., 2005; Thomson et al., 2015), model courageous behaviours, coach their child to use coping strategies (Reaven, 2011), or discuss goals and teach skills through role-play (Stadnick et al., 2013). Additional parent roles in the therapeutic process have been identified in the general paediatric psychotherapy literature, including: consultant (providing information to help determine the nature of the problem), co-client (if parents are contributing to or maintaining aspects of children's difficulties), or collaborator (helping to implement treatment) (Kendall, 2011). Though there is evidence identifying the benefits of involving parents, there is a need to define parents' roles in mental health treatment

involving autistic children in order to better understand their influence on treatment outcomes.

Parent scaffolding may be a related component of their contribution to children's therapy. Scaffolding refers to a parent's support of their child's emotional development in motivational and emotional ways (Gulsrud et al., 2010; Hoffman et al., 2006). As described by Hoffman et al. (2006), motivational scaffolding involves parents' ability to initiate and sustain their child's enthusiasm for a task, and may be shown through praise and encouragement, persistence, redirection of the child's attention, or re-stating the goals of the task. Emotional scaffolding describes the parent's ability to make the task a positive experience for the child, demonstrated by maintaining sensitivity towards the child's emotions, sharing in the child's positive emotions, and valuing the child's participation. Parent scaffolding is associated with lower emotion dysregulation and/or fewer externalizing problems in neurotypical (Hoffman et al., 2006) and autistic children (Ting & Weiss, 2017), and with improvements in toddler emotion regulation (Gulsrud et al., 2010). Of interest, the two forms of parent scaffolding (i.e., motivational and emotional) seem to map onto the two dimensions of therapeutic alliance (i.e., "task-related alliance" and "personal alliance"; Hougaard, 1994), and emotional scaffolding incorporates other therapeutic factors such as empathy and genuineness.

There is also a need to identify the predictors and correlates of parent involvement in mental health treatment involving autistic children. Literature on parent engagement in other types of therapy (e.g., psychoeducational groups for parents of autistic children, autism early intervention) suggest that parents' attitudinal and behavioural engagement in treatment are likely linked to intervention characteristics, relational factors, and external barriers or daily stresses (Hock et al. 2015), as well as parent self-efficacy, knowledge of autism and treatment, and belief in the therapy

(Hastings & Symes, 2002; Solish & Perry, 2008). Though these findings have important clinical implications, they have yet to be considered within the context of autistic children's psychotherapy.

### Current Study

This study aimed to elucidate relevant constructs and develop a conceptual framework to better understand the parent therapeutic factors at play in parent-involved CBT for autistic children. We conducted a qualitative study of therapist and parent perspectives to answer the question: *What does good parent involvement look like*? Parent-involved child mental health treatment was operationalized as therapy involving the presence of at least one parent or guardian for some or all of their child's therapy sessions. Because the purpose of this research was to understand successful parent involvement in therapy, snowball and extreme case sampling (Palinkas et al., 2015) were used to identify parents who showed good examples of involvement in their children's treatment. Parents were identified in two ways: a) as nominated by therapists when asked to identify parents whose participation and involvement in sessions was thought to be particularly helpful, or b) having a high degree of observed parent scaffolding prior to the start of the intervention. To identify parents with high levels of scaffolding, parent-child dyads were recorded in a standardized 15-minute discussion of emotional experiences, and parent scaffolding was coded using an observation rating system with known validity and reliability with autistic families (Gulsrud et al., 2010; Ting & Weiss, 2017).

## Method

### *Participants*

Participants included 17 therapists and 11 parents who were previously involved in one of two randomized trials of manualized CBT for children with

neurodevelopmental disorders ages 8-13 years, called the *Secret Agent Society: Operation Regulation (SAS:OR)*. In the *SAS:OR* program, parents attended all 10 weekly sessions with their child, and were often involved in activities during and outside of therapy sessions. The first randomized controlled trial only included families of autistic children (Weiss et al., 2018), and the second trial included families of children with a broader range of neurodevelopmental disorders. For the purposes of the present study, only parents of autistic children were involved.

Data collection and coding occurred in overlapping phases, and sample size was determined by theoretical saturation (Corbin & Strauss, 2008). Of the 22 parents contacted through therapist nomination, 8 were willing and available to participate. An additional 12 parents were contacted based on their parent scaffolding, and 3 participated. As shown in Table 1, most families involved male children ($M_{age}$ = 9.18 years, *SD* = 1.54) and their mothers. Participants varied considerably in the time that elapsed since their last *SAS:OR* therapy session (2-55 months, *M* = 19.91, *SD* = 16.86). The 17 therapists were postdoctoral fellows or clinical psychology graduate students, and all except one were female. Therapists had completed *SAS:OR* with two to seven families (*M* = 3.65, *SD* = 1.45).

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Insert Table 1 here

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*Data Collection: Semi-Structured Interviews*

The first author conducted all semi-structured interviews, and was involved in clinical trials of *SAS:OR* in a research and clinical capacity (evaluating and providing the intervention and supervising others). Participants answered initial open-ended, intermediate, and ending questions about parent therapeutic factors (Charmaz, 2006).

Open questions were broad in scope (e.g., “What was it like to be involved in your child’s therapy?”) to elicit participants’ immediate thoughts and ideas about the topic of interest. Intermediate questions (e.g., “What, if anything, was helpful about being involved in your child’s therapy? And what, if anything, was unhelpful or difficult about being involved?”) allowed participants to elaborate on their experiences and elicit more rich data.

***Procedure***

Following approval from the institutional Research Ethics Board, therapists and parents were contacted to see if they were interested in participating in the interview. Participants provided written consent and could choose to participate at the university or their home. All participants were then shown a randomly selected video recording of one of their *SAS:OR* therapy sessions to facilitate their recall of their involvement in their child’s therapy (excluding the first and last sessions). During and immediately following each interview, the interviewer recorded field notes (i.e., personal thoughts and reactions to the data, and emerging possible relations between concepts; Corbin & Strauss, 2008; Engward, 2013). Interviews were audio recorded and participants each received a $30 gift card at interview completion. The average length of interviews was 39.11 minutes (*SD* = 8.95, *Range* = 28-62), and interviews with therapists tended to be shorter in duration (*M* = 35.35 minutes, *SD* = 5.11, *Range* = 28-44) than interviews with parents (*M* = 44.91 minutes, *SD* = 10.66, *Range* = 29-62).

Using a grounded theory informed approach (Corbin & Strauss, 2008), recordings were transcribed verbatim by an independent transcriber, and coding occurred in three overlapping phases: open, axial, and selective. In open coding, coders assigned codes to capture the meaning of what was said. During this process, we applied analyst triangulation, where the primary coder (Victoria Chan) and a member of

the dissertation supervisory committee (Nazilla Khanlou) coded several transcripts independently and met to compare their codes. After resolving coding differences, the primary coder carried out the remaining coding. Coders also used the constant comparative method, a process where phrases within each code were compared to one another to ensure they were conceptually similar to one another, while also being conceptually distinct from other codes. In axial coding, coders explored causal relationships between codes and grouped similar codes together under more general categories or concepts. Coding was driven by interview data, but coders were also sensitized to existing literature about parent involvement in children's mental health treatment. Selective coding involved reviewing the reflective memos that were taken throughout data collection and analysis, which included the interviewer's thoughts and reactions to the data, as well as emerging hypotheses (Engward, 2013). Coders also examined relationships between categories and concepts by identifying confirming and disconfirming examples from interview transcripts. This process resulted in a conceptual framework, whereby categories and subcategories of codes emerging from interview data were causally related to one another.

### *Methodological Rigor*

Several grounded theory procedures were employed to enhance this study's rigor and trustworthiness (Corbin & Strauss, 2008), including cyclical and overlapping phases of data collection and analysis, data-driven coding, grouping similar concepts into categories, applying constant comparison to ensure similarity of concepts within categories and distinctiveness between categories, and memo-ing throughout data collection and analysis. Analyst triangulation involved two independent coders meeting to consult on coding, and member checking involved presenting initial findings to a

group of *SAS:OR* therapists and research staff to elicit their feedback, which was then incorporated into the conceptual framework.

**Results**

As shown in Figure 1, a conceptual framework of parent involvement emerged from interview data and focused on four elements during the therapeutic process: parent therapeutic functions, parent beliefs and attitudes towards therapy, child motivation to participate in therapy, and therapist factors. These elements can be affected by pre-intervention factors, including child factors (e.g., age, developmental level, gender, temperament), parent factors (e.g., gender, mental health, temperament), the parent-child relationship, and environmental factors (e.g., logistical barriers, school support, support from spouse/family, other children, financial resources). In addition, therapeutic process elements may influence post-intervention factors (e.g., child outcomes, parent outcomes, and the parent-child relationship). Pre-intervention, intervention, and post-intervention factors are depicted linearly in the conceptual framework, and the focus of the current study is on the intervention (therapeutic process) factors (described in Section 2).

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Insert Figure 1 here

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***Section 1: General principles***

There were three general principles that cut across the four elements of parent involvement: variability, goodness of fit, and the benefits of parent involvement in child mental health treatment.

*1.1.Variability of Parent Involvement*

Although all parents were seeking therapy for their children, not all parents demonstrated the same level of involvement in therapy activities. Therapists spoke of a range of parent involvement during sessions (e.g., participating in activities and discussions, attentive listening, following along in the parent handbook, helping the child understand therapy content), as well as outside sessions (e.g., facilitating skill practice at home, communicating with school staff).

Parents who were involved in a helpful way during therapy were noted as being *committed*, *motivated*, *positive*, *supportive*, and *mindful*. They demonstrated their *commitment* to therapy through completing in-session tasks and after-session homework, arriving to sessions on time, having therapy materials organized (e.g., bringing workbooks to and from home), implementing an at-home reward system for skill generalization, and being responsive to email or phone communication with the therapist outside of session time. Highly-involved helpful parents also tended to be *motivated* to engage with therapy content, were excited to attend sessions, eager to learn new skills alongside their child, were willing to try therapists' ideas and suggestions, and were "immersed" in the program (e.g., learning the cognitive-behavioural language and using it at home). In addition, it was helpful when parents maintained a *positive attitude* towards therapy, demonstrated warmth towards their child, noticed and reflected on their child's successes, and were *supportive* of their child's progress. Helpful or involved parents demonstrated a level of *mindfulness* during sessions; they were present, "tuned in," or "checked in to what was happening in the room," and remained compassionate and non-judgmental during the therapeutic process.

There were also ways in which parents were unhelpful when included in treatment, such as being *disengaged* or *distracted*, frequently *interrupting*, or having a *negative attitude* or *misaligned session goals*. Therapists noted that some parents were

*disengaged* or assumed that they were not needed in the session, and as a result could miss opportunities to step in and assist their child. For example, some parents would come to the first session unaware that they were expected to attend the whole session, despite this information being provided in orientation material. There were also some therapy activities that participants noted seemed geared to the child alone (e.g., didactic psychoeducation, video games), which can send mixed messages given the program's expectation to involve parents in all aspects of therapy sessions. While therapists understood that parents were busy and juggling multiple responsibilities, there were times when some parents used their phones, left the room, or were otherwise *distracted*, missing opportunities to support their child in activities. Therapists also found that parents who frequently *interrupted* their children or stepped in without letting their child speak first were unable to see what the child could achieve on their own. It was unhelpful to the therapeutic process when parents had a consistent *negative attitude* or affect in session, or when they had *misaligned session goals* leading them to be overly focused on details that took away from the session aim (e.g., making sure the child sat in the chair properly or spelled words correctly).

Of note, the *quality* of parental involvement seemed of greater importance than the *quantity* of involvement. For example, while some parents could be less talkative than other parents, they could still provide valuable contributions. Because of the many pre-intervention factors that can influence any given presentation of parent involvement, it may not be useful to try to describe an exact 'rule' or guideline as to how much or little parents should be involved in therapy.

*1.2. Goodness of Fit of Parent Involvement*

To fit with their child's needs, parents adapted their involvement in therapy depending on child factors, such as age, developmental level (e.g., understanding of

abstract concepts), executive functioning (e.g., organization, memory, problem solving skills), attention or behavioural problems, temperament, or motivation to engage in therapy. Participants noted how parents might not need or want to be present for the entire session if their child was older, capable of understanding the abstract concepts, or desired independent connection with therapists. In that case, parents could benefit from having the flexibility to attend the beginning and end of their child's sessions, or to have some sessions without the parent to give the child some autonomy in the therapeutic process and the freedom to have their own 'space' with the therapist. Parents of children with executive functioning difficulties found they needed to provide their children with further support, such as breaking down tasks into smaller steps for their child, providing prompts and reminders to help support their children's problem solving, help them stay organized, and plan home practice.

*1.3. Benefits of Parent Involvement*

Parent involvement was associated with benefits during and outside of session. During session, therapists noticed that when parents were actively engaged, children also seemed more motivated, had more fun, and were more likely to complete therapy homework. In effect, children learned from parents' modelling of positive behaviours. In addition, learning and practicing emotion regulation strategies was challenging for many families, and the child's persistence and motivation seemed to be bolstered when a parent supported their child through these challenges.

Attending sessions also had benefits that extended beyond session time. Parents learned content that could: a) help them with their own emotion regulation and mental health, and b) equip them to assist their child in emotion regulation tasks and in maintaining therapeutic gains post-treatment. For example, three and a half years after participating in the brief CBT program, one parent (P008) was able to recall specific

emotion regulation strategies they continue to use with their child, and described ways they adapted concepts learned in therapy to apply to more complex social situations as their child matured into adolescence. In addition, having a shared experience in therapy, along with a shared vocabulary to communicate about emotions and new tools to cope with strong feelings, can also enhance the parent-child bond. For example, one mother shared about how participating in CBT together helped to deepen her relationship with her son:

> "I think it brought my son and I closer together, I think it really did. Being involved with him and walking every step of the way -- there was a deeper sense of trust I think with that. I became his sounding board for a lot of things, and I really credit this program, going through it all together, being involved in all of it. We were [close before] but it just took on a different element." –P007

Parents may also come away with a deeper understanding of, and compassion for, their child after participating in therapy with them:

> "I think sometimes you don't have the necessary tools to understand what that child is going through because you take for granted that simple things could be difficult. I saw how autism affected him, how challenging simple things were for him, and it made me parent differently. It made me feel stronger as an individual because I had more compassion for what he was going through." –P011

***Section 2: Therapeutic Process Factors***

Four therapeutic process factors were seen as important elements of parent involvement (components "in the room" during therapy), including parent therapeutic functions during the intervention (e.g., logistical coordinator, co-facilitator, coach and cheerleader, companion and teammate, complementary helper), parent beliefs and attitudes towards child mental health treatment (e.g., therapy commitment, criticalness, and flexibility), child motivation to participate in therapy, and therapist factors (e.g., characteristics, skill and knowledge, behaviours).

*2.1.Parent Therapeutic Functions*

Parent-specific therapeutic process factors included five therapeutic functions parents may fulfil during the intervention: logistical coordinator, co-facilitator, coach and cheerleader, companion and teammate, and complementary helper.

*2.1.1. Logistical Coordinator: "Let me handle the logistics."* Parents were in charge of planning and organizing the logistics involved with attending sessions. This involved communicating with the therapist to schedule sessions, arranging transportation, ensuring that materials (e.g., handbooks, worksheets, cards) were brought to and from home, coordinating with school staff if session times overlapped with the school day, bringing snacks, and allotting time for traffic to arrive on time. For example, one therapist said:

> "I think that it was really nice to have the parents there because they would be better [than the child would be on their own] at organizing all these materials and making sure things are brought to session, not forgetting things. So that management aspect of it was very helpful. Again more logistics stuff but it makes a big difference actually, especially with a CBT program." – T016

*2.1.2. Co-facilitator: "Here is what we need to do."* During sessions, parents assisted therapists with the execution of therapy tasks and were engaged in co-running aspects of the intervention with the therapist. Working as a team, parents brought in expertise on their child (e.g., providing the therapist with relevant clinical information about the child's history and interests), while the therapist brought in their expertise on the therapy content with the parent helping to facilitate activities (e.g., helping the child understand how to do therapy activities). One therapist (T005) noted: "Just working together, they know their kid better than me, so they know if I word something one way, they might know how to word it differently to make their child understand." CBT often relies on clients to provide examples of a time when they felt a certain emotion to help guide discussions during therapy, and therapists found it helpful to have parents remind their child of specific examples from the child's experiences at school or at home.

Parents also provided therapists with insight into the child's life, articulating recent challenges that may have arisen, and providing therapists with feedback on the implementation of skill practice at home. They also gave therapists an idea of when a particular topic might be difficult for the child. For example, one therapist shared:

> "…the parent would lean over and something would be said and they'd [say] 'Oh this is a tough topic for him, this will be hard today.' And they give you this little window [into the child's life] that you wouldn't probably get without the parent." – T005

Parents can also provide therapists with helpful information about a child's strengths and interests, enabling therapists to incorporate those into therapy. In turn, parents' co-facilitation efforts help to make the material more relatable to a particular child's context. Over the course of therapy, as parents learned how to help their child identify and rate emotions, and implement coping strategies, some parents spontaneously drew on these skills in-session to support their child during times of emotion dysregulation, with the assistance of the therapist if needed.

Parents were also co-facilitators *outside* of the session. For example, parents were instrumental in ensuring weekly completion of home practice, orchestrating situations to enable their child to practice the emotion regulation skills, reminding the child to complete home practice, creating an at-home reinforcement system similar to the one used in session, and communicating session content to school staff to help the child practice skills at school. Some parents also found creative ways to complete home practice (e.g., watching the Olympics to practice identifying others' emotions through facial expressions or body language). Because parents observed how therapists explained concepts in session and learned therapy content first-hand, parents were able to use consistent terminology and language with their child, as well as engage in problem-solving when barriers or challenges arose during skill practice at home or at school.

*2.1.3. Cheerleader and Coach: "You can do it and I can help you succeed."* Parents encouraged children in targeted change (i.e., improving their emotion regulation skills), with the goal of increasing the child's autonomy in coping with their emotions. Parents provided their child with praise and encouragement for completing difficult activities or doing their best to learn new concepts or skills, as well as celebrated and delighted in the child's successes, such as one parent who said:

> "Like when [my son] worked through that anxiety too by himself and I'm just coaching from the sidelines, like giving him extra points, he just—wow! So then [I'd say]… 'there are times you didn't realize how big this is that you did this! You did this, right? Yourself! This is huge!'" – P007

If child motivation waned towards the later stages of therapy, parents would also encourage their child to continue. There were times when coping strategies would no longer work, or when families had to go through a period of trial-and-error to identify new strategies, and in those times, parents helped to keep their child moving toward therapy goals. One mother talked about drawing on her personal experiences of the effectiveness of coping strategies to encourage her child to continue practicing these new skills, even when it seemed difficult:

> "I think because I could relate and I could see how certain concepts of, for example deep breathing, are so good, I knew that they could work with him as well […] I could encourage him to persevere because if you've been through a tunnel you've come out the other side, you know there is another side, right? So then you can help him through that as well." -P007

It was also important to parents that they balance supporting their child with allowing them space to learn how to use coping skills and regulate emotions more independently. Parents felt that providing praise and encouragement also contributed to their child's confidence and sense of accomplishment. One mother spoke of how rewarding it was to be part of her child's progress:

> "…it was kind of fun, you feel a little bit [like] a mother hen pushing her child out a little bit. But it was so wonderful to see to see him grow, and to be able to pull back and

> on the sidelines and just kind of push him a little bit out there saying, 'You can do this, I'm watching you do it.'" – P007

*2.1.4. Companion and Teammate: "I am here for you, we are in this together."* Parents were able to act as children's allies and build a sense of "togetherness." At the beginning of therapy, a parent's presence can help them feel more comfortable with the novel environment, making it easier for the child to see therapy as a safe space and enable the therapist to build rapport. Parents were also involved alongside their children in activities, such as role-play to practice coping skills and problem solving, or game-based psychoeducational activities. By being a companion with the child, parents provided a sense of companionship and normalized the experience of receiving help from a mental health professional and allowed the child to feel less alone in the process, knowing that they had someone to trust and rely on. Some parents also found ways to involve other family members in home practice or to teach their other children coping skills to normalize the use of these skills.

Having the parent and child together during sessions allowed them the opportunity to work as a team. One therapist (T016) recounted an example where, "They were on a team and there was a lot of support and a lot of trust, and I think it was a real amazing asset to have them together because it elevated it to another level." Some parents were enthusiastic about participating to help their child get the most out of their therapy experience, with one therapist (T005) remarking, "I had parents on the ground, making jokes with their kids but keeping the kid comfortable. I had some great examples of parents who would really do anything to get their child engaged and going through the program."

*2.1.5. Complementary Helper: "I can fill in the gaps where you need me to."* This function specifically refers to the acts of helping to bridge the gap between the child's capacity and what is expected of them within the therapeutic context. By being attuned

to the child's needs, parents could step in to scaffold a child's participation in session through actions such as: helping the child build a relationship with the therapist, helping the therapist better understand the child, managing the child's behavioural or attention problems, scribing for a child with fine motor issues, or linking therapy content to the child's experiences to make abstract concepts more concrete and understandable. For autistic children with social-communication difficulties, developing a relationship with an unfamiliar person can be challenging, and some autistic children may need their parent's help with building a therapeutic relationship with the therapist. Parents can "bridge the relationship" between the therapist and the child by modelling for the therapist ways to best to relate to the child, especially when a child is less intrinsically motivated to engage with the therapist. Some parents helped their child develop a rapport by prompting them, or by offering information about the therapist that would pique the child's interest:

> "the mom said to [her son], "Did you know that [therapist's name] has her PhD?" And he like, looked away and then two seconds later, he looked up, he's like, "Really? What do you have it in?" And all of a sudden he was interested in me… she knew what he would like about me and she tried to develop that relationship." –T008

Parent complementary helpers also bridge the gap for children by asking therapists to change aspects of sessions to better accommodate specific triggers or needs (e.g., noting how a child can be triggered when hungry can lead to incorporating snack breaks into session agendas). Parents used strategies to help support their child when faced with attentional issues, such as repeating or rewording a question, reminding the child to stay focused, and redirecting the child's attention back to the goal of the session. In other instances, children experienced negative emotions that could have led to a rupture in the therapeutic alliance and parents functioned as a 'safety net' in these situations. One therapist (T008) noted: "I can do my best but [the mother is] the one that gives him a little whisper in the ear. I don't know what she's saying but then he starts to

actually listen to me." Children who had fine motor issues benefited from having a parent scribe for them when they needed to complete written activities. CBT also requires a certain level of abstract thinking, as clients are asked to change or bring awareness to maladaptive thoughts. Parents were connecting the dots with their child and helped them understand how to apply a coping strategy by reminding them of a situation in which it might have been useful, or bringing in other personal examples to "bring the material to life for the child" (T017).

*2.2.Parent Beliefs About and Attitudes Towards Therapy*

In addition to these parent therapeutic functions, three main parent beliefs and attitudes related to therapy emerged as important in influencing parent involvement: therapy commitment, therapy criticalness, and therapy flexibility.

*2.2.1. Therapy Commitment: "Therapy is worthwhile," Positivity, and Persistence.*

Many parents were committed to therapy, demonstrating an attitude of positivity and persistence, and the belief that participation in therapy is worthwhile. Therapists noticed that some parents seemed particularly committed to prioritizing therapy in their busy schedules, taking an active role in completing therapy tasks (e.g., in-session activities, practicing coping strategies with the child at home), arriving to sessions on time, and a general 'buy-in' to the effectiveness of therapy. Parents also understood that helping their child outside of session time and after the CBT program ended would help their family get the most benefit out of therapy: "It's only as good as the effort you put in after the fact, so [I was] trying to keep drawing on the material and keep it fresh at home" (P005).

Parents also reframed potential barriers to therapy in a positive light. For example, one mother reframed long travel times as an opportunity to bond with her

child. Another parent described their commitment to their child's therapy as a small part of a bigger picture:

> "I guess the more you learn about something like autism and how that's going to affect your child… how it shows in their life, you know, it's a journey. …this is going to be a journey and [SAS:OR] is then part of the journey." – P007

Therapists reported that it was helpful to have parents look for positives, even when things were hard in sessions; and to have parents be excited to participate and supportive of the overall process, without expecting every strategy to work flawlessly.

*2.2.2. Therapy Criticalness: "Therapy is an added stressor."* The term 'criticalness' is sometimes used in a negative tone, but here it is used neutrally to capture a posture of thinking critically about the demands that participating in therapy place on a family and available resources. For example, one parent appreciated how her presence in therapy sessions was helpful for her son, but also felt she could have benefited from an hour's respite to prevent caregiver burnout:

> "I wanted to be a part of [therapy] so I could really capture what they were doing and what was helpful. If I'd been sitting in the waiting room, I wouldn't have gotten that full effect, which I think is really good. But I did find it, to be honest, exhausting, just because it was a long drive there and because he was a bit resistant to go. We really want to help our kids too but there's also never time for us either, and then we get burnt out." –P010

Even if parents think that their involvement in their child's CBT is helpful, they also benefit from setting realistic expectations of how much their family is able to invest in therapy, understanding that each family is approaching treatment within a different context. Therapists can model this for parents by being flexible and decreasing the pressure to complete prescribed homework.

*2.2.3. Therapy Flexibility: Flexibility, Openness, and Letting Things Go.* Many involved parents were flexible in their implementation of CBT strategies, were open to trying new ways of coping, and were willing to let things go when situations did not go as

planned. Having learned the therapy material alongside their child, parents were empowered to adjust coping strategies as required by different situations, by children's changing interests, or by different maturity levels:

> "It's like a dial on an instrument and every time his interest or his maturity level [changes], depending on the season, depending if there's stress factors in his life, you have to turn the dial and adjust the methods that you use. Now I have to use this method a little bit more, this one a little bit less. It's not working in this situation and so forth. […] And then use the experiences I have from SAS or other strategies from the past and try to merge them and try to come up with a solution." -P002

Part of flexibility within a therapeutic context is having openness, whether it is trying new things, managing child emotions in a different way, or giving a strategy another chance. Therapy might be a new experience for both the child and the parent, and it was helpful for parents to bring openness to their experiences and those of their child. Having openness does not necessarily mean that all new experiences will be positive; some parents learned to let things go when they encountered difficulties. Some parents had an adaptive response to managing multiple competing demands by prioritizing their focus and by granting themselves compassion to focus on what they could handle in the present moment.

*2.3. Child Motivation*

Parents and therapists both noted a reciprocal process of child motivation and parent involvement. When children came to their first therapy session with high intrinsic motivation, parents did not need to be as involved because there was less of a need for parents to model positive behaviours to maintain their child's engagement. When children had low motivation to attend therapy, considerable parental effort was needed:

> "He would just move slow[ly] […] when we got to the parking lot, and even just getting out of the parking lot once we got there. So I would do mini-steps, like 'Well, you know if we just get from here to the elevator then we'll all talk about it some more.'" – P010

Therapists also noticed that when parents were actively engaged, children also seemed more motivated, had more fun, and were more likely to continue completing therapy homework, even as families faced increasingly difficult challenges as part of the therapy program. For example, a therapist recalled:

> "…[when] they would try to use a [coping skill] and it didn't go so well or [when] they tried something that was really difficult, [the parent] always found a way to be really positive and supportive and find the strengths in those moments. [The parent] was really proud. And the child really picked up on that, and that really motivated him to keep going and trying" –T009

### *2.4. Therapist Factors*

There were also key therapist factors that were associated with parent involvement: therapist characteristics and behaviours, and their level of skill and knowledge. Parents found it helpful when therapists showed compassion and empathy, warmth, eagerness, and flexibility. One mother said:

> "…whether it's SAS or any other therapies I've gone to, I always feel like I sit in front of a professional who gives me great advice, but just doesn't understand the emotional components of how exhausting all this is […] those levels of compassion are so important." –P003

Therapists appeared to support involvement through specific behaviours. Early in therapy, therapists noted how they clarified what therapy would look like, and expectations during and outside sessions. They also noted that it was helpful to ask parents if there were any barriers to involvement, gauging treatment readiness, and problem solving with parents to set them up for success. Parents and therapists described the importance of therapists making an effort to learn more about families' previous therapy experiences, asking about what did or did not work from week-to-week, checking-in on parents' understanding, and aiding parents' knowledge of how to support their child in therapy.

Many therapists in this study were graduate-level trainees, and those with less experience voiced worries about the possibility of the parent evaluating them negatively, as well as concerns about overstepping parents' authority or about setting boundaries if parent-child conflict arose. Beginner therapists also appreciated having the parent present for sessions because it helped them with managing child attentional or behavioural problems, and with learning more about the child (e.g., when parents filled complementary helper and co-facilitator functions). Therapists needed to be attuned to both the child and the parent in session and had to build a therapeutic alliance with both, and noted managing two therapeutic relationships by emphasizing collaboration and teamwork among the three parties.

## Discussion

This study is the first qualitative study of how parents of autistic children contribute to the therapeutic process in parent-involved child psychotherapy. There is evidence that CBT trials with parental involvement tend to have greater treatment effect sizes (i.e., greater reductions in autistic children's anxiety symptoms) compared to CBT trials without parental involvement (Perihan et al., 2020), but there is a paucity of research on the specific ways in which parent involvement might be helpful in CBT for autistic children. Participation in CBT involves a client's ability to identify their thoughts and emotions, and to form a therapeutic alliance within a short time frame (Safran et al., 1993), requiring verbal expression, sustained attention during didactic teaching, identification of cognitive processes, and emotional awareness, all of which can be particularly challenging for autistic children (Corbett et al., 2009; Griffin et al., 2016; Shalom et al., 2006), making parent involvement a critical consideration for treatment accessibility.

This study's results place an emphasis on the goodness-of-fit of parent-child interactions in the context of therapy. Parents often naturally adapted their interactions with their child during therapy depending on the child's need for support and the situational demands. This can include a balance of filling more 'child-led' parent therapeutic functions (e.g., coach and cheerleader, companion and teammate) with more 'parent-initiated' therapeutic functions (e.g., logistical coordinator, co-facilitator). Parent responsivity is found in theoretical models of transactional relations between self- and other-regulation in child development (Sameroff & Fiese, 2000), in longitudinal research on parenting stress and behaviour problems of children with developmental disabilities (Woodman et al., 2015), and in other forms of parent-involved child treatment. For example, in Parent-Child Interaction Therapy, parents are given direct coaching on how to follow the child's lead in *child-directed interactions* (using positive parent strategies such as positive attention and praise) and to initiate *parent-directed interactions* (using straightforward commands) when necessary to decrease inappropriate child behaviours (Eyberg & Robinson, 1982). The conceptual framework is a bioecological model of a number of pre-intervention (non-process) and intervention (therapeutic process) factors. Also referred to as the Process-Person-Context-Time model (Bronfenbrenner & Morris, 2007), successful operations are influenced by *person* characteristics (e.g., child and parent characteristics) and the family's environmental *contexts* (e.g., immediate and extended family, school, financial resources), which may change over *time* (e.g., changes pre- to post-intervention).

### *Parent Therapeutic Functions*

This study goes beyond previous research by articulating five specific therapeutic functions that parent involvement in CBT might serve: *logistical coordinator, co-facilitator, coach and cheerleader, companion and teammate,* and

*complementary helper*. These functions are not hierarchical, as no one therapeutic function seems to serve as a precursor or prerequisite to another. A parent may fill each therapeutic function to varying degrees, depending on their ability to serve each function, their child's relative need for support in that way, and their family's context. In other words, 'ideal' parent involvement in CBT could be a different combination of therapeutic functions depending on the skills and characteristics parents come in with, as well as the needs of the child and the family's context.

The importance of *logistical coordinator* should not be underestimated, particularly for parents of children with complex needs who might also be juggling appointments with other health care providers, child care for multiple children, or other stressors on top of work demands or transportation limitations. Parenting stress tends to be high for caregivers of autistic children (Rao & Beidel, 2009), but the relation between parenting stress and negative outcomes (e.g., depression, social isolation) can be moderated by positive ways of coping (e.g., positive reappraisal, taking action; Dunn et al., 2001); and one example of a parent's positive coping might be seen in organizing and coordinating the logistics involved in therapy participation. The *co-facilitator* function can help with skill generalization to other contexts outside of session, and maintain therapeutic gains through parent-facilitated skill practice after therapy ends (Reaven, 2011); this can contribute to maximizing a child's benefit from a brief intervention, such as the 10-week CBT program employed with this study's participants. Parents acting as co-facilitators can also increase the 'dosage' of intervention the child receives, similar to the use of parent-mediated intervention in early intervention programs for younger children with autism (Nevill et al., 2018), as parents continue to help their children consolidate their understanding of therapy content outside of weekly one-hour therapy sessions.

The *coach and cheerleader* function is similar to scaffolding, whereby parents initiate and maintain their child's enthusiasm to complete a task, and make the task a positive experience for the child (Gulsrud et al., 2010; Hoffman et al., 2006). Coaching in sessions may also capitalize on the 'zone of proximal development,' enabling the child to achieve more of their potential than they would without support (Vygotsky, 1978). Supporting children in therapy also involves being a *companion and teammate*, with parents acting as an ally with the child, building "togetherness". Similar to therapist self-disclosure, which can normalize challenges a client might face in the therapeutic process (Goldfried et al., 2003), parents' ability to model the effectiveness of coping strategies and share in the highs and lows of therapy can motivate children to persist and maintain enthusiasm. The parent-child team allows the therapist to form a triadic relationship, similar to couple's therapy, where the therapist can work with the two clients as a unit (where the therapist's focus is on the clients' relationship together) or as a translator (providing each client with empathic understanding and mediating interactions to help clients enact a new way a relating to each other), instead of forming bonds with each client separately (Patterson et al., 2009).

The last function, being a *complementary helper*, is when the parent partners with the child and therapist to bridge the gap between the child's capacity and what is expected of them, increasing therapeutic accessibility for children with different strengths and needs. It was helpful for parents to complement children's autism-specific needs (e.g., socio-communication skills needed to build a relationship with the therapist) and needs common among neurodevelopmental disorders more broadly (e.g., attention or behaviour problems, organization and memory challenges, fine motor issues, difficulty understanding abstract concepts). Systemic approaches to family therapy describe complementary relationships as a way of relating based on difference

or opposites, such as one person being cared for and the other person providing their care (Burnham, 2002). Although complementary relationships can be problematic when dyads are rigid or entrenched in their opposing roles (Burnham, 2002), the approach of the complementary partnership we describe is one of flexibility, adapting support to best suit the dynamic demands of therapy activities and the child's need for support.

### *Parent Beliefs and Attitudes Towards Therapy*

The parent beliefs and attitudes towards therapy reflect an eagerness to persevere when therapy is not easy, critical thinking about how to integrate therapy in their family context, and flexibility in changing their expectations or approaches as therapy progresses. Parents who are committed, think critically about therapy demands, and bring an attitude of flexibility to therapy may be in the "active collaborative mode," in that they believe they have an active part in the change process, are open in disclosing issues with the therapist, and take initiative to continue the work (Bachelor et al., 2007). It is also possible that a parent's therapy criticalness might lead them to enter either of the two other collaborative modes, mutual (i.e., joint collaboration where both the client and therapist contribute to the change process) or dependent (i.e., the client relies on the therapist to be the main contributor to the change process) (Bachelor et al., 2007). For example, if the parent tells the therapist they are having difficulties with implementing a coping strategy at home, the therapist can collaborate with the client in making appropriate changes to the approach (i.e., mutual collaborative mode), but if the parent thinks that home practice is too difficult to implement given their family's situation, then they may rely on the therapist to take a greater role in the change process (i.e., dependent collaborative mode).

***Limitations***

This study has a number of limitations. Parent therapeutic functions were only examined within the context of a manualized child CBT program, and it is unclear if similar therapeutic factors would emerge or be as relevant in other treatment modalities (e.g., play therapy, emotion focused therapy, family therapy). Some specific ways that parents supported their children in therapy are unique to CBT approaches, such as CBT's emphasis on skill learning and home practice (which then necessitates parents' support with facilitating and reminding the child to complete home practice). Further research is needed to clarify how parent therapeutic functions may look different in other therapy modalities. This sample was only comprised of parents of autistic children, and the parent therapeutic factors that emerged from this study may not be generalizable to child therapy more broadly. At the same time, many of the factors may also be useful for children with other neurodevelopmental conditions. For example, a child with ADHD and challenges with executive functions (e.g., planning and organization) may benefit from a parent providing support as the logistical coordinator, co-facilitator, and/or the complementary helper. There was also a substantial delay between participants' final *SAS:OR* session and their participation in the current study which may have affected their ability to remember details of their involvement in treatment.

There were also limitations in the demographics and characteristics of the sample. This sample only included parents of school-aged children, and parent involvement would likely differ in numerous ways as children transition to adolescence; prior research has discussed relevant considerations for parents in the treatment of anxiety symptoms for autistic adolescents (Reaven, 2011). Participants were predominantly female, and there was a lack of ethnic or cultural diversity (the majority

of parents were White). Further research is needed to explore the ways in which gender or culture might influence the parent therapeutic factors identified in this study. For example, a recent study found that compared to White parents, those who identified as Latinx were less likely to share their concerns about treatment with therapists and tended to have lower levels of participation in sessions (Guan et al., 2019).

### *Conclusions*

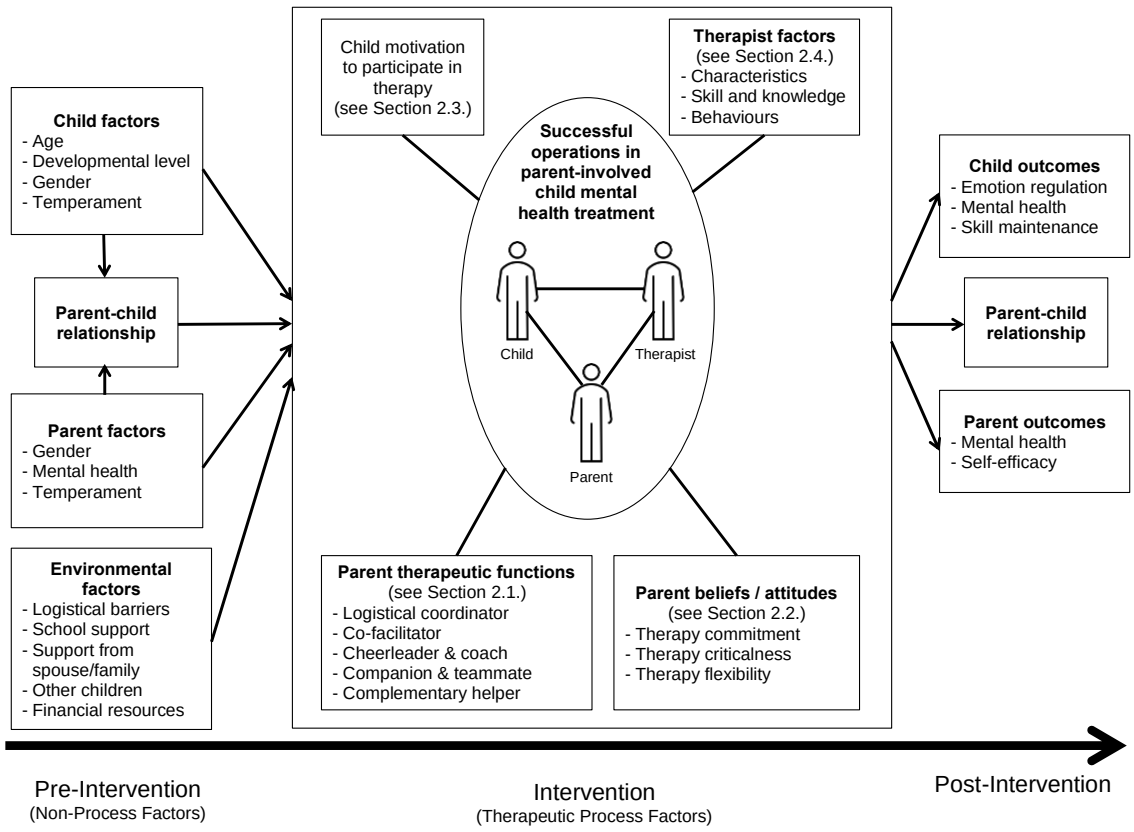
Overall, this study identified a number of clinically relevant constructs and factors associated with successful operations in parent-involved child mental health treatment, and outlined a conceptual framework that can serve as a guide for further empirical study. It brings to light many of the otherwise implicit demands that can be placed on parents in their contributing roles to help their children, and it is important to consider how different families will have unique capabilities and resources to dedicate to this kind of endeavour. To further our understanding of parent-involved therapy, future work should seek to develop measures of parent therapeutic factors. An observational, interview-based, or questionnaire-type measure would also enable an investigation of the relation between parent therapeutic factors and child treatment outcomes. This would allow for the empirical testing of the conceptual framework and provide targets for clinicians to improve parent involvement and inform decisions about which families might benefit from interventions that expect parent involvement.

Table 1

*Parent Demographics and Characteristics*

| | *M(SD)* or % (*n* = 11) |
|---|---|
| Age | |
| *Child* | 9.18 (1.54) |
| *Parent* | 43.27 (4.10) |
| Gender | |
| *Child (female)* | 9% |
| *Parent (mothers)* | 100% |
| Ethnicity | |
| *White* | 73% |
| *Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.)* | 18% |
| *West Asian (e.g., Iranian, Afghan, etc.)* | 9% |
| Marital status (married) | 82% |
| Graduated from college | 91% |
| Family income (CAD before taxes) | |
| *< $49,999* | 18% |
| *$50,000 - $99,999* | 18% |
| *$100,000 - $149,999* | 9% |
| *$150,000 or more* | 27% |
| *Prefer not to disclose* | 27% |

*Note:* Data collected at time of participation in *SAS:OR* program.




## Figure Captions

Figure 1. Conceptual framework of therapeutic process and non-process factors in parent-involved child mental health treatment.

# Chapter Three: Study 2 – Development and Psychometric Evaluation of the Parent Therapeutic Factors Observational Rating Scale (PTFORS)

In the general pediatric literature, parent participation is considered a common therapeutic factor in youth and family therapy (Karver et al., 2005). First explored empirically by Chamberlain et al. (1984), parent participation can be measured, at the very minimum, by the attendance of either or both parents at therapy sessions. Parent participation also involves parents' willingness to participate, openness to the therapeutic process, and willingness to follow the intervention regimen (Nye et al., 1999). One meta-analysis found that parent willingness to participate and actual parent participation were associated with more positive child psychotherapy outcomes (Karver et al., 2006). This may be because parents who are involved in their child's treatment also help create a therapeutic context that facilitates treatment adherence and generalization of skills learned in therapy to the home and school settings (Karver et al., 2005). Parents may also serve a protective function in mitigating possible barriers to therapy participation, thereby decreasing the likelihood of therapy drop-out (Kazdin et al., 1997).

In light of the core social-communicative challenges associated with autism, parents of autistic children are particularly involved in supporting their children in therapy. The extent of their involvement may differ by treatment model, ranging from parent-*involved* therapy (i.e., therapy involving the presence of at least one parent or guardian for some or all of their child's therapy sessions, such as in some Cognitive Behaviour Therapy (CBT) programs; Reaven, 2011; Sofronoff et al., 2005; Stadnick et al., 2013; Thomson et al., 2015) to parent-*mediated* therapy (i.e., training parents to conduct formal therapy sessions, such as the Early Start Denver Model; Rogers & Dawson, 2010). Parent involvement also differs by treatment focus, with therapies

focusing on improving socio-communicative skills tending to use a parent-mediated approach, and therapies focusing on mental health tending to use a parent-involved approach. In mental health treatment involving autistic children, a recent meta-analysis of CBT found that parent-involved therapy had greater reductions in child anxiety symptoms than those without parental involvement (Perihan et al., 2020). Moreover, as discussed in Study 1, parents may fulfill various therapeutic functions (e.g., Logistical Coordinator, Co-Facilitator, Cheerleader and Coach, Companion and Teammate, and Complementary Helper), and bring different attitudes or beliefs about therapy (e.g., therapy commitment, flexibility, and criticalness) as they support their child in a therapeutic context.

Currently, there is a lack of measures that capture the ways parents contribute to the therapeutic process in parent-involved mental health treatment. Existing measures of parent involvement in therapy mainly focus on session attendance, homework completion, or global participation in treatment, with few measures capturing parent behaviours in clinical interactions or reporting psychometric properties to establish their validity or reliability (Haine-Schlagel & Walsh, 2015). Additionally, only one measure of parent involvement has been developed for use with an autistic sample (Brookman-Frazee et al., 2012). This single-item measure of global participation in treatment has only been used in one study and its validity has yet to be investigated. It focuses on the extent of parent participation in therapy activities and collaboration with the therapist as rated on a 5-point scale, but it fails to gauge the *quality* or *helpfulness* of parent participation.

Looking to the broader general pediatric literature on common therapeutic factors reveals considerable variation in how therapeutic relationship variables are conceptualized (Elvins & Green, 2008; Shirk & Karver, 2003), measured (Elvins &

Green, 2008; McLeod, 2011), and used in treatment (Friedlander et al., 2006). Scholars advocate for collecting information about therapeutic relationship variables from multiple points of view including child-, parent-, and therapist-perceptions, though discrepancies in their responses can make it difficult to interpret alliance-outcome associations (Shirk & Karver, 2003). There are also demand characteristics where participants can feel pressured to respond positively and developmental factors that can impact a child's ability to reflect on the therapeutic process to consider. Using an observational measure instead of self-report has the advantage of removing some of these limitations (e.g., demand characteristics, shared method variance in associations with treatment outcome measures; Podsakoff et al., 2012; Stone et al., 2000).

One example of an observational measure of therapeutic process factors is the *Therapy Process Observational Coding System – Alliance scale* (TPOCS-A; McLeod & Weisz, 2005), which has been used as a measure of therapeutic alliance in psychotherapy research involving neurotypical youth (Chiu et al., 2009; McLeod et al., 2021) and with autistic children receiving CBT, has revealed associations among youth-therapist alliance and improvements in emotion dysregulation (Albaum et al., 2020; Burnham Riosa et al., 2019). However, this measure focuses on therapeutic alliance between a therapist and child or parent, without capturing the ways that parents contribute to parent-involved therapy. Another observational measure called the *Parent Participation Engagement (PPE) in Child Psychotherapy Observational Coding System* (Haine-Schlagel & Martinez, 2014) examines parent participation behaviours in therapy sessions (e.g., asking questions, participating in session activities, showing commitment to therapy), as rated on a 5-point scale (1 = "no participation" to 5 = "high participation"). However, the validity of this measure has not been established and it was developed with a neurotypical sample. Other examples of observational measures

of related therapeutic process factors include the *Child Involvement Rating Scale* (CIRS; Chu & Kendall, 2004), which examines the extent to which children are involved in CBT sessions; the *System for Observing Family Therapy Alliances – observational* (SOFTA-o; Friedlander et al., 2006), a measure of therapeutic alliance in family therapy; and the *Parent-Child Interaction Rating System* (PCIRS; Fenning et al., 2007), a measure of parenting behaviours during structured and unstructured parent-child interactions with young children outside of a therapy context. Although these measures have psychometric support, they do not directly examine parent involvement in psychotherapy, and only the PCIRS, TPOCS-A, and PPE in Child Psychotherapy Observational Coding System have been used in studies involving autistic children (e.g., Albaum et al., 2020; Burnham Riosa et al., 2019; Fenning et al., 2007; Guan et al., 2019).

The purpose of the current study was to develop and evaluate psychometric properties of the *Parent Therapeutic Factors Observational Rating Scale* (PTFORS), an observational measure of parent therapeutic factors in the context of parent-involved CBT for autistic children. This study describes the five steps of creating the PTFORS, and presents the scale's descriptive statistics, inter-rater reliability (intraclass correlations), internal consistency (scale reliability, item stability), and preliminary assessments of validity. More specifically, content validity of the PTFORS (i.e., the extent to which a test is representative of the construct it aims to measure) was first established by deriving the items directly from Study 1 and further reinforced through expert therapist review. Construct validity refers to the extent to which a test measures the construct it claims to measure, and it includes both convergent and discriminant validity. Due to the lack of extant measures of parent therapeutic factors, convergent validity could not be investigated in this study. To investigate discriminant validity,

correlations were calculated for the PTFORS items and parent measures that are theoretically distinct from parent involvement in therapy but would reflect other aspects of parents' psychological functioning in relation to their child (i.e., parent-child relationship quality, mindful parenting). To investigate criterion-related validity, correlations were calculated among the PTFORS scores and pre- and post-treatment scores on two emotion regulation outcome measures.

## Method

### *Participants*

Participants included 60 autistic children and their parents who previously participated in a randomized controlled trial of *Secret Agent Society: Operation Regulation* (SAS:OR), a weekly 10-session CBT program for children with autism and/or neurodevelopmental conditions, ages 8-13 years. Families participated in one of two randomized controlled trials of the SAS:OR program: the first randomized controlled trial (Weiss et al., 2018) only included autistic children, and the second trial (currently underway) included children with neurodevelopmental disorders (only autistic children were included in this study). For demographics and characteristics of the 60 parents and children included in this study, see Table 1. The majority of parents were White (75%), married (87%), college-educated (80%), and mothers (87%), with a family income of over $100,000 (50%).

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Insert Table 1 here

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## *Measures*

### Parent Therapeutic Factors.

Parent therapeutic factors were measured using the *Parent Therapeutic Factors Observational Rating Scale* (PTFORS), which was developed using the five-step process described in the Procedure section below. The PTFORS is an 8-item observational measure of parent therapeutic factors, with two subscales: 1) parent therapeutic functions, and 2) parent beliefs and attitudes towards therapy. The therapeutic functions subscale includes 5 items, corresponding with the five therapeutic functions identified in Study 1. Scores reflect the quality of parents' fulfillment of different therapeutic functions on a 5-point Likert-type scale, ranging from -2 ("very poor") to +2 ("excellent"). The beliefs and attitudes subscale includes 3 items, corresponding with the three beliefs and attitudes identified in Study 1, and uses a 3-point Likert-type scale, ranging from 0 ("Parent does not appear to hold this belief/attitude about therapy") to 2 ("Parent appears to highly hold this belief/attitude about therapy"). For each participant, the PTFORS was used to code three video-recordings of therapy sessions (i.e., a beginning, middle, and end of therapy session); further PTFORS coding procedures are described in the Procedure section below and in the Coding Manual (see Appendix B).

### Parent-Child Relationship.

The *Positive Affect Index* (PAI; Bengtson & Schrader, 1982), a 10-item parent-report questionnaire, was used to measure parent-child relationship quality. Respondents rated statements about the level of understanding, trust, fairness, respect, and affection in their parent-child relationship using on a 6-point Likert-type scale (ranging from 1 = "not at all" to 6 = "extremely"), with higher scores reflecting better parent-child relationship quality. There is evidence supporting the construct validity of

the PAI (Bengtson & Allen, 1993; Bengtson & Schrader, 1982), and it has been used in previous studies involving parents of autistic adolescents and adults (Baker et al., 2011; Orsmond et al., 2006).

**Mindful Parenting.**

Two measures, the *Bangor Mindful Parenting Scale* (BMPS; Jones et al., 2014) and the *Interpersonal Mindfulness in Parenting Scale* (IEM-P; Duncan, 2007) were used to measure mindfulness within a parenting role. Due to procedural differences in the two randomized controlled trials from which participants in the current study were derived, one subset of the sample ($n$ = 33) completed the BMPS, and the other subset of participants ($n$ = 27) completed the IEM-P prior to the start of therapy. The BMPS is a self-report questionnaire that was designed for use with parents of autistic children. It is comprised of 15-items whereby respondents rate statements about their mindfulness in parenting on a 4-point scale (0 = "never true" to 3 = "always true"), with items reflecting five domains of mindfulness (i.e., acting with awareness, non-reactivity, non-judgment, observing, describing). Evidence supporting the BMPS' internal consistency, construct validity and inter-rater agreement has been documented in previous research (Jones et al., 2014). The IEM-P is a 10-item self-report questionnaire that uses a 5-point Likert-type scale (1 = "never true" to 5 = "always true") to measure awareness and present-centered attention, non-judgment, and non-reactivity in a parenting context. Previous studies have found the IEM-P to have adequate internal consistency (Coatsworth et al., 2010), and concurrent and discriminant validity (Duncan, 2007).

**Child Treatment Outcomes.**

The *Emotion Regulation Checklist* (ERC; Shields & Cicchetti, 1997) and the *Emotion Regulation and Social Skills Questionnaire* (ERSSQ-P; Beaumont & Sofronoff, 2008) were used to assess child treatment outcomes. The ERC

Lability/Negativity subscale is a 15-item parent-report measure of child dysregulation, assessing the frequency of child reactivity, mood swings, intense feelings, and negative affective expression on a 4-point scale (1 = “rarely/never” to 4 = “almost always”). This scale has been used in several studies involving autistic children (Berkovits et al., 2017; Scarpa & Reyes, 2011; Weiss et al., 2018). The ERSSQ-P is another parent-report measure of child emotion regulation, which has high internal consistency and concurrent validity (Butterworth et al., 2014; Einfeld et al., 2018), and was developed for parents of autistic youth. Parents rated their child’s use of emotion regulation processes and social skills using a 5-point scale (0 = “never” to 4 = “always”).

### *Procedure*

This research was approved by the institutional Research Ethics Board. Parents provided written consent for video-recorded therapy sessions to be used for research purposes. The final sample included 60 parent-child dyads with viable video-recordings of sessions near the beginning, middle, and end of therapy. The current study focused on pre- and post-treatment assessments, which were completed just prior to the start of intervention and just after completing the intervention, regardless of treatment allocation or degree of change from pre- to post-treatment time points.

#### **Measure Development.**

Development of the PTFORS followed the five-step process used to develop the *Therapy Process Observational Coding System* (TPOCS-A), another therapeutic process observational measure (McLeod & Weisz, 2005). The steps included: scale focus, subscale and item development, scoring strategy, pilot coding, and research applications. In scale focus, findings from Study 1’s qualitative analysis were used to identify the dimensions of interest for the measure (i.e., five parent therapeutic functions, and three parent beliefs and attitudes toward therapy). Deriving the PTFORS

items directly from the constructs identified in Study 1 also contributed to the measure's content validity. During subscale and item development, observational measures (e.g., *Child Involvement Rating Scale* (CIRS; Chu & Kendall, 2004); *Parent-Child Interaction Rating System* (Fenning et al., 2007); *System for Observing Family Therapy Alliances – observational* (Friedlander et al., 2006); TPOCS-A (McLeod & Weisz, 2005)) were consulted while writing the PTFORS items. To increase inter-rater reliability, instead of creating subscales for each construct, it was decided to create one item for each of the five parent therapeutic functions and the three parent beliefs and attitudes toward therapy, for a total of 8 items. Like the SOFTA-o, behavioural indicators were included as examples of possible observed behaviours for each item.

After finalizing the items, step three involved creating a scoring strategy. As used in the PCIRS, a 5-point Likert-type scale was chosen for the parent therapeutic functions items; and similar to the SOFTA-o, the rating scale was set to a mid-point of 0 (i.e., with possible scores ranging from -2 to +2), with positive and negative scores reflecting the valence of observed behaviours. The 3 parent beliefs and attitudes items were assigned a 3-point Likert-type scale, ranging from 0 to 2, to increase inter-rater reliability. Following the coding procedure for the SOFTA-o and TPOCS-A, coders assigned global dimension ratings based on entire therapy sessions. Similar to the CIRS, these global dimension ratings reflected concrete behaviour as much as possible, rather than reflecting inferences about participants' interest or motivation. Behavioural indicators were captured using checkboxes (indicating the presence or absence of each behaviour), and although these behavioural indicators were not used for statistical purposes, they helped inform coders' ratings.

For pilot coding, feedback on item content and wording was elicited from SAS:OR therapists and J.W. Two coders used the PTFORS to live-code three therapy

session videos together and compared behavioural indicator and global dimension ratings after each video. Coders discussed rating discrepancies and possible changes to item wording. Next, the coders independently coded three videos and compared their ratings. Intraclass correlations (ICC) were calculated for dimension ratings and items with low reliability (i.e., ICC < .40; Cicchetti & Sparrow, 1981) were refined. In the fifth step, research applications, coders continued independent coding and met to discuss three videos at a time until their dimension ratings differed by no more than a single scale point at least 90% of the time. No items were eliminated from the measures, as all items had adequate reliability (ICC > .40). The final PTFORS items are available in Appendix A.

**PTFORS Coding Procedures.**

For each participant, three videos were randomly selected: one from the beginning (i.e., session 2 or 3), middle (i.e., session 4, 5, or 6), and end of therapy (i.e., session 7, 8, or 9). The first and last sessions were excluded so that ratings were not reflective of rapport building with the therapist or end-of-program celebrations. One coder was assigned all three sessions for each participant, and they coded videos in chronological order. Coders had the option to view videos at 1.25x to 1.75x speed, as long as the viewing speed did not interfere with their understanding of session dialogue. Global dimension ratings were assigned after watching an entire session, which ranged in length from 35 to 113 minutes ($M$ = 68.44, $SD$ = 13.53). Ratings were intended to reflect the *valence* (positive or negative), *frequency*, and *quality* of a parent's contribution to the therapeutic process. Coders were encouraged to make short notes while viewing videos and were instructed not to consult other information about the family (e.g., participant characteristics, treatment allocation, treatment outcome) so as not to influence their ratings. To calculate inter-rater reliability, 30% of cases were

double-coded; coders met regularly to discuss discrepant codes, and consensus codes were used in the following analyses. Further details are described in the PTFORS Coding Manual (Appendix B).

## Results

### *Scale Descriptives*

As shown in Table 2, there was variability in PTFORS scores across the three time-points. Scores on the Parent Beliefs and Attitudes items spanned the entire possible range of scores (0 to 2), while most of the Parent Therapeutic Functions items had scores ranging from -1 to +2, suggesting it was rare for participants to receive a score of -2 (i.e., "very poor" fulfillment of a therapeutic function). All variables approximated normal distributions except for "Complementary Helper" at early treatment, which had a platykurtic distribution (i.e., very few participants had scores on the extreme ends of the possible range; skewness = -.08 (*SE* = .31), kurtosis = -1.05 (*SE* = .61)).

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Insert Table 2 here

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Pearson and Spearman correlations were calculated to investigate the associations among PTFORS items at each of the three time-points. As shown in Table 3, all the Therapeutic Functions items (other than the "Logistical Coordinator" item) were significantly associated with one another across all time-points (*r*s = .46 - .72, *p*s < .01). On the other hand, the "Logistical Coordinator" and "Therapy Criticalness" items had the weakest associations with the other PTFORS items. "Logistical Coordinator" was only significantly correlated with "Co-facilitator" ($r$ = .40, $p$ < .01) and "Therapy Commitment" scores at mid-treatment ($r_s$ = .27, $p$ = .03), and significantly correlated with "Therapy Commitment" at late treatment ($r_s$ = .47, $p$ < .01). Meanwhile, "Therapy

Criticalness" was not associated with any other PTFORS item at any time point. Of note, "Therapy Flexibility" was only significantly correlated with other PTFORS items at mid- and late treatment; it was not associated with any other PTFORS items at early treatment.

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Insert Table 3 here

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***Reliability***

**Interrater Reliability**.

Intraclass correlations were calculated across both coders for each of the PTFORS items and based on the two-way random effects consistency ICC model, interrater agreement ranged from fair to excellent (Cicchetti & Sparrow, 1981; see Table 4). In the case of discrepancies between coders' ratings, a consensus rating was assigned and used in subsequent analyses.

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Insert Table 4 here

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**Internal Consistency.**

Using George & Mallery's (2003) criteria, the internal consistency of the five items in the Parent Therapeutic Functions subscale was in the 'acceptable' and 'good' ranges across early- ($\alpha$ = .76), mid- ($\alpha$ = .80), and late-treatment ($\alpha$ = .80). Internal consistency increased to the 'good' range across all time-points when the "Logistical Coordinator" item was deleted ($\alpha$ = .86, .85, and .86, respectively; see Table 5 for early treatment scores as an example), suggesting that the remaining four items were tapping into the same underlying constructs. The resulting scale mean and variance after

deleting this item are listed in Table 5. Item stability over the three time-points varied from poor to good (see Table 4), with "Logistical Coordinator" and "Co-facilitator" having the lowest stability over time (*ICCs* = .39 and .56, respectively), while the remaining three Parent Therapeutic Functions items demonstrated good stability over time (*ICC*s from .61 to .64).

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Insert Table 5 here

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For the three items in the Parent Beliefs and Attitudes subscale, internal consistency was 'unacceptable' across early- ($\alpha$ = .36), mid- ($\alpha$ = .35), and late-treatment ($\alpha$ = .47; see Table 5 for early treatment scores). Omitting the "Therapy Criticalness" item somewhat increased the internal consistency of the subscale for the mid- and late-treatment time points, but only to the 'poor' ($\alpha$ = .58) and 'questionable' ranges ($\alpha$ = .67), respectively. Of note, the Cronbach's alpha values for the Parent Beliefs and Attitudes subscale should be interpreted with caution due to the use of a 3-point scale for these items and the small number of items ($n$ = 3). With regards to item stability (see Table 4), the "Therapy Commitment" and "Therapy Flexibility" items had fair stability over the course of therapy (ICC = .58 and .42, respectively), while the "Therapy Criticalness" item had poor stability (ICC = .17).

Given that parent involvement in therapy is likely to vary from week-to-week, and any one week may not be a good indication of their involvement in therapy overall, subsequent analyses used a mean score across early-, mid-, and late-treatment for each of the 8 PTFORS items to give a more representative view of parent involvement (see Table 2). Overall mean scores for the therapeutic functions scale were in the 'acceptable' to 'good' ranges, with the co-facilitator item having the highest ($M$ = .96)

and the cheerleader and coach item having the lowest (*M* = .43) mean scores, respectively, with a possible range of -2 to +2. For the parent beliefs and attitudes scale, overall mean scores indicated that parents appeared to 'somewhat' hold each of the beliefs/attitudes toward therapy; the highest mean score was for the therapy commitment item (*M* = 1.30), while the therapy criticalness (*M* = .74) and therapy flexibility (*M* = .71) items had slightly lower mean scores, with a possible range of 0 to 2.

### *Validity*

#### Content Validity.

Supporting the preliminary content validity was the fact that the items were directly derived from the results of a qualitative study (Study 1) that involved interviews with parents and therapists who participated in a parent-involved CBT program for autistic children. The qualitative study also employed member checking to ensure the resulting constructs resonated with and captured participants' experiences. In addition, the PTFORS items were developed by the first author who had experience as a therapist, clinical supervisor, and researcher within the CBT program. The wording of items were reviewed and refined by other therapists, as well as the Primary Investigator of the larger research study.

#### Construct Validity.

The PTFORS items were not significantly correlated with the PAI, BMPS or IEM-P except for negative correlations between non-judgment (a subscale of mindful parenting in the IEM-P) and two PTFORS items (i.e., "Logistical Coordinator," and "Therapy Commitment"; see Table 6). The overall lack of significant correlations suggest that the PTFORS items are not measuring mindful parenting or parent-child

relationship quality, which are constructs that are distinct from parent involvement in therapy.

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Insert Table 6 here

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**Criterion-Related Validity.**

As shown in Table 6, pre-treatment child emotion dysregulation (i.e., ERC lability/negativity) was negatively correlated with the five parent therapeutic functions (*r* ranging from -.24 to -.35) and "Therapy Commitment" (*r* = -.30, *p* = .02), meanwhile at post-treatment, dysregulation was only marginally associated with the therapeutic function of "Companion and Teammate" (*r* = -.25, *p* = .07). Similarly, the ERSSQ was associated with three therapeutic functions (*r*s ranging from .24 to .31) and with "Therapy Commitment" (*r* = .26, *p* = .04) in the expected direction at pre-treatment, and not associated with any PTFORS items at post-treatment. Closer examination of scatterplots revealed that these associations were driven by a small number of participants (*n* = 3) with low PTFORS scores, very high emotional lability and very low emotion regulation skills. Given the relatively few participants in this sample with "poor" parent therapeutic functions scores, these correlations should be taken with caution.

**Discussion**

This is the first study to develop and psychometrically evaluate an observational measure of parent therapeutic factors in mental health treatment for autistic children. The PTFORS goes beyond existing measures of parent involvement by quantifying the therapeutic functions parents fulfill in the therapeutic process, as well as the beliefs and attitudes parents have towards therapy, rather than focusing only on the extent of parent

participation or merely capturing session attendance and homework completion. On average, parents in this study demonstrated therapeutic functions in the 'good' range and 'somewhat' demonstrated therapy commitment, criticalness, and flexibility. The mean therapeutic functions scores from this study are comparable to the high average level of parent involvement (4.1, with a possible range of 1-5) reported in a study of an individualized intervention and therapist training protocol designed to reduce challenging behaviours in autistic school-age children (Brookman-Frazee et al., 2012).

While there was some support for measuring parent therapeutic factors reliably, and with content, discriminant, and criterion-related validity, there were limitations to the PTFORS' psychometric results that necessitate further research. For example, there was poor internal consistency for the parent beliefs and attitudes items, and it is possible that the few number of items and restricted range of scores (i.e., use of a 3-point scale, rather than a 5-point scale), in addition to the challenge of applying an observational measure to assess inner experiences like beliefs and attitudes, may have affected the consistency and stability. It was not possible to conduct a factor analysis to confirm the factor structure of this subscale due to its few number of items and use of ordinal data.

There is also inconsistent evidence supporting the PTFORS' construct and criterion-related validity. Correlations with measures of other parenting constructs (namely parent-child relationship quality and mindful parenting) supported the discriminant validity of the PTFORS, but due to a lack of directly comparable measures, this study was unable to examine convergent validity. Investigation of criterion-related validity yielded mixed results, with PTFORS scores being related to lower levels of child emotion dysregulation and higher levels of emotion regulation and social skills at pre-treatment, and no significant associations at post-treatment. Parents of children who began therapy with greater skills (i.e., higher levels of emotion regulation skills and

lower levels of emotion dysregulation) tended to have higher parent therapeutic factors scores, possibly because it was easier for these parents to meet their child's needs for support in therapy sessions. Said another way, children who began therapy with higher levels of emotion dysregulation may have higher demands for parental support during sessions, and while parents may be meeting some of these needs, others may be missed. Prior research has shown that higher levels of child externalizing problems (e.g., aggression, hyperactivity) is associated with lower levels of parents being able to support children's emotional regulation in dysregulating observation tasks (Ting & Weiss, 2017), as parents are required to manage challenging behaviours on top of supporting the child with processing distressing emotions. Turning to the lack of significant associations with post-treatment child emotion regulation, many other factors may also contribute to improvements in child emotion regulation over the course of treatment (e.g., learning coping strategies, skill practice and generalization, child-therapist therapeutic relationship), not just parent therapeutic functions as observed during sessions. Given that few participants in this sample had negative PTFORS scores, further research is needed to determine if this pattern of associations with treatment outcome measures will hold in samples with greater variability in parent therapeutic factors.

The use of an observational measure rather than a self-report questionnaire had both advantages and disadvantages. While this observation allows for a more objective understanding of parent involvement without the risk of measurement demand characteristics (i.e., respondents feeling pressured to respond positively) and shared method variance (i.e., in correlations with other related measures and with treatment outcome measures; Podsakoff et al., 2012; Stone et al., 2000), it may also hamper access to inner experiences (e.g., beliefs and attitudes), as ratings were based on

inferences of behaviour. Observational ratings are also limited to what is captured by therapy session videos. For example, many of the aspects of the "Logistical Coordinator" therapeutic function occurred before the start of the session (e.g., arriving to session on time, communicating with the therapist to schedule weekly sessions), and were not consistently captured in video recordings. Previous research on therapeutic relationship factors has also indicated the importance of capturing the subjective experiences of multiple informants (Shirk & Karver, 2003), with some evidence suggesting that subjective ratings of the therapeutic alliance are stronger predictors of treatment outcome than observer ratings of alliance (Horvath & Bedi, 2011). Future studies on parent involvement in therapy would benefit from the inclusion of more observational and questionnaire measures to gain the unique advantages of both objective and subjective measurement.

**Limitations**

Findings from this study are limited by several considerations. Parents who participate in a randomized controlled trial may not be representative of other parents of autistic children; they may be more engaged and involved in the therapeutic process than parents seeking therapy outside of a research setting. Also, the definitions of parent therapeutic factors in a highly structured CBT program may differ from that in other treatment modalities (e.g., psychodynamic therapy), or therapy provided in a context other than individual parent-child dyads (e.g., family therapy, separate child and parent therapy sessions). It is difficult to determine whether these findings will generalize to other types of therapy, or therapy provided in other contexts. There may also be cultural factors to consider that could not be investigated due to the lack of socioeconomic and cultural diversity in the current sample. In addition, this study lacked adequate measures

or statistical power to investigate the concurrent validity and factor structure of the PTFORS.

**Conclusions**

The PTFORS is a reliable measure of parent therapeutic factors in parent-involved therapy, with preliminary evidence supporting validity. Further research is needed to investigate the use of the PTFORS in parent-involved mental health treatment using treatment modalities other than CBT, and in samples with greater variability, which may be more representative of treatment-seeking families in community-based mental health clinics rather than those seeking therapy in a research setting. Developing parent- and therapist-report questionnaire versions of the PTFORS would allow for an examination of convergent validity, assessment of subjective experiences and multiple points of view, and further our understanding of associations among parent therapeutic factors and child treatment outcomes.

Table 1

*Participant Demographics and Characteristics*

| | *M(SD)* or *%* (*n* = 60) |
|---|---|
| Age | |
| *Child* | 9.58 (1.44) |
| *Parent* | 43.48 (4.84) |
| Gender | |
| *Child (female)* | 13% (8) |
| *Parent (mothers)* | 87% (52) |
| Ethnicity | |
| *White* | 75% (45) |
| *Chinese* | 3% (2) |
| *Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.)* | 3% (2) |
| *Other ethnic group* | 10% (6) |
| *Prefer not to disclose / did not specify* | 8% (5) |
| Marital status (married) | 87% (52) |
| Graduated from college | 80% (48) |
| Family income (CAD before taxes) | |
| *< $49,999* | 5% (3) |
| *$50,000 - $99,999* | 22% (13) |
| *$100,000 - $149,999* | 13% (8) |
| *$150,000 or more* | 37% (22) |
| *Prefer not to disclose / did not specify* | 23% (14) |

*Note:* Data collected at time of participation in *SAS:OR* program.

Table 2

*PTFORS Scale Descriptives*

| | Early Treatment | | Mid-Treatment | | Late Treatment | | Overall Average | |
|---|---|---|---|---|---|---|---|---|
| | *M (SD)* | *Range* | *M (SD)* | *Range* | *M (SD)* | *Range* | *M (SD)* | *Range* |
| Parent therapeutic functions | | | | | | | | |
| *Log. coord.* | .70 (.79) | -1 to +2 | .72 (.76) | -1 to +2 | .67 (.65) | -1 to +2 | .69 (.57) | -1.00 to +2.00 |
| *Co-facilitator* | .88 (.82) | -1 to +2 | 1.12 (.85) | -1 to +2 | .88 (.88) | -1 to +2 | .96 (.72) | -.67 to +2.00 |
| *Cheer. & coach* | .45 (.85) | -2 to +2 | .35 (.84) | -1 to +2 | .50 (.93) | -1 to +2 | .43 (.75) | -1.33 to +2.00 |
| *Comp. & team.* | .70 (.87) | -1 to +2 | .55 (.89) | -2 to +2 | .58 (.91) | -2 to +2 | .61 (.77) | -1.33 to +2.00 |
| *Compl. help* | .83 (.90) | -1 to +2 | .85 (.90) | -1 to +2 | .80 (1.02) | -2 to +2 | .83 (.82) | -1.00 to +2.00 |
| Parent beliefs and attitudes | | | | | | | | |
| *Tx commit.* | 1.22 (.58) | 0 to 2 | 1.35 (.66) | 0 to 2 | 1.33 (.63) | 0 to 2 | 1.30 (.53) | 0 to 2 |
| *Tx criticalness* | .93 (.61) | 0 to 2 | .68 (.70) | 0 to 2 | .62 (.64) | 0 to 2 | .74 (.44) | 0 to 2 |
| *Tx flexibility* | .68 (.65) | 0 to 2 | .85 (.63) | 0 to 2 | .60 (.64) | 0 to 2 | .71 (.50) | 0 to 2 |

*Note.* PTFORS = Parent Therapeutic Factors Observational Rating Scale.

Table 3

*PTFORS Inter-Item Correlations*

| | Therapeutic Functions | | | | Beliefs and Attitudes | | |
|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Early Tx therapeutic func. | | | | | | | |
| *1. Logistical coordinator* | .15 | .08 | -.01 | <.01 | .22$^{+}$ | -.10 | -.05 |
| *2. Co-facilitator* | | .63** | .61** | .68** | .64** | -.01 | -.01 |
| *3. Cheerleader & coach* | | | .57** | .54** | .51** | <.01 | <.01 |
| *4. Companion & teammate* | | | | .58** | .54** | -.02 | .19 |
| *5. Complementary helper* | | | | | .57** | -.21 | .21 |
| Early Tx beliefs & attitudes[a] | | | | | | | |
| *6. Therapy commitment* | | | | | | .09 | .25$^{+}$ |
| *7. Therapy criticalness* | | | | | | | .20 |
| *8. Therapy flexibility* | | | | | | | |
| Mid-Tx therapeutic func. | | | | | | | |
| *1. Logistical coordinator* | .40** | .10 | .11 | .18 | .27* | .10 | .16 |
| *2. Co-facilitator* | | .56** | .59** | .63** | .66** | -.06 | .60** |
| *3. Cheerleader & coach* | | | .67** | .54** | .72** | -.13 | .40** |
| *4. Companion & teammate* | | | | .53** | .62** | .02 | .52** |
| *5. Complementary helper* | | | | | .48** | .02 | .42** |
| Mid-Tx beliefs & attitudes[a] | | | | | | | |
| *6. Therapy commitment* | | | | | | .05 | .40** |
| *7. Therapy criticalness* | | | | | | | <.01 |
| *8. Therapy flexibility* | | | | | | | |
| Late Tx therapeutic func. | | | | | | | |
| *1. Logistical coordinator* | .25$^{+}$ | .14 | .05 | .13 | .47** | -.03 | .20 |
| *2. Co-facilitator* | | .63** | .64** | .72** | .66** | -.07 | .40** |
| *3. Cheerleader & coach* | | | .67** | .54** | .56** | .02 | .39** |
| *4. Companion & teammate* | | | | .46** | .46** | .03 | .25$^{+}$ |
| *5. Complementary helper* | | | | | .49** | -.10 | .34** |
| Late Tx beliefs & attitudes[a] | | | | | | | |
| *6. Therapy commitment* | | | | | | .04 | .52** |
| *7. Therapy criticalness* | | | | | | | .12 |
| *8. Therapy flexibility* | | | | | | | |

*Note.* [a]Spearman rank-order correlations were calculated for correlations with Parent Beliefs and Attitudes due to ordinal data. All other correlations reported are Pearson correlations.

$^{+}p < .10$, $*p < .05$, $**p < .01$

Table 4

*PTFORS Interrater Reliability and Item Stability*

| | Interrater Reliability | | | Item Stability | |
|---|---|---|---|---|---|
| | ICC | Descriptor | Range | ICC | Descriptor |
| Parent therapeutic functions | | | | | |
| *Logistical coordinator* | .71 | Good | -1 to +2 | .39 | Poor |
| *Co-facilitator* | .77 | Excellent | -1 to +2 | .56 | Fair |
| *Cheerleader & coach* | .71 | Good | -1 to +2 | .61 | Good |
| *Companion & teammate* | .69 | Good | -1 to +2 | .64 | Good |
| *Complementary helper* | .70 | Good | -1 to +2 | .62 | Good |
| Parent beliefs and attitudes | | | | | |
| *Therapy commitment* | .73 | Good | 0 to 2 | .58 | Fair |
| *Therapy criticalness* | .64 | Good | 0 to 2 | .17 | Poor |
| *Therapy flexibility* | .58 | Fair | 0 to 2 | .42 | Fair |

*Note.* PTFORS = Parent Therapeutic Factors Observational Rating Scale. Two-way random effects consistency ICC model is reported.

Table 5

*PTFORS Internal Consistency – Early Treatment*

| | Cronbach's α | Cronbach's α if Item Deleted | Scale Mean if Item Deleted | Scale Variance if Item Deleted |
|---|---|---|---|---|
| Parent therapeutic functions | .76 | | | |
| *Logistical coordinator* | | .86 | 2.87 | 8.36 |
| *Co-facilitator* | | .64 | 2.68 | 5.61 |
| *Cheerleader & coach* | | .68 | 3.12 | 5.87 |
| *Companion & teammate* | | .69 | 2.87 | 5.88 |
| *Complementary helper* | | .68 | 2.73 | 5.69 |
| Parent beliefs and attitudes | .36 | | | |
| *Therapy commitment* | | .27 | 1.62 | .92 |
| *Therapy criticalness* | | .37 | 1.90 | .94 |
| *Therapy flexibility* | | .16 | 2.15 | .77 |

Table 6

*Correlations of the PTFORS, the Positive Affect Index (PAI), Bangor Mindful Parenting Scale (BMPS), Interpersonal Mindfulness in Parenting Scale (IEM-P), and Pre- and Post-Treatment Child Emotion Regulation*

| | PAI Total Score (*n* = 33) | BMPS Total Score (*n* = 33) | IEM-P Awareness (*n* = 27) | IEM-P Non-Judgment (*n* = 27) | IEM-P Non-Reactivity (*n* = 27) | Pre-Treatment | | Post-Treatment | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | ERC Lability/ Negativity | ERSSQ Total Score | ERC Lability/ Negativity | ERSSQ Total Score |
| Parent therapeutic functions | | | | | | | | | |
| *Mean log. coord.* | *ns* | *ns* | *ns* | -.37$^{+}$ | *ns* | -.26* | .31* | *ns* | *ns* |
| *Mean co-facilitator* | *ns* | *ns* | *ns* | *ns* | *ns* | -.35** | .30* | *ns* | *ns* |
| *Mean cheer. & coach* | *ns* | *ns* | *ns* | *ns* | *ns* | -.24$^{+}$ | *ns* | *ns* | *ns* |
| *Mean comp. & team.* | *ns* | *ns* | *ns* | *ns* | *ns* | -.25$^{+}$ | *ns* | -.25$^{+}$ | *ns* |
| *Mean complem. helper* | *ns* | *ns* | *ns* | *ns* | *ns* | -.35** | .24$^{+}$ | *ns* | *ns* |
| Parent beliefs and attitudes | | | | | | | | | |
| *Mean Tx commitment* | *ns* | *ns* | *ns* | -.41* | *ns* | -.30* | .26* | *ns* | *ns* |
| *Mean Tx criticalness* | *ns* | *ns* | *ns* | *ns* | *ns* | *ns* | *ns* | *ns* | *ns* |
| *Mean Tx flexibility* | *ns* | *ns* | *ns* | *ns* | *ns* | *ns* | *ns* | *ns* | *ns* |

*Note.* ERC = Emotion Regulation Checklist. ERSSQ = Emotion Regulation Social Skills Questionnaire.
$^{+}p < .10$, $*p < .05$, $**p < .01$, *ns* denotes non-significant correlation

# Appendix A

*Parent Therapeutic Factors Observational Rating Scale (PTFORS)*

Participant ID: SAS-OR_____

[ ] Early [ ] Mid [ ] Late Treatment Session #: ____ Session duration: ____h : ____ m :____ s

**Parent Therapeutic Factors Observational Rating Scale (PTFORS)**

**Parent Therapeutic Functions**

1) Logistical Coordinator: "Let me handle the logistics"
*Planning and organizing the logistics involved with attending therapy sessions*

| | |
|---|---|
| | Arranging **transportation** (parking, public transit), **arriving to session on time** |
| | **Bringing therapy materials** (e.g., handbooks, worksheets, cards) to and from home |
| | **Communicating with school staff** (e.g., if therapy sessions overlapped with the school day, completion of home-school diary) |
| | Bringing snacks, fidget toys, or other **materials** the child needed to make sessions go smoothly |
| | Communicating with the therapist to **schedule weekly sessions** |
| | *Family arrived late, parent forgot to bring therapy materials* |

_____ = Global dimension rating (-2 to +2; see below for scale descriptors)

2) Co-facilitator: "Here is what we need to do"
Assisting the therapist with the execution of CBT tasks/activities

| | |
|---|---|
| | Providing therapist with **feedback on the past week's home practice** – could include talking about how the parent:<br>□ orchestrated situations to enable child to practice emotion regulation skills<br>□ integrated skill practice into weekly routine<br>□ reminded child to complete home practice<br>□ created at-home reinforcement system<br>□ involved other family members in home practice |
| | **Informing therapist of any challenges** that arose since the last session |
| | Providing therapist with **relevant clinical information** about the child's **history, strengths, and/or interests** |
| | Helping therapist **facilitate session activities** (e.g., re-explaining role play or game-based activity instructions) |
| | **Reminding child of examples** or specific situations from their experiences at school or at home to discuss with therapist |
| | **Explaining therapy concepts in a way the child understands**, making therapy content more **relatable** to the child |
| | **Using skills** learned in therapy to support child during times of emotion dysregulation (e.g., help child identify their emotions, use coping strategies) |
| | **Planning home practice** |
| | Talking to therapist about **communication with school staff** to help child practice skills in the school setting |
| | *Engaging child in off-task activities or discussions, being overly focused on details that took away from the overall goal of the session (e.g., making sure the child sat in the chair properly or spelled words correctly)* |

_____ = Global dimension rating (-2 to +2)

Parent demonstrates ____ fulfillment of this therapeutic function
-2 = **very poor** (negative behavioural indicators observed, no positive indicators observed)
-1 = **poor** (few positive behavioural indicators observed, many missed opportunities to support child, negative behavioural indicators observed)
0 = **acceptable** (some positive and negative behavioural indicators observed; unremarkable/neutral)
+1 = **good** (a couple of missed opportunities to support child)
+2 = **excellent** (no missed opportunities to support child)
N/A = **not applicable** – this domain was not applicable to this session (if N/A, please explain why)

3) Cheerleader and Coach: "You can do it and I can help you succeed"
Encouraging the child in their process of targeted change, with the goal of increasing child's autonomy

| | |
|---|---|
| | **Praising and encouraging** child for doing their best to learn new concepts or skills |
| | **Celebrating and delighting in child's successes** or completing difficult activities |
| | **Encouraging child to continue** when child motivation begins to wane, or to **persevere** with practicing new coping skills |
| | **'Stepping back,'** allowing child the space to use coping skills and/or participate in session discussions more independently |
| | *Frequently interrupting child or stepping in without letting child speak first; critiquing or dismissing child's efforts* |

_____ = Global dimension rating (-2 to +2)

4) Companion and Teammate: "I am here for you, we are in this together"
Acting as the child's ally, building "togetherness" with the child

| | |
|---|---|
| | Helping child to see therapy as a **safe space** (e.g., encouragement, reassurance of parent's presence, providing physical comfort) |
| | **Participating in therapy activities** with child (e.g., role play, game-based psychoeducational activities) |
| | **Keeping the child comfortable** during session (e.g., sitting on the ground with the child, making jokes with the child) |
| | **Normalizing the use of strategies**; describing ways the parent has found coping skills helpful for their own emotion regulation, integrated therapy concepts and/or vocabulary into family's conversations |
| | *Use of phone, left the room, otherwise distracted or disengaged for parts of the session* |

_____ = Global dimension rating (-2 to +2)

5) Complementary Helper: "I can fill in the gaps where you need me to"
Partnering with the child and therapist to bridge the gap between the child's capacity and what is expected of them within the therapeutic context

| | |
|---|---|
| | Helping the child **build a relationship with the therapist** (e.g., "Oh, tell [therapist] about what we did this weekend") |
| | Helping the **therapist better understand the child** (e.g., offering therapist information about child's interests and/or needs; modeling how best to relate to child) |
| | **Managing** the child's **behavioural or attention problems** (e.g., repeating or rewording a question asked by the therapist, reminding the child to stay focused, redirecting the child's attention back to the goal of the session) |
| | **Scribing** for a child with fine motor issues; **reading** for a child with reading difficulties |
| | Linking therapy content to child's experiences to make abstract concepts more **concrete and understandable, helping child understand** the relevance of a concept or skill |
| | *Distracted or disengaged for parts of the session and missing opportunities to support child* |

_____ = Global dimension rating (-2 to +2)

Parent demonstrates ____ fulfillment of this therapeutic function
-2 = **very poor** (negative behavioural indicators observed, no positive indicators observed)
-1 = **poor** (few positive behavioural indicators observed, many missed opportunities to support child, negative behavioural indicators observed)
0 = **acceptable** (some positive and negative behavioural indicators observed; unremarkable/neutral)
+1 = **good** (a couple of missed opportunities to support child)
+2 = **excellent** (no missed opportunities to support child)
N/A = **not applicable** – this domain was not applicable to this session (if N/A, please explain why)

**Parent Beliefs / Attitudes**

1) Therapy Commitment: "Therapy is worthwhile," positivity, persistence

| | |
|---|---|
| | Prioritizing therapy in their **family schedule** (e.g., arriving to session on time) |
| | Demonstrating **positive affect** during session |
| | **Looking for the positives or strengths**, even when things are hard in session |
| | Taking an **active role** in completing therapy tasks (e.g., in-session activities, talking about their active role in practicing coping strategies with child at home) |
| | Willingness to try new strategies, **"buy-in"** to the effectiveness of therapy |
| | **Reframing** potential barriers to therapy to view them more positively (e.g., talking about the long drive to session as time to bond with child) |

_____ = Global dimension rating (0 to 2; see below for scale descriptors)

2) Therapy Criticalness: "Therapy is an added stressor"
The term 'criticalness' is sometimes used in a negative tone, but here it is used neutrally to capture a posture of thinking critically about: a) the demands that participating in therapy place on a family, and b) evaluating the family's resources and ability to take on those demands

| | |
|---|---|
| | Voicing concerns about the **feasibility of home practice** (e.g., due to logistical barriers, environmental factors), and/or **engaging in problem solving** with therapist |
| | Voicing concerns and/or engaging in problem solving with therapist re: **involving school staff or other adults** in supporting child with practicing coping skills |

_____ = Global dimension rating (0 to 2)

3) Therapy Flexibility: Flexibility, openness, letting things go

| | |
|---|---|
| | Voicing **openness to try new ways** of coping and/or helping child regulate emotions |
| | **Willingness to let things go or to move on** when situations did not go as planned (either during session or in retelling a situation that occurred outside of session) |
| | Talking about how parent **adjusted the way they implemented** coping strategies (e.g., depending on the situation, the child's changing interests) |
| | Demonstrating **openness to their own experiences** (e.g., trying new strategies, managing child emotions differently), not expecting every strategy to work flawlessly |
| | Demonstrating **openness and curiosity towards child's experiences** and perspectives of situations, giving child space to share and explore |

_____ = Global dimension rating (0 to 2)

0 = Parent **does not** appear to hold this belief/attitude about therapy
1 = Parent appears to **somewhat** hold this belief/attitude about therapy
2 = Parent appears to **highly** hold this belief/attitude about therapy
N/A = **Not applicable** – this domain was not applicable to this session (if N/A, please explain why)

# Appendix B

*PTFORS Coding Manual*

**Parent Therapeutic Factors Observational Rating Scale (PTFORS) Coding Manual**

**Background: Conceptual Framework**

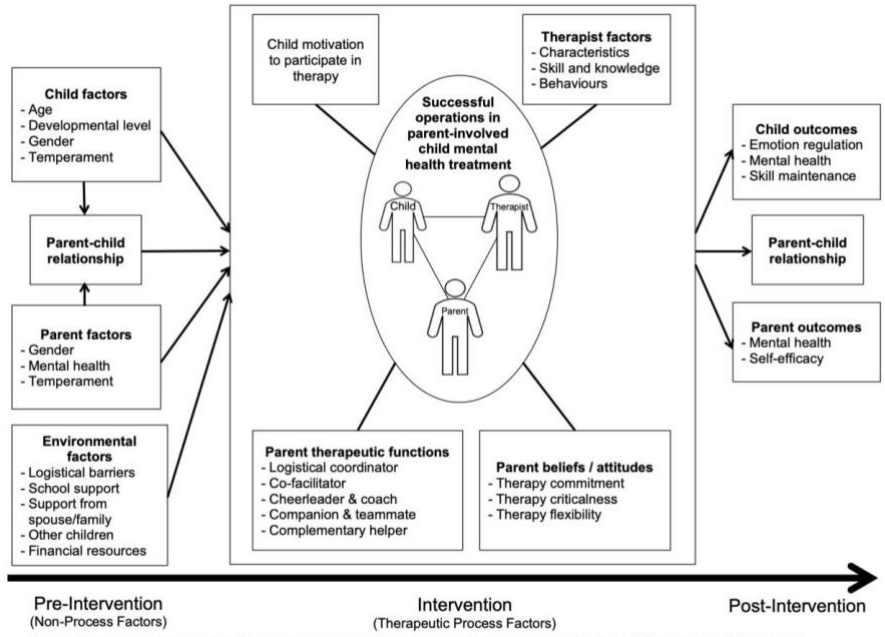


*Figure 1*. Conceptual framework of therapeutic process and non-process factors in parent-involved child mental health treatment

**Pilot Coding**

- Secondary coder to give feedback on item content and wording.
- 2 coders to live-code 3 session videos *together*, comparing behavioural indicator and global dimension ratings after each video. Discuss if wording of items needs to be changed, discuss any differences in ratings.
- 2 coders to *independently* code 3 of the same session videos, compare behavioural indicator and global dimension ratings. Calculate ICC for dimension ratings and refine items with ICC < .40.

**Reliability Training**

- Continue independent coding, meeting to discuss after coding 3 of the same session videos, until dimension ratings differ by no more than a single scale point at least 90% of the time.

- Primary coder to code all 180 videos (60 cases x 3 session videos per case). Secondary coder to code 30% of cases → 18 cases (x 3 session videos per case = 54 videos) for inter-rater reliability.

**Coding Process**

- Randomly select 3 sessions for each case (one for the beginning (sessions #2 or 3), middle (#4-6), and end of therapy (#7-9)). The first and last sessions are excluded so that ratings are not reflective of rapport building with the therapist or end-of-program celebrations.
    - 1 coder is assigned all 3 sessions for each case, with sessions viewed in order

- Video start time is when family is pictured in the session room, and end time is when the family leaves the room at the end of session.

- Session videos can be viewed at 1.25x to 1.75x speed to make behavioural coding more efficient, so long as the viewing speed does not interfere with speech comprehension.

- All but one behavioural indicator for each parent therapeutic factor are worded positively. Negative behavioural indicators are italicized and right-justified.
    - Use a **checkmark** to indicate the presence of a behavioural indicator.
        - *Optional*: Use two checkmarks to note when a behavioural indicator was of particularly high quality or observed numerous times.
    - Use a **tilde (~)** to indicate that a behavioural indicator was observed, but of somewhat poor quality (make note of relevant context to help inform dimension ratings).
    - Leave the box **blank** if behavioural indicator was not observed.

- While watching the session, feel free to make short notes for each therapeutic factor / beliefs and attitudes, and assign checkmarks for behavioural indicators. Coders should assign global dimension ratings *only after watching an entire session*.

- As much as possible, coders should make their ratings on the basis of *observable* behaviours rather than relying on *inferences* about a parent's motivations. Although any observational rating of an individual's beliefs/attitudes necessitates a certain degree of inference, coders should strive to keep inferences to a minimum.

- Coders should rely on observed behaviour during session videos, without consulting other information about the family (e.g., demographics, treatment allocation, treatment outcome).

- If multiple parents attend the session, designate one parent as the primary parent to focus coding on (e.g., the parent who completes other questionnaire measures)

- Global dimension ratings should reflect the *valence* (positive or negative), *frequency*, and *quality* of a parent's contribution to the therapeutic process. It is important not to rely solely on the frequency of parent behaviours, because interviews with parents and therapists suggested that it is the *quality* not the *quantity* of parental involvement that is most helpful in therapy.

**Scoring**

- Checkboxes for behavioural indicators are **not** used for data analysis, because these items merely reflect *examples* of parent behaviours that fall within each dimension. Only the global dimension ratings should be used for data analysis because these ratings better reflect the *context* and *quality* of a parent's therapeutic contribution, rather than simply the presence or absence of a behaviour.
    - Parent therapeutic factors are not mutually exclusive, and examples of parent behaviours may serve more than one therapeutic function.
- Parent therapeutic factor ratings are <u>not</u> summed, as they reflect different aspects in which parents might contribute to the therapeutic process.
- Things to consider when assigning global dimension ratings:
    - *Logistical Coordinator* – the absence of parent communication with school staff is not necessarily indicative of 'poor' logistical coordination. Keep in mind that sometimes therapy occurs during the summer, and sometimes families choose not to involve school staff in their child's therapy.
    - *Cheerleader and Coach* – "stepping back" and allowing the child to practice skills or participate independently should not be confused with "<u>sitting</u> back" and leaving the child to participate on their own. In the former, the parent is actively engaged in therapy activities but chooses to make room for the child to develop their skills (i.e., the baseline level of participation is high and attenuated to child's participation level), whereas in the latter, the parent is generally not as actively engaged during therapy activities (i.e., the baseline level of participation is low).
    - *Companion and Teammate* – phone use is listed as a negative behavioural indicator for this function as well as *Complementary Helper*, however it is more heavily weighted in this domain. A parent who is using their phone during session may still be able to pay attention to what is happening in session and step in to help the child when needed (i.e., functioning as a *Complementary Helper*, but without the sense of 'togetherness' that underpins the *Companion and Teammate* function).
    - *Parent Beliefs / Attitudes section* – given that this section uses a 3-point scale instead of a 5-point scale like the parent therapeutic functions section, coders have sometimes found it helpful to think of this scale as 0 = "no", 1 = "kind of", and 2 = "yes".
        - *Therapy Criticalness* – this attitude is rated with a 'low threshold', whereby any mention of a parent's concerns about home practice, involving school staff, or other therapy content would be rated as either a 1 or a 2. If a parent does not mention any concerns, *Therapy Criticalness* is rated as 0. Although it is possible for a parent to be thinking critically about therapy without verbalizing any concerns during session time, these items were worded this way in order to operationalize this construct for an observational measure.

## Chapter Four: General Discussion

This dissertation used a mixed-method approach to investigate how parents contribute to the therapeutic process in mental health treatment for autistic children. The two studies of this dissertation sought to answer two overarching questions: what does good parent involvement in therapy involving autistic children look like, and how can it be measured? Both studies drew from a pool of therapists and parents who participated in one of two larger randomized controlled trials examining a cognitive behaviour therapy (CBT) program for autistic children ages 8-13 years. During the CBT program, parents attended 10 weekly sessions with their child, and completed therapy tasks during and outside of session time. The first study used qualitative methods to identify and describe the therapeutic functions of involving parents in their child's CBT, while the second study develop a quantitative measure of parent therapeutic factors and evaluated its psychometric properties.

Study 1 developed a conceptual framework of the therapeutic process factors associated with successful parent involvement in CBT for autistic children. Interviews with therapists and mothers of autistic children revealed five main therapeutic functions: logistical coordinator, co-facilitator, coach and cheerleader, companion and teammate, and complementary helper. The conceptual framework depicted parent involvement as variable depending on non-process factors that are present prior to the start of the intervention, such as child-, parent-, and environmental variables. Involvement may also be influenced by three parent beliefs and attitudes toward therapy: therapy commitment, criticalness, and flexibility. Although a high degree of parent involvement is common practice in mental health treatment involving autistic children, this study is the first to use a grounded theory-informed approach to investigate the factors associated with successful parent involvement.

Study 2 focused on creating and assessing the reliability and validity of a novel observational measure of parent therapeutic factors in parent-involved CBT for autistic children. The Parent Therapeutic Observational Rating Scale (PTFORS) items were developed based on Study 1's findings and form two subscales. The therapeutic functions subscale had adequate interrater reliability, internal consistency, and item stability. The beliefs and attitudes subscale, on the other hand, had adequate interrater reliability but poor internal consistency and item stability. Preliminary evidence supported the content and construct validity of the PTFORS, while the current evidence of its criterion validity was mixed.

These two studies addressed two significant gaps in the literature by identifying and defining relevant parent therapeutic factors, as well as creating an observational rating scale to measure parent involvement in therapy. In the sections below, summaries of each study's findings are provided, followed by an integrated synthesis of the two studies, an overview of this dissertation's implications for research and clinical practice, and a review of limitations and overall conclusions.

**Summary of Findings from Study 1**

In line with common clinical practice, a recent meta-analysis found that CBT interventions with parent involvement had greater reductions in autistic children's anxiety symptomology, relative to CBT interventions without parent involvement (Perihan et al., 2020). However, there is a lack of research investigating the therapeutic functions of their involvement. Study 1's results articulated five parent therapeutic functions that parents may serve during their autistic child's CBT and identified three beliefs and attitudes toward therapy that may affect involvement. This extends upon existing understanding of parent treatment engagement, which has previously focused

on behavioural and attitudinal engagement (e.g., Staudt, 2007), without conceptualizing the therapeutic functions of parent involvement.

This study's conceptual framework addresses a gap in the literature by identifying the relevant therapeutic process factors in psychotherapy with autistic children. Parent participation in CBT is particularly important for treatment accessibility for autistic children, as parents can mitigate some of the demands CBT places on common areas of difficulty for autistic children, such as verbal communication, attention, and awareness of thoughts and feelings (Corbett et al., 2009; Griffin et al., 2016; Shalom et al., 2006). Past conceptual frameworks of parent treatment engagement have focused on therapy involving neurotypical youth, without considering the unique involvement of parents in therapy involving autistic children. For example, the barriers-to-treatment model focuses on treatment dropout or termination as an outcome associated with parents' experience of various obstacles such as practical and logistical barriers, perceptions that treatment is demanding or irrelevant, and poor therapeutic alliance (Kazdin et al., 1997). Other authors have made mention of parents in their theoretical model of common process factors in youth and family therapy (Karver et al., 2005), or focused on motivation in bringing about optimal parent affective, cognitive, and behavioural states of treatment engagement (King et al., 2014). However, none of these frameworks have been developed with the needs of autistic children and their families in mind, nor do they capture the efforts of parents to enhance treatment accessibility through complementary support. This study's conceptual framework also provides a clear and unified approach for future research by framing parent involvement within the well-established bioecological model of development (Bronfenbrenner & Morris, 2007) and by using a linear chronological structure that lends itself well to

quantitative investigation of the pre-treatment predictors and post-treatment outcomes associated with parent therapeutic involvement.

**Summary of Findings from Study 2**

To further investigate the therapeutic factors identified in Study 1, the goal of Study 2 was to create an observational measure of parent therapeutic factors in mental health treatment for autistic children and to evaluate its psychometric properties. Following the five-step process used to develop another therapeutic process observational measure (TPOCS-A; McLeod & Weisz, 2005), the resulting Parent Therapeutic Factors Observational Rating Scale (PTFORS) consisted of two subscales. The therapeutic functions subscale is comprised of 5 items, each rated on a 5-point Likert-type scale reflecting the overall frequency, valence, and quality of a parent's fulfilment of therapeutic functions in a therapy session with their child. The 3-item parent beliefs and attitudes subscale examines the extent to which a parent appears to approach therapy with commitment, criticalness, and flexibility, as rated on a 3-point Likert-type scale.

The choice to employ observational methods over self-report measures was made to avoid issues related to social desirability (Stone et al., 2000) and the potential for common method variance (when the same method of measurement is used for multiple variables of interest; Podsakoff et al., 2012). When questionnaires are used to investigate therapeutic relationships, authors advocate for the use of multiple informants, but discrepancies between informants can make it difficult to interpret findings (Shirk & Karver, 2003). Instead, observational measures provide a level of objectivity that can promote generalizability of study results (Girard & Cohn, 2016) and have been used successfully to investigate common therapeutic factors, such as therapeutic alliance (Friedlander et al., 2006; McLeod & Weisz, 2005), parent

participation engagement (Brookman-Frazee et al., 2012; Haine-Schlagel & Martinez, 2014), and child involvement in therapy (Chu & Kendall, 2004). Similarly, Study 2 found that the PTFORS had adequate inter-rater reliability, and the therapeutic functions subscale had good item stability and internal consistency, suggesting that the PTFORS can be used to reliably measure parent therapeutic functions in parent-involved CBT with autistic children.

Unlike existing measures of parent treatment engagement which largely focus on session attendance, homework completion, or global participation in treatment (Haine-Schlagel & Walsh, 2015), the PTFORS assesses the therapeutic functions that parents fulfil in the therapeutic process, as well as the beliefs and attitudes they have toward therapy which might influence their involvement. Perhaps the most similar observational measure, the *Parent Participation Engagement (PPE) in Child Psychotherapy Observational Coding System* (Haine-Schlagel & Martinez, 2014), focuses on the extensiveness of five specific behaviours (sharing their perspective in general, sharing their perspective about home actions, agreement about home actions, asking the therapist questions, and demonstrating commitment to therapy in the session). By focusing on the amount of parent participation, it fails to distinguish between the quantity and quality of parent involvement, and does not take into account the child's need for support which emerged as important principles in Study 1. In addition, its validity has not been established. Other than the PTFORS, only one other measure was developed for therapy involving autistic children and their parents (Brookman-Frazee et al., 2012), but it is a simple single-item measure that has similar drawbacks as the *PPE in Child Psychotherapy Observational Coding System* (exclusive focus on the quantity of parent participation and lacking evidence supporting its validation). To our knowledge, the PTFORS is the only observational measure that

assesses the quality and therapeutic functions of parent involvement during autistic children's psychotherapy.

At the same time, there are some disadvantages to observational measures. All observational measures rely on a level of observer inference (Girard & Cohn, 2016), and the ability of observers to adequately make judgements about participants' inner experiences, such as cognitions and attitudes, is limited. Accordingly, the PTFORS beliefs and attitudes subscale had poor internal consistency and item stability over time, despite attempts to operationally define behavioural indicators of the beliefs and attitudes of interest. Observational measures are also time-intensive and require extensive training (Girard & Cohn, 2016), which may limit their feasibility in busy clinical settings or in research studies with large samples. In the current study, coders viewed entire therapy sessions and had graduate-level training in clinical psychology as well as experience providing CBT for autistic children and their families. It is unclear whether the reliability or validity of the data would be affected if coders viewed segments of therapy sessions (as is done in the Child Involvement Rating Scale; Chu & Kendall, 2004), or if coders with less clinical knowledge and/or experience were selected.

**Synthesis**

Effective treatment requires the integration of evidence-based therapy techniques and common therapeutic factors (Kazdin et al., 2006; Weinberger, 2014). Past research on mental health treatment for autistic youth has laid the groundwork by establishing evidence-based treatments (Sukhodolsky et al., 2013; van Steensel & Bögels, 2015; Wood et al., 2009) and identifying autism-specific modifications to CBT (Moree & Davis, 2010). However, as we seek to improve mental health care for autistic children and their families, there is a need to better understand the therapeutic process

factors associated with therapeutic change. This dissertation sought to fill this gap in the literature by exploring and defining parent therapeutic factors (i.e., therapeutic functions, beliefs and attitudes towards therapy), as well as creating an observational measure with which to measure these factors. Building on current evidence supporting the importance of parent involvement in therapy with autistic children (Perihan et al., 2020) and previous efforts to measure parent behavioural engagement in treatment (Haine-Schlagel & Martinez, 2014), the current studies uniquely explore the therapeutic functions of parent involvement in therapy sessions. Translating Study 1's parent therapeutic factors into an observational measure with demonstrated reliability adds further trustworthiness to the constructs identified in the qualitative analysis and signals the need for additional measures to establish convergent validity of the PTFORS. On the other hand, translating parent beliefs and attitudes toward therapy into an observational measure led to some issues regarding internal consistency and item stability. As previously discussed, these issues may be partly related to the limitations of this method of measurement in examining inner experiences (Girard & Cohn, 2016). Overall, results emphasize the need for continued inclusion of parents in mental health treatment for autistic children, as their involvement in therapy can serve various functions in supporting their child and enhance treatment accessibility for children with diverse needs.

**Research and Clinical Implications**

Findings from this dissertation have several implications for research, clinical practice, and training of future therapists. Identifying the factors associated with successful operations in parent-involved therapy allows clinicians and researchers to better understand how parents contribute to the therapeutic process, and having a conceptual framework can help unify future research on parent-involved therapy for

autistic children. Clinicians may seek to consider whether families have the capabilities and resources to take on different therapeutic functions during therapy, equipped with greater awareness of the implicit demands that involvement in therapy places on parents. Mental health practitioners may also seek to consider the 'parent therapeutic functions' and 'beliefs and attitudes toward therapy' in their conceptualization of a child's mental health problems and treatment progress. With further evidence supporting its validation, the PTFORS may be a useful tool for research on the predictors of parent therapeutic functions and the effects on child treatment outcomes. This dissertation also sets the stage for a unified body of research on parent-involved therapy with a consistent vocabulary and a clear conceptual approach with which to examine therapeutic process factors. This consistent approach will increase the parsimony and integration of future research endeavours, and having a shared language for these clinically relevant constructs may help improve the uptake of applied research findings to bridge the gap between research and practice.

**General Limitations**

There are also limitations to this dissertation to consider. The parent therapeutic factors as described in Study 1 and measured through the PTFORS in Study 2 were examined in the context of a manualized CBT program for autistic children, and the relevant therapeutic factors and their operational definitions may differ in other therapy modalities (e.g., play therapy, emotion focused therapy) or in therapy provided in a context other than individual parent-child dyads (e.g., family therapy, group therapy). Parents who are willing to participate in research may be more involved and engaged in their child's therapy compared to parents seeking therapy in a clinic setting. Findings from this dissertation also may not be generalizable to therapy involving neurotypical children, who may not share the same parental support needs as autistic children. On the

other hand, children with other neurodevelopmental conditions such as ADHD could benefit from similar parent therapeutic functions as autistic children, such as 'logistical coordinator' support with planning and organization of therapy-related tasks and materials. The current sample also lacked diversity regarding socioeconomic, gender, and cultural factors that may affect parent behavioural and attitudinal engagement in therapy. Previous research has also discussed parents' changing roles as children transition to adolescence (Reaven, 2011), and the parent therapeutic factors identified in this study may be most relevant for autistic school-age children and may not directly apply to parents of autistic adolescents. This dissertation was also unable to investigate the concurrent validity and factor structure of the PTFORS due to a lack of relevant measures and statistical power.

**Directions for Future Research**

With the goal of maximizing the benefits of participating in psychotherapy on the health and wellbeing of autistic children and their families, this dissertation leads to five main directions for future research.

First, it will be important to empirically test the associations put forth in Study 1's conceptual framework of therapeutic process factors in parent-involved therapy. For example, regression analyses evaluating parent therapeutic factors as predictors of treatment outcomes would further establish parent involvement as a significant common therapeutic factor in child psychotherapy. In addition, investigating the child, parent, and environmental factors associated with parent therapeutic factors would inform clinical efforts to increase parent treatment attendance and engagement (e.g., Dickson et al., 2020).

Second, there are valuable research questions stemming from the 'goodness of fit' principle from Study 1's results. If parent therapeutic functions are associated with

decreases in children's psychopathology following parent-involved therapy, moderation analyses might elucidate the families for whom parent involvement is most clinically indicated. This knowledge may help avoid placing undue burden on parents of autistic children who tend to have high levels of stress (Rao & Beidel, 2009) and might struggle to meet the demands of therapy involvement. It is also possible that parent therapeutic functions vary in their helpfulness for individual children, and future studies might consider comparing the use of PTFORS therapeutic functions items individually to the use of an overall average subscale score in predicting treatment outcomes.

Third, further research is needed to clarify the convergent and criterion validity of the PTFORS. Using observational methods brought a more objective lens to assess parent therapeutic factors. However, one intrinsic drawback of this method of measurement was that coders were not present in the therapy room and their inferences about the functions of parent behaviours may differ from the interpretations of those in the room. In other research on therapeutic relationship factors, there is some evidence that self-perception of the therapeutic alliance is more predictive of treatment outcome, compared to observer ratings of alliance (Horvath & Bedi, 2011). Similar issues might be present in the current study's use of the PTFORS and it will be important to measure parent therapeutic factors from both subjective and objective means. Creation of analogous parent- and therapist- questionnaire or interview measures would allow for direct examination of the PTFORS' convergent validity, and further contextual interpretation of Study 2's mixed results regarding the PTFORS' criterion validity.

Fourth, the parent therapeutic factors identified in this dissertation emerged from interviews with parents and therapists who participated in a manualized CBT program, and further research is needed to determine the extent to which these factors are generalizable to therapeutic modalities other than CBT (e.g., play therapy, emotion

focused therapy) or to non-manualized therapy approaches. There may also be merit in determining whether these parent therapeutic factors apply to parent-mediated early interventions for autistic children, given the high reliance of those interventions on parent engagement for treatment dosage and success (Nevill et al., 2018).

Last, there is a need to investigate what aspects of parent involvement in mental health treatment are most important in bolstering treatment outcomes for autistic children. There have been recent efforts to increase parent attendance in mental health services for autistic children through therapist training (Dickson et al., 2020), however session attendance on its own is not a sufficient metric of parents' ability to meaningfully support their child in therapy. Instead, efforts to train therapists to increase parent engagement should be based within a motivational framework (King et al., 2014) and future studies should focus on measuring parent therapeutic factors as an outcome in addition to other metrics of parent involvement such as session attendance, homework completion, and/or behavioural engagement.

**Conclusions**

Effective mental health treatment requires a combination of evidence-based treatment and therapeutic process factors, and parent involvement in therapy is a growing area of interest in research involving autistic children. This dissertation presented the results of a mixed-methods investigation into the varied and nuanced ways parents support their autistic child in CBT. Qualitative analysis of interviews with parents and therapists revealed five main parent therapeutic functions (logistical coordinator, co-facilitator, cheerleader and coach, companion and teammate, and complementary helper), and three beliefs and attitudes towards therapy (therapy commitment, criticalness, and flexibility). These findings go beyond existing conceptualizations of parent treatment engagement by describing not only the

behaviours and attitudes of parents in therapy, but also articulating the therapeutic functions of their involvement. Results also indicated that parent involvement in therapy is variable, with quality being more important than the quantity of involvement. The conceptual framework presented here depicted parent therapeutic factors within a bioecological framework that outlined the pre-intervention (non-process) and intervention (therapeutic process) factors that may contribute to child and parent outcomes following CBT. This framework serves as a useful model for future research in this area and may guide clinicians in their formulation and treatment planning.

To fill the need for a reliable and valid quantitative measure of parent therapeutic factors, this dissertation developed the PTFORS based on the results of the qualitative study. This observational measure shows promising reliability, as well as content and discriminant validity. However, there were some limitations to the use of the beliefs and attitudes subscale, and the PTFORS' criterion and convergent validity merits further investigation.

This dissertation contributes to the literature on therapeutic process factors and evidence-based psychotherapy for autistic children. It identified several clinically relevant constructs and provides a conceptual framework and observational measure to enable continued research on parent-involved CBT with autistic children. Current findings also emphasize the importance of treatment accessibility, as parents play a key part in supporting their child's needs in therapy to help them most benefit from treatment. This dissertation adds to a growing body of knowledge regarding the provision of optimal client care to promote the mental health and wellbeing of autistic children and their families.

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