CHILDREN AND PARENTS' EXPERIENCES WITH DISTANCE MENTAL HEALTH TREATMENT

by

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ABSTRACT

Timely access to child mental health services is a widespread concern. Many children with diagnosable disorders do not receive help. Untreated disorders can cause significant child and family impairment. Barriers to treatment can impede access. Few specialists, long wait lists and clinic-based services can be problematic. Families encounter treatment barriers related to travel (i.e., time off work or school; inconvenience; financial burden), stigma, and child resistance to therapy. Alternative models of care are needed. Distance telephone treatment (e.g., Strongest Families), can bridge the access gap.

There is little understanding about the participants' experience with distance treatment. The research objectives were: 1. to establish if therapeutic alliance exists between a) a parent-coach and b) a child-coach, when distance treatment is delivered by telephone with no face-to-face contact; 2. to explore the parents' distance experiences and opinions; 3. to develop and validate the Treatment Barrier Index (TBI) scale derived from participants' experiences; and 4. to use the TBI to examine treatment barrier differences (and therapeutic processes) between two delivery systems (Distance vs Face-to-face).

Therapeutic alliance exists between adult-coach and child-coach with distance treatment. Participants found distance treatment to be more private and felt less stigmatized because of visual anonymity, compared to their opinions of face-to-face services. The TBI results indicated fewer perceived barriers with distance treatment. A significant difference was found between delivery systems in terms of perceived barriers, therapeutic alliance and self-disclosure as a group of variables. This suggests that there may be differences in therapeutic processes between systems. Therapeutic alliance scores were enhanced with distance treatment and found to positively correlate with self-disclosure and outcome scores; suggesting that these processes are important in the context of distance intervention.

Cost-effective distance systems using non-professionals may be one way to increase access to child mental health services. Although some families may prefer the physical presence of face-to-face services, others prefer distance services. The results from these studies may help to inform system design improvements aimed at increasing service access. Improving models of care to meet participants' needs could lead to increased service utilization, ultimately improving child health outcome.

LIST OF ABBREVIATIONS USED

BCQ	**Barriers to Care Questionnaire**
CI	**Confidence Interval**
CVI	**Content Validity Index**
DCCS	**Distance Communication Comfort Scale**
GEE	**General Estimated Equations**
GLM	**General Linear Modeling**
HBM	**Health Belief Model**
I-CVI	**Item Content Validity Index**
MANOVA	**Multivariate Analysis of Variance**
S-CVI	**Scale Content Validity Index**
TBI	**Treatment Barriers Index**
WAI	**Working Alliance Inventory**
WAI-C	**Working Alliance Inventory Client Form**

ACKNOWLEDGEMENTS

I will begin by saying that my PhD journey has been a rewarding and very interesting experience. I began my research career in 1992. I knew research was my passion because every day I was excited to go to work and was astonished that time passed so fast. I yearned to learn more each day; always dreaming about achieving a PhD. I was fortunate to have collaborated with Dr. Patrick McGrath on a study in the late 1990s. This was the beginning of my mentorship with Dr. McGrath. He persistently encouraged me to consider pursuing a PhD. Finally, in 2005, with continued encouragement from Drs. Patrick McGrath and Carolyn Watters, I began my journey.

I was truly blessed to be surrounded by individuals, in both academic and personal aspects of my life, who showed consistent compassionate support over these past 6 years. At times, the support was overwhelmingly positive, which helped smooth the path for me during 'rocky' or stressful times. The never-ending support from my family and friends provided additional strength and determination to persevere, achieving my goals.

As a young girl, my mother and father always said to me: "You can do anything that you set your mind to". The constant, reiteration of this life motto guided me through my career and my academic journeys. I have continued the tradition with my three children (Jacob, Breanna and Madisyn). I am delighted to say that they all have similar drive and determination, aspiring to achieve academic and career goals. Indeed, repetition is an effective teaching strategy! At times during these past five years, I have even heard my husband, Darryl, reciting the motto hoping to renew my confidence during challenging periods, knowing it is a motivating factor for me. It worked…I made it!

There are a multitude of people who I would like to thank for their support, patience and generous investment of time. I want to acknowledge those who I may not mention specifically. Most people who know me will know how appreciative I have been for any contribution or support that they have provided to me and I sincerely thank everyone.

First, I want to extend my gratitude to my loving family. To my husband Darryl and my three children Jacob, Breanna and Madisyn, without your patience, encouragement and unconditional love (I can't omit Darryl's culinary support), I would not have been able to accomplish this life-long, aspired goal.

Next, I would like to express my deepest appreciation to Dr. Patrick J. McGrath. I feel extremely honored to have had Dr. McGrath, a world-class leader, as my supervisor and mentor. His guidance and encouragement was incredible. His kindness and patience are virtuous qualities. Dr. McGrath's dedication and passion for research was inspiring; an excellent match with my goals and aspirations. Our broad visions, ambitions and communication styles were very complimentary. He is truly an inspiration and an example to lead by.

CHAPTER 1: INTRODUCTION

1.1 Background

Timely access to mental health services for children is a concern expressed by Canadian senators (Kirby & LeBreton, 2002), and government officials (Accord, 2003) as well as researchers (Lipman & Boyle, 2003; Offord et al., 1987; Waddell et al., 2005), families and clinicians. Lack of mental health services can have compounding, detrimental effects on a child as well as collateral effects on the family and society. Untreated mental health conditions have been shown to worsen over time. Exacerbated symptoms can track into adolescence and adulthood (Caspi, Moffitt, Newman, & Silva, 1996; Kessler et al., 2005; Offord & Bennett, 1994), causing functional impairment in academic achievement and relationships (e.g., family, teachers, peer, marital) (Costello, Egger, & Angold, 2005; Offord & Bennett, 1994). Behaviour problems can lead to conduct disorder and delinquency (Bennett, Lipman, Racine, & Offord, 1998). Anxiety can lead to depression (March, 1995). Moreover, child behavioural issues can lead to maternal depression (Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2004).

Although there are proven interventions that can effectively treat pediatric mental health disorders (Cunningham, Bremner & Boyle, 1995; Kendall, 1994), most children do not receive timely services (Offord et al., 1987; Waddell et al., 2005). Often, services received are not evidence-based (Waddell, Lomas, Offord, & Giacomini, 2001). Access issues such as scarcity of mental health care professionals, resource funding and system design, can be system imposed. Specialist help is important for the treatment of severe or complex cases. Children with severe problems are often triaged to be seen quickly. Unfortunately, children with less severe symptoms often face long wait times causing the underlying condition to deteriorate until increased severity and impairment warrant more urgent services. This means that the system may inadvertently

facilitate the progression of mental health disorders, causing unnecessary child and family suffering and impairment.

Once services are accessed, families encounter personal barriers. Travelling to a clinic for counseling, typically during work or school hours for 12 or more weekly sessions, can be inconvenient, expensive, and stigmatizing. Children, especially children with significant externalizing problems such as defiance and aggression, may resist going to a clinic for treatment (Digiuseppe, Linscott, & Jilton, 1996). Child resistance to and refusal of necessary treatment can be a barrier that causes additional stress that may wear down a parent. Such personal barriers can be especially challenging for those who are disadvantaged financially, physically, psychologically or for those who live a distance from treatment centres. Barriers can result in treatment non-compliance and drop-out (Kazdin, Mazurick, & Bass, 1993). Increased perceived barriers can adversely impact health outcomes (Kazdin & Wassell, 1999). Attrition rates in pediatric mental health, ranging from 50-75% (Kazdin, 1990), are higher than in adult mental health (Pekarik & Stephenson, 1988). Since high attrition rates and limited access can result in poor health outcomes for treatable pediatric mental health disorders, it is essential to consider alternative ways to deliver services to overcome these barriers (Manion, 2010).

Cost-effective treatment modalities have been developed that do not include traditional face-to-face contact with a specialist (Simon, Ludman, & Rutter, 2009). With the use of technology such as the telephone or internet, distance treatments not involving face-to-face contact have been found to be effective for panic disorder and agoraphobia (Swinson, Fergus, Cox, & Wickwire, 1995), adult depression (Beckner, Vella, Howard, & Mohr, 2007; Kessler et al., 2009; Ludman, Simon, Tutty, & Von Korff, 2007), adult insomnia (Bastien, Morin, Ouellet, Blais, & Bouchard, 2004), adult obesity (Befort, Donnelly, Sullivan, Ellerbeck, & Perri, 2010),

smoking cessation (Bottorff et al., 2004) as well as child and youth behaviour problems (Markie-Dadds & Sanders, 2006; Haggerty, Skinner, MacKenzie, & Catalano, 2007). In a meta-analysis, Bee et al. (2008) found that remote psychotherapy applications, although limited (i.e., only 13 reported randomized trials: 10 telephone-based, 2 internet-based and 1 videoconference-based), were effective for anxiety and depression.

Although professionals traditionally deliver psychological interventions, there has been interest in developing programs where non-professionals deliver treatment. In a large meta-analysis, Weisz, Weiss, Han, Granger, and Morton (1995) found that paraprofessionals were as effective as professionals in producing positive therapy outcomes. However, there are few distance interventions for child mental health using non-professionals. Development of an evidence-based, protocol-driven intervention using non-professionals to deliver the treatment from a distance may be a cost-effective, primary-care solution for pediatric mental health.

Strongest Families (formerly known as Family Help) is a distance treatment program that was designed to overcome child mental health access barriers. Strongest Families has been shown to overcome diagnosable pediatric Oppositional Defiant. Attention Deficit Hyperactivity, and Anxiety disorders with sustained outcome up to one year post-treatment (McGrath et al., 2011). Strongest Families uses evidence-based, manualized protocols that guide trained non-professionals (coaches) to deliver treatment to families over the telephone. Families receive easy-to-understand skill-based handbooks and videos and approximately 12 weekly telephone coach sessions. Strongest Families is family-centered care so staff work days, evenings and weekends to accommodate the families' schedules. Families are considered experts on their own families. The goal is to deliver timely services to families in the comfort and privacy of their own homes at convenient times.

Distance treatment delivery systems such as Strongest Families offer promising solutions to treatment barriers encountered by children and families when seeking pediatric mental health services. Home health care delivered at convenient times to the family can:

- Provide up-to-date, evidence-based, self-help style materials designed for children and parents;

- Eliminate the financial burden and inconvenience of travel as well as time away from work/ school (e.g., incidental costs such as transportation, babysitting, meal costs; lost time from work);

- Minimize the stigma associated with receiving mental health services (e.g.. children do not have to worry about being identified because there is no need for early dismissal from school and no need to go to a mental health facility for an appointment).

Distance treatment using non-professionals holds potential as a means to address both the systemic financial issues as well as the physical (e.g., travel) and psychological barriers (e.g., stigma) that some participants face with traditional services. However, given the limited evidence from the participants' perspective, there is little understanding about what the distance treatment experience is like for participants and how it may differ from traditional services. Knowledge gained from a thorough examination of the distance treatment experience may inform delivery system designs.

1.2   Research Objectives

The purpose of this dissertation was to examine comprehensively, the distance treatment experience from the participants' perspective. An interdisciplinary approach with a supervisory committee from Psychology, Nursing, and Computer Science, enhanced and informed the project

design. The overall goal was to gain information that would inform future system design improvements to best meet the needs of families and children.

The goal of best practice research is to choose the methodology, or combination of methodologies, that will best answer the research question (s) (Anderson, 1994; Clarke, 1998; Emden & Sandelowski, 1999; Maggs-Rapport, 2001; Shih, 1998). Given the complexity of human life and the impact of cultural, social, historical and physical influences on the functioning of an individual, a variety of methodologies can provide enhanced comprehension of the research findings, thus minimizing the probability of one-sided researcher interpretation. Initially, the research was guided by three main objectives:

1. To determine whether a therapeutic alliance can exist between a parent and his/her non-professional, Strongest Families telephone coach when treatment is delivered from a distance with no face-to-face contact;

2. To determine whether a therapeutic alliance can exist between a child and his/her non-professional, Strongest Families telephone coach when treatment is delivered from a distance with no face-to-face contact. Also, to determine if there are differences between the child ratings and parental ratings of therapeutic alliance with the therapist;

3. To explore the distance therapeutic alliance and overall distance Strongest Families treatment experience with the parent.

The results of these studies informed the remaining objectives:

1. To develop and validate a scale, based on the participants' perspective, to further explore perceived treatment barriers between different delivery modalities (distance versus face-to-face).

2. To determine differences in perceived obstacles to treatment between face-to-face versus distance using a new scale and explore possible differences in therapeutic processes such a therapeutic alliance, self-disclosure and outcome.

1.3   Dissertation Structure

This dissertation is presented in a manuscript-style consisting of five journal publications, four of which have been accepted and deposited with Pub-Med. Chapter 1 introduces the existing issues with limited mental health services access, barriers and the need to find new ways to deliver care to bridge the access gap. Chapter 2 follows with a brief overview of the important role that therapeutic alliance plays in therapy and introduces debates and existing literature on distance therapeutic alliance. The submitted manuscripts are represented in chapters 3-7 which provide details about study designs, methodology, analysis and results. Chapter 8 provides a general discussion of the dissertation findings and research limitations and concludes with suggestions for future research directions to further understand distance treatment processes and ways to enhance health care services.

CHAPTER 2: THERAPEUTIC ALLIANCE

2.1   Therapeutic Alliance in Face-to Face Therapy

Therapeutic alliance is a term commonly used in face-to-face therapy to describe the relationship or bond that exists between the participant and therapist. There are specific elements that must exist to produce a positive therapeutic alliance. Bordin (1979) established that there must be evidence of a mutual relationship (Bond) between the client and therapist, both parties must engage in identifying the goals of the therapy (Goal Agreement) as well as mutually agreed upon tasks (Task Agreement) to be completed to reach the established goals.

Personal therapist qualities such as honesty, trustworthiness, attentiveness, compassion, confidence and eagerness have been found to be important contributors to a positive alliance (Ackerman & Hilsenroth, 2003; Hersoug, Hoglend, Monsen, & Havik, 2001). Somewhat surprisingly the level of professional training does not influence therapeutic alliance. In two separate studies, Hersoug et al. (2001) and Hersoug, Hoglend, Havik, von der Lippe, & Monsen (2009) (n= 270 and n=201 respectively) found a relationship between more professional training and poor therapeutic alliance quality based on participant ratings at all stages of therapy.

2.1.1 Importance of Therapeutic Alliance in Adult and Child Therapy

Therapeutic alliance has been shown to correlate positively with health outcome (Bordin 1979; Horvath & Greenberg, 1989; Horvath & Symonds 1991; Marmar, Horowitz, & Weiss, 1986), self-disclosure (Farber & Hall, 2002) and treatment retention (Mohl, Matinez, Ticknor, Huang, & Cordell, 1991) in adult therapy. In child mental health the parent-therapist and child-therapist therapeutic alliance has been associated with retention (Garcia & Weisz, 2002; Hawley & Weisz, 2005), satisfaction of services (Hawley & Weisz, 2005), perceived barriers (Kazdin &

Wassell, 1999) and positive outcome (Hawley & Weisz, 2005; Kazdin, Marciano, & Whitley, 2005). Factors that have been shown to positively correlate with the strength of the child-therapist bond are therapist ability to collaborate (Creed & Kendall, 2005; Shirk & Saiz, 1992); therapist projection of warmth and empathy (Karver, Handelson, Fields, & Bickman, 2005) and satisfaction with or acceptability of the treatment (Hawley & Weisz, 2005; Kazdin et al., 2005). The strength of the therapeutic bond directly influences the child's willingness to participate (Karver et al., 2005).

There has been insufficient exploration of child and parental views about pediatric therapeutic processes (Kazdin, 1999) and inadequate development of theories of therapeutic alliance in the pediatric population (Creed & Kendall, 2005; Kazdin, 1999; Shirk & Karver, 2003). For example, Bordin's therapeutic alliance theory has been used to design therapeutic alliance scales in the adult therapy setting (Horvath & Greenberg, 1989) which have subsequently been applied to pediatric therapy (Creed & Kendall, 2005; McLeod & Weisz, 2005). Although studies have shown that both parents and children report that a positive child-therapist alliance is fundamental to treatment outcome success (Diamond, Diamond, & Liddle, 2000; Kendall & Southam-Gerow, 1996; McLeod & Weisz, 2005; Motta & Lynch, 1990; Shirk & Saiz, 1992), many studies did not measure pediatric therapeutic alliance (Shirk & Karver, 2003).

Although therapeutic alliance has been established in face-to-face therapy little is known about whether it can occur in distance therapy, in the absence of visual cues. Since therapeutic a1liance is important for treatment completion and success, then it is imperative to establish whether it is possible in telephone therapy between parent-coach and/or child-coach dyads, with no face to-face contact.

2.2 Distance Therapeutic Alliance

For many years people have established and maintained relationships from a distance, with no face-to-face contact, by communicating through letters, telephone and the internet. Pen-pal relationships begin and develop solely through letter writing. After its invention, the telephone became an important means for forming and strengthening relationships. Through technical advancement, similar relationship formations have been reported with the use of the computer. For years, computer-mediated communication (e.g., Parks & Floyd, 1996; Walther, Anderson, & Park, 1994; Walther, 1996; Spears & Lea, 1994) and online distance education (e.g., Beldarrain, 2006; Jerry & Collins, 2005; Picciano, 2002; Richardson & Swan, 2003) researchers have shown that relationships can exist in the absence of face-to-face contact. Moreover, theories have been established to explain associations with self-disclosure (Joinson, 2001), inhibiting effects of visual anonymity (Joinson, 1998, 1999; Spears & Lea, 1994; Suler, 2004), social identity and deindividuation (Lea & Spears, 1991; Spears & Lea, 1994), social presence (Beldarrain, 2006; Richardson & Swan, 2003), participant engagement (Beldarrain, 2006) and demarginaliztion (McKenna & Bargh, 1998). Compared to the research undertaken in the computer-mediated communication field on distance communication, distance therapy research lags behind somewhat (Helton, 2003).

Generally, telephone access is available in most homes. It is not uncommon for a clinician to provide telephone consultation. However, the telephone has not been fully accepted as a sole means of mental health treatment delivery (Sanders & Rosenfield, 1998). This may be due to the uncertainty as to whether a therapeutic alliance can exist in the absence of visual cues (King et al., 2006), especially in child mental health services. While Mohr et al. (2000) and Simon, Ludman, Tutty, Operskalski, and Korff, (2004) found that telephone psychotherapy for

adult depression was effective with low attrition, neither study reported on therapeutic alliance. At the time of this dissertation, distance therapeutic alliance research using the telephone to deliver therapy was limited and no pediatric study was found.

2.3   Transition to Chapters 3, 4 and 5

We were interested in investigating whether a distance therapeutic alliance was possible between participants (adult and child participants) and their non-professional coach when child mental health services were delivered solely via the telephone. Additionally, we explored the distance treatment experience from the adult participant perspective. Chapters 3, 4 and 5 consist of three published manuscripts as follows:

- Chapter 3: A therapeutic alliance can exist without face-to-face contact

- Chapter 4: A pediatric therapeutic alliance occurs with distance intervention

- Chapter 5: Distance therapeutic alliance: the participant's experience.

CHAPTER 3: A THERAPEUTIC ALLIANCE CAN EXIST WITHOUT FACE-TO-FACE CONTACT

Student Contribution: study design, analysis and primary author.

Appendix A: Copyright Permission Form

3.1 Abstract

We examined the therapeutic alliance scores in 64 parents who completed treatment with a non-professional telephone coach in a pediatric psychosocial and behavioural intervention study called Family Help. The mean total Working Alliance Inventory score was 242.7 (95% confidence interval [CI]: 240.2, 245.2). Overall, the total scores were very high regardless of coach/parental age or gender, socioeconomic class/educational level of the parent, severity or type of the child's mental health disorder or modality of treatment delivery. These results were compared with normative data reported from other studies, which suggested that the distance therapeutic alliance scores were at least similar to face-to-face therapeutic alliance scores. The present study provides evidence that a strong, positive therapeutic alliance can exist in the absence of face-to-face contact using non-professional telephone coaches.

3.2 Introduction

In health care delivery, an open and trusting relationship between client and provider is important, so the client's problems can be addressed effectively. This relationship has been termed the therapeutic alliance. Evidence of a strong or positive, therapeutic alliance has been shown to correlate with positive treatment outcomes (Bordin, 1979; Horvath & Greenberg, 1989;

Horvath & Symonds, 1991; Marmar et al., 1986). Although professionals traditionally deliver psychological interventions, there has been recent interest in developing programs where non-professionals deliver treatment. In a large meta-analysis, Weisz, Weiss, Han, Granger, and Morton (1986) found that paraprofessionals were as effective as professionals in producing positive therapy outcomes.

Cook and Doyle (2002) delivered online-text treatment (email or chat) by therapists to 15 subjects for a range of problems such as relationship counselling and depression. They concluded that a therapeutic alliance could be established using these forms of distance therapy. Moreover, some clients reported increased convenience, disinhibition and a positive client-counsellor relationship.

Similarly, Day and Schneider (2002) conducted a randomized laboratory study comparing face-to-face contact, videoconferencing and audio conferencing. In the latter two situations the clients came into the clinic but did not meet the therapist, thus imitating distance treatment. The results showed significant differences in working alliance between the groups. Clients receiving face-to-face treatment showed less participation during therapy sessions compared with clients in the two distance conditions. Day and Schneider (2002) suggested that the clients may have felt more accountable for the discussions, made more of an effort to talk, more of an attempt to be heard and more inclined to share information because the distance made them feel safer.

The results of these small studies suggest that a therapeutic alliance can exist without face-to-face contact when services are delivered by professionals or professionals in training. However, with the advent of telehealth services there is uncertainty about whether a therapeutic alliance can exist in the absence of face-to-face contact. The present study was designed to

determine if a positive therapeutic alliance can exist between parents (primary care-givers of diagnosed children) and non-professional, telephone support coaches when evidence-based psychological and behavioural interventions are delivered from a distance with no face-to-face contact.

3.3   Methods

The present study was part of an evaluation of a primary care intervention called the Family Help, which provides psychological and behavioural assistance for children with mental health problems. This service is delivered at a distance to children and families in their own homes at times convenient to them (Lingley-Pottie, Watters, McGrath, & Janz, 2005). Participants were recruited through written referrals from family physicians. Children exhibiting mild to moderate diagnosable mental health disorders including behaviour disorders, anxiety, nocturnal enuresis, recurrent headache and abdominal pain were referred to the Family Help research program. Any children with severe or complex co-morbid diagnoses were excluded from the research study. A description of the Family Help Program can be found elsewhere (see http://www.bringinghealthhome.com).

3.3.1 Recruitment

The participants were the parents of Family Help clients who had completed treatment. The Family Help treatment program consisted of three components: written, easy-to-manage information available by handbook or by secure website; video scenarios that complemented the written materials and a non-professional telephone coach who was supervised by a psychologist (Lingley-Pottie et al, 2005). The treatment program contained 4-12 sessions and took 3- 6 months to complete.

Parents received materials designed to teach them new skills to manage their child's primary problem. The materials were divided into weekly sessions with the focus of learning and implementing a new skill each week. After the parent reviewed the weekly material, the session concluded with an exercise called a 'tryout page' designed to facilitate skill implementation. The purpose of the tryout page was to guide the parent to select specific problems they were experiencing with their child and focus implementation of the learned skill each time they encountered that behaviour during the following week. The tryout page was also used to track progress to be reviewed with the coach each week.

Each family was assigned a primary coach who performed a telephone treatment session approximately once a week, after the parent had reviewed the session material and practiced the learned skill. In all cases treatment sessions were conducted by telephone and in some cases the parent could also communicate with their coach via the Internet (email or discussion board). During the treatment session, the coach assisted the family by reinforcing the session material, reviewing the specific problems they encountered with their child in the past week, discussing the success of skill implementation, and engaging in active problem solving with the parent to determine which skills were most effective in managing their child's specific problems.

Each coach completed an intense training program on a specific problem module with the Family Help psychologist that included practice training on each session that was recorded, reviewed and critiqued by the psychologist. The coach was not authorized to perform a coaching session until the psychologist was satisfied with the level of competence as evidenced by the practice calls. Caseload supervision by a psychologist was conducted weekly.

The study was approved by the appropriate ethics committee. Informed consent was obtained from all participants.

3.3.2 Measure

To determine if a therapeutic alliance existed between the parent and coach, the Working Alliance Inventory-Client Form (WAI) was administered to the parent upon treatment completion (Horvath & Greenberg, 1987; 1989). The WAI was telephone-administered by a research assistant not involved in providing treatment sessions to the parent. Prior to administration of the WAI, the participant was informed that their coach would not have access to the responses provided. In the cases where the parent might have had more than one coach due to staff turnover, the questionnaire was focused on the relationship developed with the coach who had the most contact with the parent during treatment. Participants received a $10 movie voucher to complete the questionnaire.

3.4   Results

Sixty-four parents who completed Family Help treatment as the primary care-giver participated in the study. They were mainly Caucasian mothers of varying social class, see Table 3.1. The specific pediatric problem treatment modules included behaviour disorders (3-12 years), anxiety (6-12 years), recurrent headache and/or abdominal pain (9-16 years) and nocturnal enuresis (5-12 years). Approximately 80% of the participants lived in rural Nova Scotia.

Table 3.1: Participant demographic data*

	N	%
Sex of primary care-giver		
Female	62	97
Male	2	3
Age (years)		
19-25	1	1
26- 35	24	38
36-45	39	61
Highest level of education achieved		
Less than grade 8	1	1
Some high school	10	16
High school diploma	19	30
Vocational school	15	23
University degree	17	27
Professional or graduate degree	2	3
Marital status		
Married/common-law	44	69
Single/separated/divorced	20	31
Annual family income ($)		
Less than 25, 000	14	29
25,000- 45, 999	13	26
46, 000- 55, 000	4	8
More than 55, 000	18	37
Pediatric problem module		
Behaviour disorder	30	47
Recurrent headache/abdominal pain	3	5
Anxiety	16	25
Enuresis (night-time bedwetting)	15	23
Mode of distance treatment		
Written manual/telephone coach	56	88
Web-based/telephone coach	8	12
Treatment included child/coach component (pain and anxiety modules)	19	30
Length of time in treatment (months)**		
Less than 4	15	23
4-6	21	33
More than 6	28	44
Sex of Coach		
Female	60	94
Male	4	6

*Fifteen out of 64 participants had missing data for annual income, so the results are based on 49 participant responses

**The treatment duration data were recorded at the point of initiation until completion of the final session. It does not account for any treatment delays or suspension (which occur during summer months and during family crisis)

Approximately half of the participants completed disruptive behaviour disorder treatment focused on parenting skills; 23% completed the enuresis program using the urine alarm with their child at bedtime; 30% completed the parent component of the anxiety and pain modules (25 and 5%, respectively), by assisting their child during treatment to learn coping strategies.

Eighty-eight percent received treatment delivered by handbook/video/telephone coaching and 12% received the same information via a secure website (behaviour disorder intervention). Most of the web-based participants had a computer supplied to them for the study. More than 50% of the web-based Family Help participants reported communicating with their coach at least once by email during treatment. The average treatment period was approximately six months (median = 160 days).

Total WAI composite and subscale scores are shown in Table 3.2. There were missing data in eight of the 64 study participants. Missing data were handled by replacing the observation with the average item score within the specific subscale.

Table 3.2: WAI score results (n=64)

	Mean	**SD**	**95% confidence interval**
Total	242.7	10.0	240.2, 245.2
Task subscale	80.3	3.9	79.4, 81.3
Bond subscale	81.5	3.5	80.7, 82.4
Goal subscale	81.0	4.0	80.0, 82.0

The results of the present study were compared with data reported in other studies that measured therapeutic alliance using the WAI, see Figure 3.1. We also compared the results from the present study with the results reported in one of the reference studies shown in Figure 3.1 using two sample t-tests. Composite scores (see Table 3.3) were significantly different for

Family Help compared with the study reported by Horvath and Greenberg (1989). A Welch's test was performed to compare the subscale means. The subscale scores from Family Help were significantly different from the reference study.
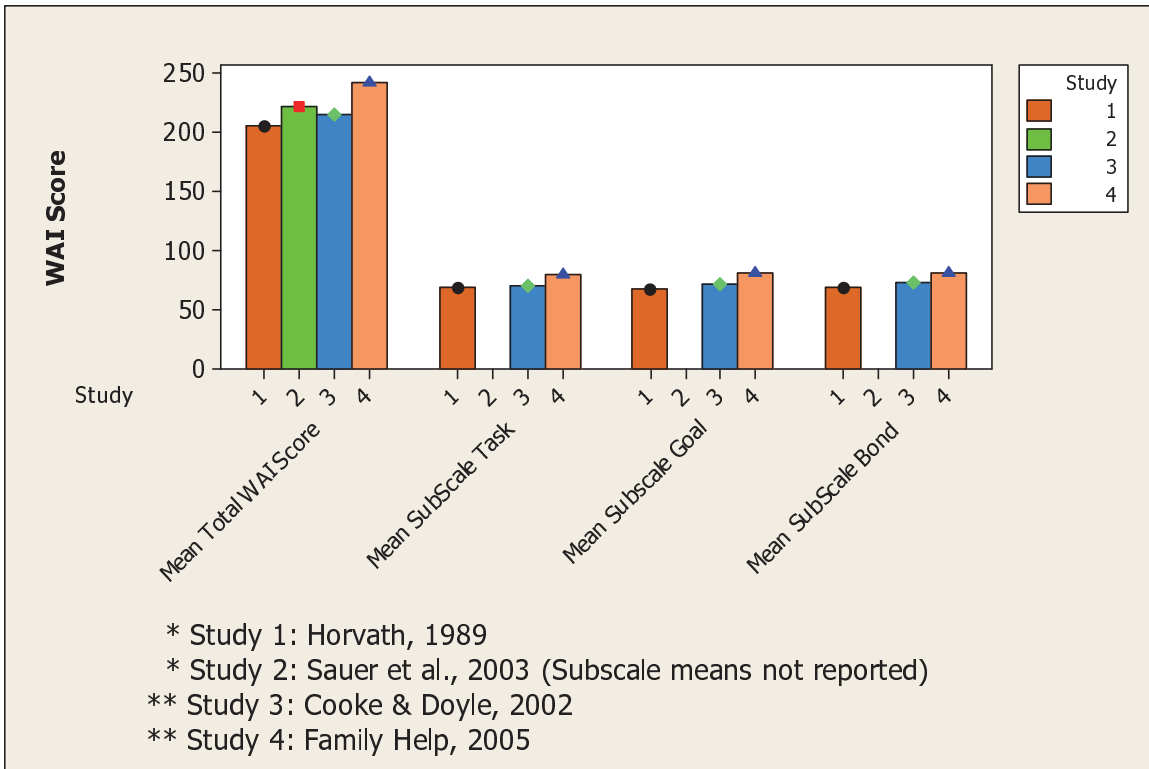
Figure 3.1: Reported WAI scores from the present and other studies. *Horvath and Greenberg, 1989 and Sauer et al., 2003 were performed face-to-face; the other studies were not

Table 3.3: Results from the present and the reference study.

	Present study no face-to-face (n=64)	Horvath and Greenberg, 1989 face-to-face (n=25)	*t*	*p*	95% confidence interval
Total (SD)*	242.73 (10.0)	205.5 *(10.3*)*	15.4	<0.001	(32.4, 42.1)
Task (SD)	80.34 (3.9)	68.6 (9.8)	5.8	<0.001	(7.6, 15.9)
Goal (SD)	81.03 (4.0)	67.3 (11.1)	6.0	<0.001	(9.1, 18.4)
Bond (SD)	81.52 (3.5)	69.6 (10.1)	5.8	<0.001	(7.7, 16.2)

* In the absence of the availability of the SD for total score in the Horvath report, an average of the subscale SD was calculated.

An analysis of mean comparison using a Welch's test performed on another referenced face-to-face study (Sauer, Lopez, & Gormley, 2003) versus Family Help revealed similar results. The mean total WAI score was higher for Family Help and the means were significantly different ($P < 0.001$; 95% CI 13.3, 28.4).

3.5 Discussion

The results of the present study support the hypothesis that a positive therapeutic alliance can exist in distance treatment with no face-to-face contact between a client and a non-professional telephone coach. Overall, the participant's WAI scores were high, providing evidence that by the end of treatment a positive therapeutic alliance had formed, despite the absence of face-to-face contact. These results are similar to the findings reported by Cooke and Doyle (2002) who measured distance therapeutic alliance using the WAI and found that the

composite and subscale scores were high overall. These results suggest that therapeutic alliance generalizes to distance treatment.

The comparison of the present study results to normative data reported in the literature showed that the distance therapeutic alliance scores were at least similar to therapeutic alliance scores reported by adults who received face-to-face treatment. The evidence that a therapeutic alliance can exist in the absence of face-to-face contact and may be similar to alliances formed face-to-face, may help to influence the acceptance of telehealth.

There are a few potential explanations for the strength of the alliance in distance treatment such as Family Help. For example, Family Help treatment is evidence based and protocol driven for consistency in treatment delivery by a primary coach. In addition, receiving care in the home at any time is probably more comfortable, convenient and less stigmatizing. These factors may enhance relationship development. Other contributing factors may be participant disinhibition (Cook & Doyle, 2002; Day & Schneider, 2002) and increased participant participation (Day & Schneider, 2002) or engagement in distance treatment therapy sessions.

Further research will be needed to understand how a distance therapeutic alliance is formed, to determine the essential elements required, to determine whether it is directly correlated with positive client outcomes as in face-to-face therapeutic alliance and undertake trials to explore whether there is a difference between distance therapeutic alliance compared with face-to-face.

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CHAPTER 4: A PEDIATRIC THERAPEUTIC ALLIANCE OCCURS WITH DISTANCE INTERVENTION

Lingley-Pottie, P., and McGrath, P.J. (2008). A pediatric therapeutic alliance occurs with distance intervention. Journal of Telemedicine and Telecare, 14, 236-240.

Student Contribution: study design, analysis and primary author.

Appendix B: Copyright Permission Form

4.1 Abstract

We investigated whether distance therapeutic alliance occurs when children receive manualized, cognitive-behavioural treatment via telephone, in the absence of face-to-face contact. The therapeutic alliance scores were measured in 55 child-parent pairs. The mean total Working Alliance Inventory child scores were 236 (95% confidence interval [CI]: 232, 240) and the mean parent scores were 245 (95% CI: 242, 247). Parent scores were significantly higher than child scores, although the difference may not be clinically meaningful. This study provides evidence that a strong therapeutic alliance does occur between child-coach and parent-coach pairs when treatment is delivered from a distance by non-professionals. The term 'child' encompasses both children and adolescents.

4.2 Introduction

We have developed a novel system for delivering mental health services, called Family Help that has been designed to overcome access barriers and improve retention for children and families receiving mental health treatment. Family Help provides manualized treatment (i.e., structured, protocol guided) at a distance by means of handbooks, videos and weekly telephone sessions with a non-professional coach. The Family Help program consists of 12 weekly

telephone sessions scheduled at the family's convenience, reducing the need to travel, take time off work or remove the child from school.

The coach is trained to problem-solve and provide program skills education with the family as outlined in the Family Help protocol. Coaches follow strict risk management protocols involving immediate reporting to the Family Help health professional (a nurse or psychologist) of any suspected abuse, neglect or safety issues that may be disclosed by the parent or child during telephone sessions.

The Anxiety and Recurrent Pain Family Help programs both include a cognitive-behavioural approach with emphasis on successful implementation of coping strategies (i.e., positive self-talk and relaxation techniques). The focus of the Anxiety program is on gradual exposure using a hierarchical process. The Pain program integrates learning of cognitive-behavioural stress management strategies with information about medication, diet and exercise. The child completes weekly homework assignments that include successful learning and implementation of a new skill (e.g. belly breathing, deep muscle relaxation or mini-relaxation, positive thinking/self-talk, role playing and/or gradual exposure). The role of the parent is to be an 'at home coach' encouraging the child to learn and practice the new skill.

During weekly telephone sessions, the Family Help coach problem-solves with the parent and the child, customizing treatment to address the individual child's problems. For example, if the child had a specific phobia of dogs, the coach would guide the design of a hierarchical worry list, ensure that the child learned the coping strategies to equip him/her for gradual exposure to dogs and evaluate success each week. However, it is not known whether a therapeutic alliance can occur between a child and coach in the absence of face-to-face contact. We have therefore

conducted a study to determine if a therapeutic alliance occurs between the child and Family

Help coach, and between the parent/primary caregiver and coach.

4.3   Methods

The study participants were adult caregiver-child pairs who completed the Family Help

treatment program for pediatric anxiety (6-12 years old) or recurrent headache/abdominal pain

(9-16 years old). Children were referred to Family Help by family physicians and were eligible if

the Family Help psychologist found evidence of a mild to moderate DSM-IV diagnosable

disorder. A sample size of 55 parent-child pairs was needed to detect a difference of 5 points in

therapeutic alliance sores with 90% power and alpha 0.05, including a 10% failure rate. All

participants provided verbal consent to complete a telephone administered questionnaire. The

study was approved by the appropriate ethics committee. Information was collected from

January 2004 to February 2007.

Fifty-six parent-child dyads participated in the study. The reliability of one child's

response data was questionable (i.e., it was apparent during the interview that he did not take it

seriously and the responses were not consistent). Therefore, the data were excluded from

analysis leaving 55 parent-child pairs (Table 4.1).

Table 4.1: Child-Parent Pair Demographics

*The

Data Type	N	%
Residential location		
Urban	14	25
Rural	41	75
Sex of child		
Girl	39	71
Boy	16	29
Sex of primary caregiver		
Woman	54	98
Man	1	2
Ethnicity of child		
Caucasian	51	93
First Nations	1	2
No data	3	5
Ethnicity of primary caregiver		
Caucasian	52	94
Arabic	1	2
Aboriginal/native Canadian	1	2
Not sure (adopted)	1	2
Age of child (years)		
6-8	13	24
9-11	28	51
12+	14	25
Age of primary caregiver (years)		
19-25	1	2
26-35	12	22
36-45	37	67
46+	5	9
Highest level of education primary caregiver achieved		
Less than grade 8	0	0
Some high school	5	9
High school diploma	8	15
Vocational school	12	22
Some university	1	2
University degree	15	27
Professional or graduate degree	14	25
No data	0	0
Marital status of primary caregiver		
Married/common-law	44	80
Single/separated/divorced	10	18
Refuses to answer	1	2
Annual Family Income		
Less than $25,000	3	6
$25,000-45,999	5	9
$46,000-55,000	1	2
Greater than $55,000	14	25
Unknown	32	58
Pediatric treatment module		
Recurrent headache/abdominal pain (9-16 year olds)	10	18
Anxiety (6-12 year olds)	45	82
Length of time in treatment*		
Less than 4 months	22	40
4-6 months	21	38
More than 6 months	12	22

treatment interval did not account for delays caused by seasonal holidays or family crisis

The majority of the participants were Caucasian, living in rural Nova Scotia. Most of the parent participants were female primary caregivers above 35 years of age (mean 39 years; SD 5). Half of the children were aged 9-11 years. The Family Help treatment had an average duration of five months and participants were interviewed about the therapeutic alliance at the end of treatment. All participants had a female telephone coach.

4.3.1 Measures

The Working Alliance Inventory Client scale (WAI-C) (Horvath & Greenberg, 1989) was used to measure the therapeutic alliance at the end of treatment. The WAI-C is a 36-item, 7 point Likert scale comprising three subscales (Bond, Task Agreement and Goal Agreement). The WAI-C form was originally developed for adult psychotherapy and the wording was slightly modified for use in the present study (e.g. 'collaborate on setting goals' was simplified to 'work together on setting goals'). The WAI was administered by telephone to the parent and child at the end of treatment by a research assistant who had had no prior involvement in the child's Family Help treatment.

4.4 Results

Pediatric and parent therapeutic alliance scores are shown in Table 4.2. Four parents and seven children had missing data. Missing data were managed by replacement observation calculated from the mean item score within the specific subscale. The scores for parents and children were compared with paired t-tests (Table 4.3). Overall, the parent scores were significantly higher than the child scores. There was no significant correlation between the child and parent scores.

Table 4.2: Mean child and parent distance therapeutic alliance (WAI) scores. 95% CI shown in parentheses. Maximum possible scores: total = 252; subscale = 84

	Child Scores n = 55	Parent Scores n = 55
Total score Mean	236 (232, 240)	245 (242, 247)
Bond subcale Mean	80 (79, 81)	82 (82, 83)
Task Subscale Mean	78 (77, 80)	81 (80, 82)
Goal Subscale Mean	78 (76, 80)	82 (81, 83)

Table 4.3: Comparison between child-parent pairs (n=55)

	Mean Difference	SD	*t*	*p*	95% CI
Total Score	-8.3	16.3	-3.8	<0.001	(-12.7, -3.9)
Bond Subscale	-2.1	5.1	-3.2	0.003	(-3.5, -0.8)
Task Subscale	-2.3	6.9	-2.5	0.015	(-4.2, -0.5)
Goal Subscale	-3.8	6.9	-4.1	<0.001	(-5.7, -2.0)

In a separate questionnaire, 93% of the primary caregivers strongly agreed they were satisfied with the service received. The correlation between parent total WAI scores and treatment services satisfaction was r = 0.14 (*P* = 0.28). When asked if they would encourage other families to use Family Help to treat their child, 94% strongly agreed. The results of content analysis performed on participant responses when asked what they found most helpful about Family Help are summarized in Table 4.4.

Table 4.4: Content analysis results: 'What did you find most helpful about Family Help?'

Themes	Results N = 55	Sample responses
Program design attributes	32 (58%)	'The child handbook and going through the lessons; the coach going over it with "child" and encouraging her. They really bonded, wasn't just me teaching her.' 'One on one with the coach, able to speak with them about the material, so we weren't just going through the books ourselves.' 'Flexibility was important, we are busy.' 'The availability of the people and the strong willingness to genuinely help.' 'Always convenient for us; around our schedule; we didn't feel judged.'
Coach attributes	29 (53%)	'Coach very enthusiastic. "Child" was comfortable with her. She was efficient. "Child" was comfortable at home.' 'Talking with the coach; she was amazing.' 'Coach and everything else. Without each step we would not have got to where we got.'
Coach bond/relationship	11 (20%)	'I think having the coach being able to talk to "child"; sometimes she was more likely to tell her coach than us about some things.' 'I really liked "coach"; she was really good with child even if he didn't want to talk she could turn him around. The program was very helpful.' 'I really liked the connection we both made to coach. The fact there was a solution to our problem. At home, on our time, loved it.'
Program materials/skills	24 (44%)	'Techniques were very helpful, practical. Anxiety diary was really good too.' 'The relaxation techniques; getting her to see where it was coming from. It really worked.' 'The relaxation exercises, belly breathing, positive thinking. Coach speaking with child was very helpful.'
Positive outcomes	8 (14%)	'Best treatment she could get' 'I would say I think actually going through the workbook each week and having exercises to do and then going through with the coach to see what worked. Very helpful that both my child and I were participating. Worry diary, we could see a pattern of improvement.' 'Overall everything! Child went from having pain every day to having none.'

4.5   Discussion

The results of the present study were compared to an earlier Family Help distance treatment study with adults and an adult face-to-face treatment study (Figure 4.1).

Unfortunately, we were unable to find a study in which the 36-item WAI scale had been used to measure pediatric therapeutic alliance. However, a pediatric face-to-face therapy study reported a parental mean total WAI score of 230 (SD = 18), (Kazdin et al., 2005) similar to the results of the present study.
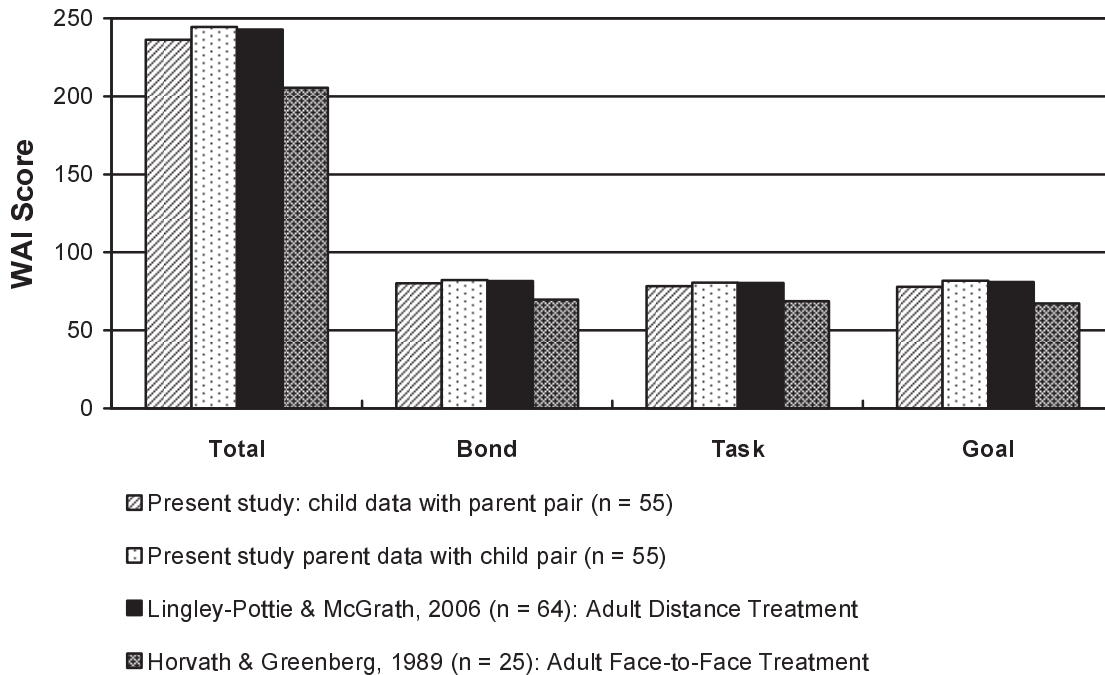
Figure 4.1: WAI composite and subscale scores

A positive therapeutic alliance existed between the pediatric client-therapist and the parent-therapist dyads, in the absence of face-to-face contact. The pediatric WAI scores were similar to the WAI scores reported in adult face-to-face intervention (Horvath & Greenberg, 1989; Sauer et al., 2003) and in other distance treatment studies (Cook & Doyle, 2003; Lingley-Pottie & McGrath, 2006).The results imply that Bordin's theory (mutual bond, goal and task agreement) can be generalized to pediatric distance therapeutic alliance. However, it is difficult to know whether this theory adequately defines the pediatric therapeutic alliance constructs, especially in distance therapy. Perhaps the child therapeutic alliance is more complex (Hawley &

Weisz, 2005; Shirk & Karver, 2003) given the dual nature of alliance in parent-assisted intervention (e.g. both the parent and the coach work with the child). There is insufficient knowledge of child and parental views about pediatric therapeutic processes (Kazdin, 1999) and inadequate development of theories specific to the pediatric population (Creed & Kendall, 2005; Kazdin, 1999; Shirk & Karver, 2003).

The present study was one of the first to examine differences between child-therapist and parent-therapist therapeutic alliance. The power of this study was sufficient to detect a small difference between the parent-child pair WAI scores. However, the significant mean difference of 8 points (out of a maximum score of 252) may not be clinically meaningful.

The lack of correlation between parent-child WAI scores and parent total WAI scores and treatment program satisfaction was probably due to ceiling effects and to data truncation, and should be interpreted with caution. Similar effects have been found in pediatric face-to-face therapeutic alliance research, (Kendall, 1994; Kendall et al., 1997; Southam-Gerow, Kendall, & Weersing, 2001) limiting predictability. However, studies have shown that parents and children both report that a positive child-therapist alliance is the most important part of treatment (Kendall & Southam-Gerow, 1996; Motta & Lynch, 1990). Perhaps the effectiveness of manualized therapy (Kendall, 1994; Kendall et al., 1997) and the specialized therapist attributes required for child therapy may heighten the treatment experience.

To achieve positive health outcomes, the child must fully participate in frequent treatment sessions (Hawley & Weisz, 2005; Kendall, 1994; Shirk & Saiz, 1992) to learn how to implement coping strategies (such as relaxation techniques used to facilitate the gradual exposure process for anxiety). The present study provides evidence that a young child with an internalizing disorder will engage in manualized treatment from a distance and form a strong

bond with a non-professional coach whom they have never met in person. The content analysis findings provide validation of the parent and child therapeutic alliance scores with 73% of the sample describing positive coach attributes, including comments about the relationship. Moreover, the attrition rate in the Family Help study was low (about 1%) indicating that therapy delivered from a distance is possible and highly accepted by children and adults.[4,16] The majority of the participants were very happy with the service that they received and many commented about positive health outcomes.

Program design attributes reported in the satisfaction survey are similar to previous findings (Lingley-Pottie & McGrath, 2007). The convenience of home delivery eliminates the need to travel. Families seem to prefer the flexibility of treatment sessions offered after usual business hours (Lingley-Pottie & McGrath, 2007; Lingley-Pottie et al., 2005). In the present study, the peak times for coach telephone sessions were between 18:00-20:00 hours, indicating user preference for after-hour access to treatment services. Increased service accessibility and convenience may enhance therapeutic alliance and treatment compliance, decreasing drop-out rates.

4.6   Study Limitations

Although the WAI has been validated for adult face-to-face work, the few wording changes made to the WAI were not validated; this may represent a limitation of the present study. The majority of missing data occurred with reverse scored items. Most of the missing data were within the goal subscale which is the only subscale with five of the eight items reverse scored. This may suggest participant confusion (especially children). There may also have been

bias introduced by giving participants a $10 certificate in recognition of their time commitment to complete the call.

4.7   Future Research

A better understanding of the dimensions of the child-therapist and parent-therapist dyads and related associations are necessary (Hawley & Weisz, 2005; McLeod & Weisz, 2005) to fully understand the complexity of pediatric mental health care. Moreover, the influence that the parent's role has on the child's perception of the therapeutic alliance is important to explore given the dyadic nature of parent-assisted child therapy. Emphasis should be focused on appreciation of the child's perception of the therapeutic alliance (in face-to-face and distance treatment) to begin to understand the influence the child-parent therapist relationships have on health outcomes, treatment readiness and attrition rates.

4.8   Conclusion

A therapeutic alliance does exist in distance treatment between a pediatric client, their parent pair and a non-professional therapist. Acceptance of the manualized treatment program by children and parents in the present study suggests that distance delivery mechanisms may be a convenient and effective way to address mild to moderate internalizing pediatric mental health issues. Children may be more willing to engage in therapy and remain committed when they are in a comfortable, familiar environment that offers privacy through visual anonymity. Moreover, eliminating the barriers to face-to-face treatment (i.e., traveling, time off work, dragging resistant children to appointments) may enhance the role that parents play in pediatric internalizing treatment regimes, thus improving outcomes and decreasing attrition rates. Providing children

with cognitive-behavioural coping strategies early in life can potentially promote healthy

adulthood and a future generation with fewer mental health illnesses.

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CHAPTER 5: DISTANCE THERAPEUTIC ALLIANCE: THE PARTICIPANT'S EXPERIENCE

Student Contribution: study design, analysis and primary author.

Appendix C: Copyright Permission Form

5.1   Abstract

Access barriers to services result in extensive wait times. Distance delivery systems with no face-to-face contact are not yet widely accepted because of uncertainty about whether therapeutic alliance can exist. In this study, 131 participants completed a questionnaire designed to explore their distance treatment experience. The majority described positive comments about the relationship formed with their telephone coach including the strength/quality, coach attributes, and the inapprehension to disclose information to the coach. Moreover, 97% reported preference for distance treatment. Acceptance and integration of evidence-based distance delivery systems are a promising approach to primary healthcare reform. Key words: disinhibition, distance delivery system, distance therapeutic alliance, distance treatment, nonprofessional therapist, self-disclosure, therapeutic alliance, therapist attributes, visual anonymity, wait times.

5.1.1 Author Affiliations

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5.2   Introduction

Innovative approaches such as distance treatment have been developed to overcome serious problems of access to mental health services in Canada. Service delays and untimely waitlists are widely reported by the Canadian government (Kirby & LeBrenton, 2002; Health Canada, 2003) and researchers (Offord et al., 1987; Waddell et al., 2005). There has been little research to determine the nature or the ability to develop therapeutic relationships using technology to deliver evidence-based treatment.

Although 18% of the pediatric population has a diagnosable mental health disorder, approximately 80% do not receive services (Offord et al., 1987). The current mental health service structure can be a barrier to timely access because often only severe cases receive specialist services. Children exhibiting mild to moderate symptoms are wait-listed, often for

periods up to a year. Similarly, women suffering from mild to moderate postpartum depression symptoms are disadvantaged by limited access to services. Over time, untreated conditions can lead to exacerbation of symptoms causing physical/social impairment to the individual and chaos or marital difficulties within the family unit (Costello et al., 2005; Offord & Bennett, 1994). Such healthcare disparity can be very frustrating for families who are in desperate need of services.

The cost (i.e., transportation, meals, parking, child care and missed work for one or both parents) and inconvenience of travel for face-to-face appointments that are typically scheduled during weekday hours can be especially burdensome for those living in rural or remote regions. Furthermore, the stigma associated with receiving mental health services often prevents families from maintaining scheduled appointments (Cunningham et al., 2000; Cunningham et al., 1995; Lipman & Boyle, 2003; Lingley-Pottie et al., 2005). These obstacles to access result in high attrition rates and ultimately poor health outcomes.

5.3   Background

The demand for improved access to health care services has been the impetus for the development of new methods of health care delivery such as self-help style interventions that do not require face-to-face contact (Newman, Erikson, Przeworski, & Druz, 2003; Rochlen, Zack, & Speyer, 2004). Distance intervention programs could provide convenient access to families who have the right to receive timely health care services, a potential solution for waitlist issues. The effectiveness of distance delivery systems is uncertain because there is a question of whether a therapeutic alliance can be formed with the therapist, in the absence of visual contact (Cook & Doyle, 2002). To facilitate the design and acceptance of new delivery systems, we must gain a

better understanding of distance therapeutic alliance and factors that may influence the development of therapeutic relationships, in the absence of face-to-face contact.

5.4   Therapeutic Alliance

Traditionally, therapeutic alliance has been used to describe the relationship between a therapist and adult client during face-to-face therapy (Bordin, 1979). One of the most recognized theories about therapeutic alliance, developed by Bordin (1979), identifies 3 elements (bond, goal agreement and task agreement) that must mutually exist between client and therapist. A strong, positive client-therapist relationship and collective agreement to the tasks and goals of treatment are fundamental components of therapeutic alliance. Bordin suggests that the strength of the relationship greatly influences the therapeutic change experienced with therapy. In face-to-face therapy, therapeutic alliance has been shown to correlate highly with successful therapy (Bordin, 1979; Horvath & Greenberg, 1989; Horvath & Symonds, 1991; Garcia & Weiss, 2002; Marmar et al., 1986). However, it is not clear whether Bordin's theory would be generalizable to distance therapeutic alliance constructs.

5.5   Distance Therapeutic Alliance

Cook and Doyle (2002) studied (n = 15) treatment advice from therapists through electronic mail or chat for a variety of adult problems. The Working Alliance Inventory (WAI) scale, developed and validated for face-to-face treatment by Horvath, (Horvath & Greenberg, 1989; Horvath & Symonds, 1991) on the basis of Bordin's theory (bond, task agreement, and goal agreement) was used as a measure of therapeutic alliance. The results indicated that therapeutic alliance existed and when compared with normative data from the face-to-face literature, distance therapeutic alliance scores may have been possibly enhanced. Nine

participants commented on their online experience. The themes that related to the distance relationship included *Disinhibition* (inapprehension about self-disclosure), *Strength of relationship* with therapist and *Convenience/flexibility* of therapy. However, because of the small sample size, the study lacked statistical power limiting the generalizability of the findings.

Lingley-Pottie and McGrath (2006) studied the participants in the Family Help Research program to explore the distance therapeutic alliance. The Family Help Research program was designed to provide early intervention for mild and moderate diagnosable mental health problems. Evidence-based psychosocial and behavioural interventions are delivered to families and children in the comfort and privacy of their own home. Treatment includes written material, videos and a non-professional telephone therapist called a coach (Lingley-Pottie et al., 2005). The WAI scale was administered to 64 adult participants at the end of treatment. The total WAI scores were generally high providing evidence that a therapeutic alliance can exist in distance treatment. The researchers compared the distance treatment mean WAI scores with normative data reported for face-to-face treatment and discovered that the scores were at least comparable to face-to-face treatment.

The purpose of this study was to explore the meaning of the distance therapeutic alliance and the distance treatment experience, described from the Family Help participant's perspective. The researchers hypothesized that the participant's distance alliance experience would reveal constructs that would be congruent to Bordin's theory (Bordin, 1979). Furthermore, it was believed that new dimensions not adequately encompassed by the traditional therapeutic alliance definition would emerge.

5.6   Methods

5.6.1 Participants

The participants were adults receiving Family Help treatment for a diagnosable post-partum depression disorder or primary caregivers of children who were diagnosed with mild to moderate behaviour disorder, pediatric anxiety, nocturnal enuresis and recurrent headache and/or abdominal pain.

As described previously, the Family Help Research program teaches evidenced-based skills that are consistently implemented by the participant to enable them to overcome the problem (Lingley-Pottie et al., 2005; Lingley-Pottie & McGrath, 2006). All participants were assigned a primary care telephone coach and received written material pertinent to the specific problem area (either in manual form or Web-based format), complimented by an educational video. The treatment program is focused on learning and effectively implementing new skills presented in the material, followed by a weekly telephone session with the coach who is a nonprofessional. Each coach received extensive training to effectively problem-solve, customize the program tasks to meet the specific needs of the family, and provide support during the treatment program. The coaches were trained and supervised weekly by a licensed health care professional. Depending on the problem area, the program consisted of 4 to12 sessions weekly sessions.

The participants resided within Nova Scotia's (Canada) district health authorities 4, 5, 6, and 9, many located in rural areas. Sample size was determined to ensure a variety of participant's perspectives were included and redundancy achieved (Lincoln & Guba, 2000; Ryan & Bernard, 2000) (i.e., mode of treatment delivery; mental health problem area, treatment focused with child/parent, parent only or direct treatment recipient; and coach/participant

gender). Furthermore, inclusion of postpartum women would increase the generalizablility of the findings to unwell adults inflicted with a mental health disorder. Approval was obtained from the applicable research ethics committees.

5.6.2 Procedures

The researchers created a questionnaire (Table 5.1) designed to explore the meaning of distance therapeutic alliance and the distance experience. It was telephone-administered at the end of treatment. Careful attention was made to include questions that pertain to the constructs of Bordin's theory (i.e., bond, goal agreement, and task agreement). To ensure the participants' responses were not influenced by wishing to please their coach, (Greenhalgh & Taylor, 1997; Murray & Chamberlain, 1999) the questions were administered by a research assistant not involved with the participant's care. The participants were also informed that their responses would not be shared with their coach. If the participant had more than one coach during treatment, the questions were focused on the coach with whom the majority of the time was spent.

Table 5.1: Questionnaire

Questions

1.   I would like for you to describe to me your thoughts and feelings about the relationship you formed with your coach, <coach name>?

2.   (a) What were you trying to achieve, your goals/ purpose of doing Family Help? (i.e., What were you trying to get out of Family Help?)

         (b) Could you describe to me how well you and your coach agreed on what you were trying to achieve (your goals/purpose) in doing Family Help?

3.   Could you describe to me how well you and your coach agreed on what you did during the sessions?

4.   I would like for you to describe to me the things you liked or didn't like about <coach name>'s voice:
First, what you liked about his/her voice:

         Next, what you didn't like about his/her voice:

5.   Do you believe your coach's voice made a difference in helping you?

6.   Thinking of the Family Help system, where you talk to the coach only at a distance over the phone, compared with a system where the same thing is done but you go to a clinic or hospital to talk in person, face-to-face, can you tell me…

         (a) … what you think the advantages of / good things about the Family Help system are:
         (b) … what you think the disadvantages of / problems of the Family Help system are:
         (c) … what you think the advantages of / good things about a face-to-face system are:
         (d) … what you think the disadvantages / problems of a face-to-face system are:

7.   If you were starting over, would you:
         (a) Choose the Family Help System or a Face-to-face system?
               Family Help System
               Face to Face System

         (b) Prefer a male voice or a female voice as a telephone coach?
               Male
               Female
               Neither

5.7   Analysis

The open-ended questions were analyzed using content analysis and the remaining question responses were tallied. The primary researcher segmented the sentences reflecting different thoughts (Murray & Chamberlain, 1999; Ryan & Bernard, 2000). A codebook was developed on the basis of emerging themes and included the main category name, subcategories and codes, a definition of the subcategory, inclusion and exclusion criteria, and exemplars (Ryan & Bernard, 2000). The codebook was pilot tested with 30 cases using 2 trained independent coders and yielded very good interrater reliability ($k = 0.78$) (Ryan & Bernard, 2000). Discrepancies were resolved with discussion and the codebook was revised. The final codebook consisted of 5 main categories (i.e., program delivery system attributes, program content/design attributes, coach attributes, treatment goals, and hypothetical comments) with a total of 31 item sub-categories.

The full data set was released to the 2 coders. The data were entered into a SPSS database with the entries double-checked prior to running the analysis. Cohen's kappa test was performed to determine interrater reliability. Descriptive content analysis was performed to identify patterns and frequencies (Creswell, 1998; Murray & Chamberlain, 1999).

5.8   Results

The sample consisted of 131 participants (mean age = 35.5 years; SD = 4.76) who had completed Family Help treatment. Table 5.2 includes a demographic description of the study population. The majority of the participants (126) were primary caregivers (124 female, 2 male) whose children were diagnosed with psychological or behavioural disorders (i.e., enuresis, recurrent headache and/or abdominal pain, anxiety, and behaviour disorder). The other 5

participants were women receiving distance intervention for postpartum depression.

Approximately 75.6% of the participants lived in rural areas of Nova Scotia, Canada.

Table 5.2: Participant demographics

Participant demographic data	N (131)	%
Sex of participants		
Female (5 participants with postpartum depression)	129	98
Male	2	2
Age, y		
19-25	2	1
26-35	57	44
36-45	62	47
> 46	10	7
Highest level of education achieved		
< 8th grade	1	1
Some high school	15	11
High school diploma	33	25
Vocational school	31	24
University degree	38	29
Professional or graduate degree	7	5
Unknown	6	5
Marital status		
Married/common-law	95	73
Single/separate/divorced	34	25
Widowed	1	1
Refused to answer	1	1
Annual family income, $		
< 25,000	11	8
25,000-45,999	21	16
46,000-55,000	6	5
> 55,000	35	27
Unknown	58	44
Problem area		
Behaviour disorder	76	58
Recurrent headache/abdominal pain	4	3
Anxiety	20	15
Enuresis (nighttime bedwetting)	26	20
Post-partum depression	5	4
Mode of distance treatment		
Written manual/telephone coach	123	94
Web-based/telephone coach	8	6
Coach gender		
Female	123	94
Male	8	6

Table 5.3 includes the closed questions results with accompanying examples of

participant responses. The majority of the participants reported that they agreed with their coach

on the goals and tasks of treatment and would prefer the Family Help program if given the choice between face-to-face treatment and Family Help program. When asked about their coach's voice, most mentioned positive comments and believed it made a difference in helping them. Those who felt that voice did not make a difference commented that coach skill and personality were more important. More than half stated they preferred a female voice but almost half did not have a preference. Preference was not relative to the sex of their assigned coach.

Table 5.3: Analysis of questions

| Question Focus	Response (%), $N = 131$	Sample Response
Goal agreement		
Coach/participant agreed	128 (98%)	We completely agreed on it
Coach/participant disagreed	1 (<1%)	"Coach" disagreed with me a lot but I learned a lot from him too
Unsure	2 (1.5%)	I don't know; I'm not sure what "coach" would think
Task agreement		
Coach/participant agreed	130 (99%)	Agreed 100%; "coach" was great
Coach/participant disagreed	0	
Unsure	1 (1%)	We switched coaches in between the program and found it hard to adapt
Liked about coach voice		
Positive comments	130 (99%)	Perky, nice to listen to, soft voice.
Negative comments	0	
Unsure	1 (1%)	I don't know what to say; he had a lot of good views; I didn't dislike him
Disliked about coach voice		
Nothing disliked	127 (97%)	
Negative comments	4 (3%)	Sometimes when I was having a bad day it was too bubbly
Did coach voice make a difference		
Yes	115 (88%)	Yes, she was so encouraging and upbeat.
No	10 (8%)	No, sometimes it was annoying the way she praised
Unsure	6 (4%)	Hard to answer because I didn't go by her voice
Treatment preference if starting over		
Family Help distance program	127 (97%)	
Face-to-face program	4 (3%)	
Coach gender preference		
Female	86 (65.5%)	
Male	2 (1.5%)	
Either	43 (33%)	

The results of reliability testing for the open-ended questions are shown in table 5.4. Given the large amount of coding categories and sizeable number of segments in the full dataset, good inter-rater reliability was achieved ($k = 0.66$-0.78). If a theme was repeated in the same participant's response it was counted as one occurrence.

Table 5.4: Interrater reliability on full data set

Question	No. of segments	No. of missing values*	k
I would like for you to describe to me your thoughts and feelings about the relationship you formed with your coach, <coach name>?	561	3	0.68
What were you trying to achieve, your goals, the purpose of doing Family Help? (i.e., What were you trying to get out of Family Help?)	164	0	0.71
Thinking of the Family Help system, where you talk to the coach only at a distance over the phone, compared to a system where the same thing is done but you go to a clinic or hospital to talk in person, face-to-face, can you tell me:			
(a) What you think the advantages of /good things about the Family Help system are?	407	1	0.67
(b) What you think the disadvantages of / problems of the Family Help system are?	158	3	0.78
(c) What you think the advantages of / good things about a face-to-face system are?	135	9	0.66
(d) What you think the disadvantages / problems of a face-to-face system are?	226	0	0.72

* Because of limitations of SPSS for any question where a specific code was used only by one of the coders, the segment was removed from analysis so k could be generated (see: http://www.temple.edu/mmc/reliability/ last accessed May 6, 2007).

When asked to describe the distance relationship the majority of the responses were very positive. Figure 5.1 shows the frequency of the categories reported by the participants. More than half of the participants commented on the quality or strength of the relationship. The majority commented about their coach's attributes (personal and/or technical skill) being components of the relationship. Almost half of the participants reported a sense of being uninhibited enabling them to disclose information freely to their coach. There were no negative comments regarding the formed relationship.

Percentage of Responses

100
90
80
70
60
50
40
30
20
10
0

1   2   3   4   5   6
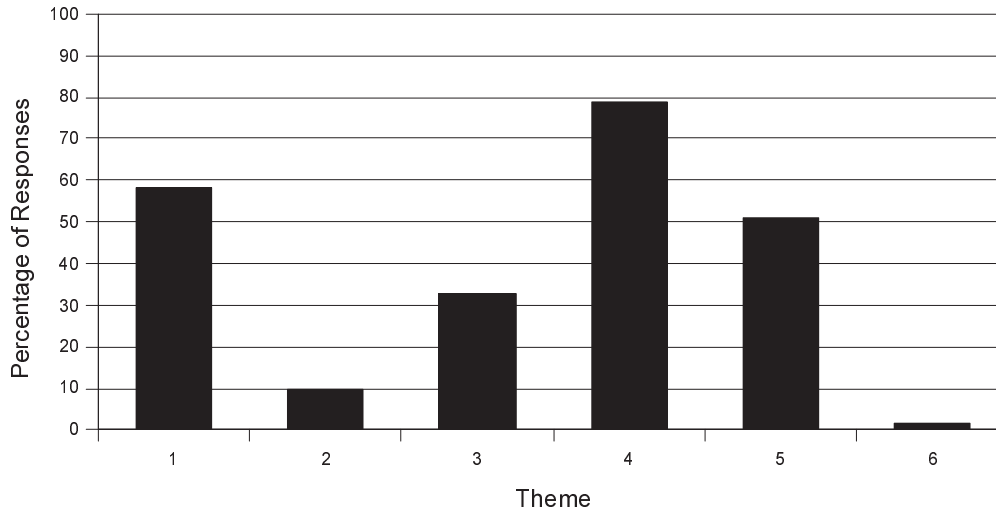
Theme

(Themes: (1) Quality/Strength of Relationship; (2) Nonstigmatizing; (3) Inapprehension/Disinhibition; (4) Positive Coach Personal Traits; (5) Positive Coach Skill; (6) – Positive Outcome).

Figure 5.1: Description of distance relationship with coach

The following excerpts are examples of how participants described the relationship they formed with the coach in the absence of face-to-face contact.

> Right off the bat I felt she was easy to talk to. Always professional but within a short amount of time I looked forward to her ideas and examples. I looked forward to talking to her. She was easy to talk to and helped me understand what she was trying to teach me. I just love her. I prolonged my meetings in the end 'cause I was scared of not talking to her again. I always had someone to talk to about things. She has given me confidence to make the decisions on my own. Even though I never got to meet her I feel like I know her.

Another informant describes her relationship with her coach by saying, "She cared about me. I felt she was like my sister. I didn't have to hold anything back."

The first example includes all of the themes identified and describes how the coach skill empowered the mom to gain confidence in managing her child's behaviour difficulties. Both statements provide a description of a strong and trusting relationship as evidenced by strong words of affection. Moreover, both exemplars denote high levels of self-disclosure.

The goals of therapy that Family Help participants were hoping to attain are illustrated in Figure 5.2. The most common theme expressed was the desire to gain control. One woman explained that she was: "Trying to learn how to deal with my son, how to handle everyday occasions and difficult times without being frustrated; without wanting to throw the towel in."

Another parent responded, "How do I deal with the behaviours; for me to learn how to deal with it without physically grabbing a hold of him."

Figures 5.3 and 5.4 depict the main themes identified by participants describing the advantages and disadvantages of the Family Help program versus face-to-face treatment. Although half of the participants reported no disadvantages of the Family Help program, most of them reported disadvantages of face-to-face including *inaccessibility* (e.g., burden of travel, scheduling issues, taking kids out of school/time off work for sessions, and wait times); *issues of stigmatization* (e.g., fear of being judged, forming an opinion on the basis of appearance, being identified and labeled); *apprehension to disclose information to the therapist* (e.g., intimidated, threatened, shy and embarrassed); *misinterpretation of body language;* and *cost burden*. Fifteen percent reported lack of honesty or quality of information disclosed in the face-to-face setting indicating that it was "hard to admit things," "less likely to be honest," and "may tend to put a better spin on things". Two participants described the disadvantages by stating: "On the phone you can develop your own mental picture of what someone is like. Meeting face-to-face there can be something about the person that you don't feel comfortable with and then the program wouldn't have been effective" and "The length of time to get in. Probably would have never gone further than my family doctor if I had to go face to face. I wouldn't have been honest face to face".

Interestingly, the inverse of the themes identified as disadvantages of face-to-face treatment were reported as advantages of the Family Help program. Most of the participants reported that *accessibility* was an advantage of Family Help program as well as *cost benefits* and specific *program design attributes* (e.g., over the phone, work at own pace, after hours staff availability, and 24/7 on-call services via toll-free line). Moreover, 41% of the participants reported that *nonstigmatization* or *disinhibition* (ability to openly disclose information to their coach) were advantages of receiving distance treatment. Analysis of the overall experience indicated that 63% of the participants made comments about feeling uninhibited and/or not judged or not stigmatized with distance treatment. Further analysis revealed that the participants who commented on the inapprehension/ nonstigmatizing advantages of distance treatment were not necessarily the same individuals who commented on the apprehension/stigmatizing disadvantages of face-to-face, suggesting that the majority of participants shared concerns about the stigmatizing and inhibiting effects sometimes associated with receiving therapy.
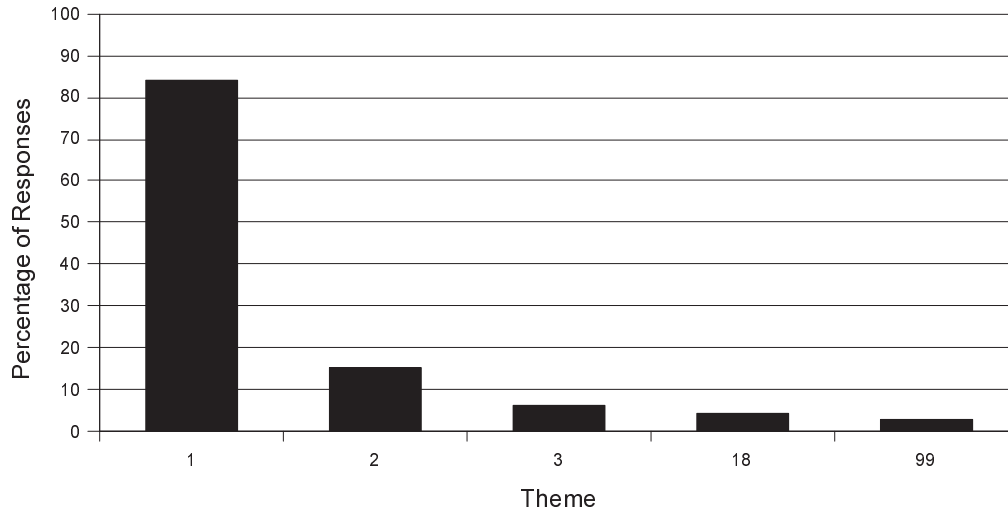
(Themes: (1) Desire to gain control; (2) Desire to strengthen family or peer relationships; (3) – Early intervention; (18) Positive Outcomes; (99) Uncodable).

Figure 5.2: Description of goals to achieve with Family Help.

Below are excerpts from a variety of respondents that describe the disinhibition and non-stigmatization distance experience:

I may not have spoken out if face-to-face. On the phone you can disclose a lot. I was in the comfort and privacy of my own home.

I didn't feel as pressured because not face-to-face. I was more willing to give an opinion; more comfortable because not looking at the person.

I felt ashamed before about myself and my parenting. It was easier to talk about this over the phone.

Can be when someone is in front of you, you can get nervous and not say what you are thinking, get shy or nervous.

Face to face may bias (body language etc), worry about opening up. On phone you have anonymity.
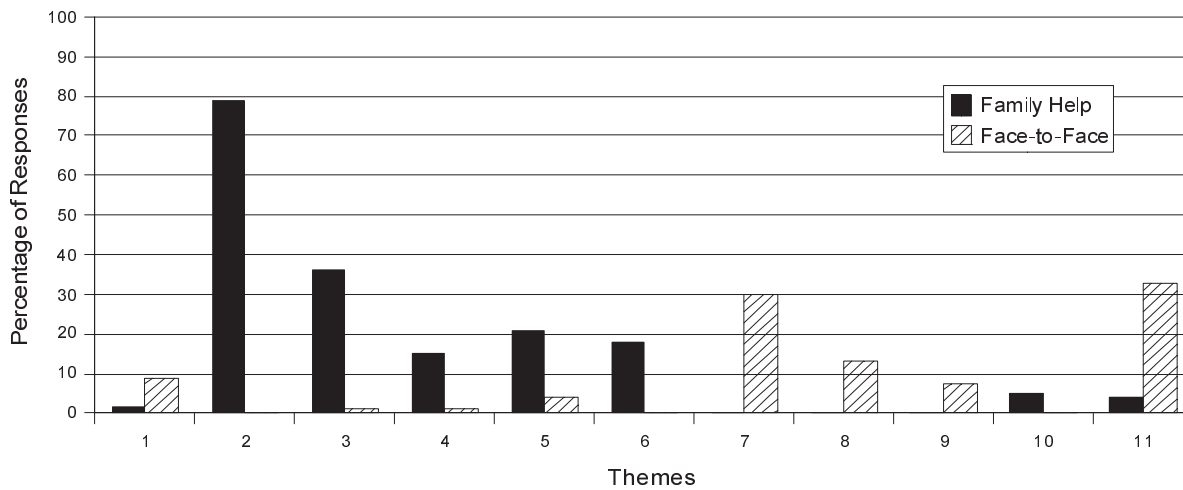
(Themes: (1) Quality/Strength of Relationship (2) Accessibility (3) Nonstigmatizing (4) Inapprehension/Disinhibition (5) Program Content/ Design Attributes (6) Costs Benefit (7) Enable Client to Meet Therapist (8) Ability to Interpret Body Language (9) Ability to Observe Child Behaviour (10) Positive Outcomes (11) Doesn't Know/None).

Figure 5.3: Advantages of family help versus face-to-face
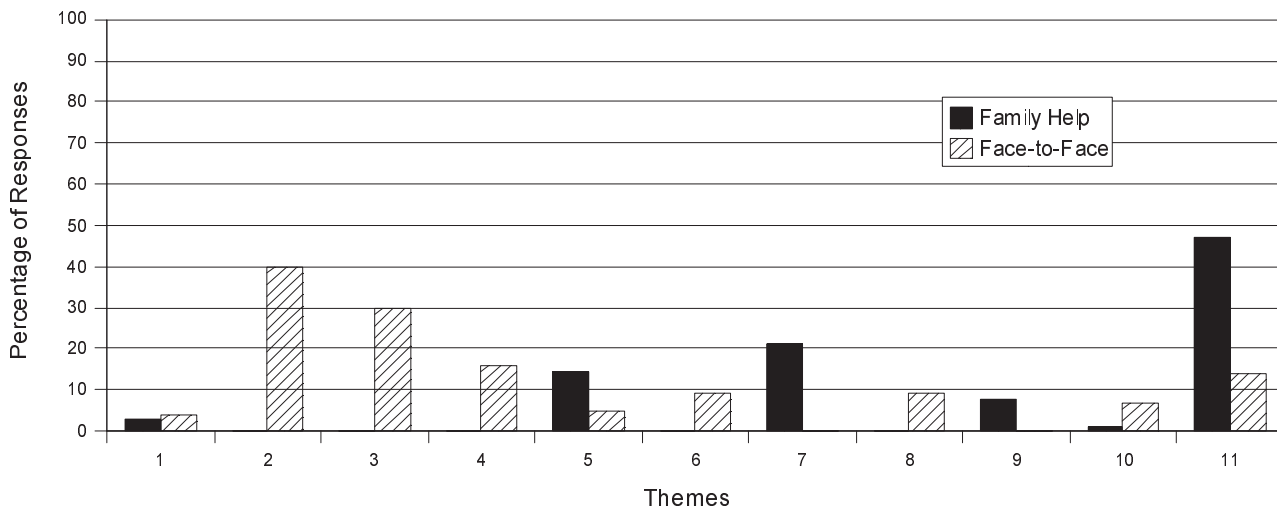
(Themes: (1) Lack of Relationship with Coach (2) Inaccessibility (3) Stigmatizing (4) Apprehension/Inhibition (5) Program Content/ Design Limitations (6) Costs Burden (7) Inability to Meet Therapist (8) Misinterpretation of Body Language (9) Inability to Observe Child Behaviour (10) Adverse Outcomes (11) Doesn't Know/None).

Figure 5.4: Disadvantages of family help versus face-to-face.

The majority of the comments about self-disclosure made reference to the openness and honesty of the communications between the parent and coach. Emphasis on the distance environment being less intimidating and a safe place 'home turf' where privacy was ensured emerged as a prominent advantage.

The main disadvantage of Family Help program reported was the *inability to meet the coach*. Of these, 70% (19/27) participants expressed a desire to meet their coach (related to the connection or bond they had made), wishing to put a face to the voice. Examples from male and female informants follow:

I didn't get to meet the person. I would have liked to have known who I was talking to but it's ok the way we did it.

I would have liked to have seen her…feel a little detached on the phone. After a long time the bond forms and it would be nice to have met her.

Potential for that personal involvement, a natural 'want to see them' but it doesn't outweigh the convenience of Family Help. The other person gets to share in the success and be able to thank them face-to-face.

The counselor doesn't get to meet the child so I sent a picture to 'Coach' of my son. I would prefer to have eye contact but if I had to choose what was available quicker and it was Family Help I would choose it all over again.

A few participants reported *program design limitations* as disadvantages of Family Help such as inability to contact coach directly, assessments were too long, wished the program was longer, difficulty getting child to commit to the skills, and wanted the child or other parent more involved during sessions. Approximately 10% (10/13) participants made *hypothetical* statements about what others may think (i.e., some people may find it impersonal) but of these, 7 qualified their response by stating it was not an issue for them.

The main advantage reported about face-to-face treatment was the *ability to meet the therapist,* however many of the comments were focused on the desire to meet their Family Help

coach. Of the 40 comments made, 26 wanted a visual of their coach and 13 made positive

comments about Family Help. A few examples follow:

"You get to meet the person, I would love to meet 'Coach' and give her a big hug".

"Nice to see what someone looks like" and "Put a face to the voice".

One mom describes how she would like to meet her coach but feels she developed a mental

picture of her:

"Just, you would know the person you were working with by seeing them. I felt like I had seen
'Coach' because we worked so well together".

5.9   Discussion

Overall, the thoughts and feelings described by this population were very positive about

the distance relationship formed with the coach regardless of the age/sex of the participant, coach

sex, or type/mode of treatment. One of the objectives of this study was to determine whether the

emerging themes would be congruent with Bordin's theory (mutual bond, task agreement and

goal agreement) (Bordin, 1979). Although Bordin's theory was developed according to

professional opinion and specific to face-to-face interactions, this distance treatment study

suggests that strong bonds are certainly expressed by a majority of the participants. The results of

this study strengthen the existing evidence reported by Lingley-Pottie and McGrath (2006) that a

therapeutic alliance can exist in the absence of face-to-face contact. Although goal and task

agreement did not emerge as themes in the open-ended questions, when asked specifically, the

majority of participants reported agreement with the coach on tasks/goals of Family Help

treatment. Therefore, Bordin's theory is likely generalizable to distance treatment. However,

other important constructs (i.e., coach attributes; inapprehension for self-disclosure, and

nonstigmatization) were identified through the participants' experiences that are not components

of Bordin's therapeutic alliance definition. Consequently, Bordin's theoretical framework may not adequately measure the constructs present in distance treatment.

Therapist attributes such as personal traits (e.g., honesty, trustworthiness, warmth and empathy) (Hersoug et al., 2001) and therapist skill (Ackerman & Hilsenroth, 2003) have been reported as important factors for the development of a therapeutic bond in face-to-face contact. As shown in the results of this study, the participants report that these coach characteristics positively impact the distance relationship. Moreover, almost all of the participants described positive coach personal traits and voice quality as attributing factors.

Participant inapprehension (ability to disclose information to coach) and *Non-stigmatizatio*n as a result of visual anonymity emerged as prominent themes in this study but are not components of Bordin's theory. Other distance treatment studies (Cook & Doyle, 2002; Day & Schneider, 2002) have found that participants report the ability to express themselves openly in distance treatment communication. Few studies have examined the role of environmental elements that influence alliance development (such as the exchange of body language and facial expressions in face-to-face contact). In the face-to-face setting, it is unclear how non-verbal cues influence the therapeutic alliance or whether they are necessary. Some professionals believe that treatments with no face-to-face contact may negatively impact the development of a therapeutic alliance if the therapist and client are not able to exchange visual cues during therapy sessions (Cook & Doyle, 2002). Conversely, as indicated by the results of this study, lack of face-to-face contact could reduce misinterpretation of body language or facial expressions that occur and are not clarified during direct therapy contact, leading to possible benefit or therapeutic gain if the client feels more comfortable in a distance setting (Parks & Floyd, 1996; Rochlen, Zack et al., 2004). Furthermore, the privacy and visual anonymity that distance therapy has to offer may

prove to strengthen the alliance if the client feels less inhibited and more comfortable disclosing personal information (Cook & Doyle, 2002; Joinson, 2001; Parks & Floyd, 1996). "Anonymity or perceived anonymity may foster intimacy by increasing the amount of personal, self disclosure in friendships on the internet, where the fear of rejection that may prevent disclosure in face-to-face relationships does not exist" (Cooke & Doyle, 2002, p. 97).

Ben-Ze'ev (2003) suggests that interpersonal communication via the Internet offers increased privacy and decreased pressure from societal norms likely because of the sense of perceived anonymity. Joinson (2001) examined the role of visual anonymity on self-disclosure in computer-mediated communication and found a significant increase in self-disclosure during computer-mediated communication compared with face-to-face communication. Joinson (2001) and Yao and Flanagin (2006) explored the theory of private versus public self-awareness as factors influencing increased self-disclosure during computer-mediated interactions. The results of this current study suggest that the visual anonymity provided by the distance treatment setting may increase the level and quality of self-disclosure as a result of being less intimidated/threatened or ashamed (decreased public awareness) and less self-conscious or more self-assured with increased autonomy (increased private awareness), which may lead to enhanced distance relationships. In the end, the main disadvantage of Family Help program reported was the desire to meet the coach (with whom a strong bond was formed) to dissolve visual anonymity by revealing identities.

The results of this study enhanced the credibility of the findings reported by Lingley-Pottie and McGrath (2006). Through a triangulation research strategy with the earlier quantitative work by the authors (Lingley-Pottie & McGrath, 2006), this qualitative study provides confirmation (Maggs-Rapport, 2001; Mays & Pope, 1995) that a positive distance

therapeutic alliance does exist from the participant's perspective and is congruent with Bordin's theory. As hypothesized, this study revealed new dimensions of distance therapeutic alliance not encompassed by Bordin's theory (i.e., coach attributes [personal traits and skill]; inapprehension for self-disclosure; and nonstigmatization as a result of anonymity). However, since this study did not include a face-to-face treatment group, it is not clear whether these dimensions are unique to distance therapeutic alliance.

Perhaps therapeutic alliance is more complex than originally proposed by Bordin, given that the constructs of the theory were developed from professional opinion where adherence to treatment plan is important to successful therapy. Conceivably, most professionals would agree that therapist attributes (personal traits and skill), client self-disclosure, and client comfort with therapy are important aspects of therapy regardless if it is delivered face-to-face or from a distance. However, these factors are intrinsic to a client's perspective about therapy. Therefore, Bordin's theory of therapeutic alliance may be limited by definition because it is not grounded in the client's opinion and may not thoroughly explain the complexity of the therapeutic relationship dyad.

The dimension of the therapeutic alliance that is unique to distance treatment is visual anonymity. The absence of visual identity offered by the distance setting may cause the clients to feel less nervous about being judged, less intimidated by the therapist, and more comfortable in their home resulting in increased level of self-disclosure and truth telling. The influence that visual anonymity may have on self-disclosure may explain the enhanced distance therapeutic alliance scores reported by Lingley-Pottie and McGrath (2006) and Cook and Doyle (2002).

This study shows that participants not only embrace distance treatment as an acceptable access solution but also would select it again over a face-to-face system. The participants'

positive distance treatment experience and expressions of strong coach relationships should be sufficient evidence to dismiss skepticism about this mode of healthcare delivery. Moreover, distance treatment modalities can offer the user visual anonymity not possible in traditional face-to-face therapy that may lead to increased treatment compliance and ultimately improved health outcomes.

Individuals with mild to moderate diagnosable mental health disorders should have the right to receive timely care to prevent the symptoms from becoming worse. New, effective distance intervention systems designed to be convenient and easily accessible to the user offer a cost-effective solution to the current wait-time issues. It is our hope that the results of this study will influence primary healthcare reform by facilitating the acceptance and uptake of distance delivery systems to resolve the disparity faced by those who are disadvantaged by limited health care access.

5.9   Limitations

One limitation of this study was the lack of member checks performed with the participants to verify accurate interpretations by researchers. However, the purpose of this study was to begin to build a foundation for future qualitative phases (Mays & Pope, 1995). In addition, the study was not designed to allow for exploration of responses since no probing questions were implemented. Health outcomes were not available at the time of analysis because the original randomized trial was not completed.

Only 2 male primary caregivers and 5 unwell women with postpartum depression were part of this study population, limiting the generalizability of the results. However, the male responses did not differ from the female respondents. Similarly, the responses from the

postpartum women did not indicate any differences in their distance treatment experience compared to the male/female parents. Since the study was not designed to gather the health status of the parents, we cannot make any assumptions of whether they were well or unwell. Given the commonality of the responses, there is some suggestion that distance treatment modalities may be applicable to both the well and unwell adults.

Finally, we had asked the participants to comment about possible limitations of a similar face-to-face treatment system that was not part of this study. Although their comments may be perceived as speculative, we believe there is merit in their experience as adults who have likely encountered limitations with some form of face-to-face healthcare service. Acknowledging their opinions and understanding their experiences may inform future system designs that will more appropriately meet the needs of society.

5.10 Nursing Implications and Future Research

Telemedicine modalities are becoming very popular modes of service delivery across disciplines, bridging the gap of limited access. Dissemination of distance treatment results to other healthcare professionals will foster collaborative relationships and lead to development of other innovative systems. Distance care delivery programs using trained, supervised non-professionals may assist with nursing shortages in some areas of primary health care services.

Future research should include distance intervention programs involving children to determine whether similar self-disclosure trends are evident when children interact with their coach in the absence of face-to-face contact. In addition, there is a need for developing sensitive and clinically valid measurement tools (i.e., self-disclosure and therapeutic alliance) for use in distance intervention, grounded in the participants' experience. Perhaps the participants' reports

about the distance therapeutic alliance may contribute to the overall understanding of the

complexity of therapeutic alliance and prompt further exploration using well-designed, grounded

theoretical research methodology.

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5.12   SUMMARY AND TRANSITION TO CHAPTER 6

At the time of publication, these were the first studies in distance child mental health services using telephone-based intervention with non-professionals. These first three articles provide initial evidence that therapeutic alliance exists between an adult and non-professional coach as well as a child and non-professional coach when treatment is delivered over the telephone, with no face-to-face contact. Recent telephone-based adult mental health intervention research has found similar results. Beckner et al. (2007), in one of the first randomized trials comparing two types of telephone therapy approaches (i.e., cognitive-behavioural vs emotional), found that a therapeutic alliance existed between adult participants with multiple sclerosis, as well as depression, and a professional therapist.

Participants' reports of their distance treatment experience (Lingley-Pottie & McGrath, 2007) validated the quantitative therapeutic alliance findings but also added contextual value by describing the quality of the distance relationship. A comparison with normative face-to-face therapeutic alliance data indicated that both adult and child distance scores seemed enhanced. The participants' described very close, trusting relationships with the telephone coach. Many participants attributed the enhanced distance treatment experience to increased privacy because of visual anonymity. Participants reported feeling more comfortable to disclose information openly and honestly to their telephone coach.

Visual anonymity seemed to make them feel more comfortable, to be at less risk of feeling judged by others, at less risk of judging their therapist and more apt to openly and honestly disclose information to their coach. From the participants' perspective, advantages of distance treatment were disadvantages of face-to-face treatment. Reported advantages and disadvantages of the two delivery systems represented a mirror image of one another. Content

analysis revealed possible differences in perceived barriers between delivery systems and suggested differences with therapeutic processes such as therapeutic alliance and self-disclosure. It is possible that fewer treatment barriers associated with distance treatment may cause less stress which may in turn enhance therapeutic alliance and self-disclosure. In the computer mediated communication literature, visual anonymity has been found to be a key factor that explains participant behaviour and may influence processes differently (Joinson, 2001). Perhaps similar findings could be true of distance treatment; however, additional research is needed.

While research regarding telephone-based child mental health intervention therapeutic alliance is limited, research using distance modalities has increased. Parenting programs delivered via telephone (e.g., Markie-Dadds & Sanders, 2006; Stallman & Ralph, 2007; Swift et al., 2009) and online (e.g., Taylor et al., 2008) have shown effectiveness but have not yet reported on distance therapeutic alliance. Similarly, randomized trials evaluating online delivery of evidence-based intervention to children for anxiety (March, Spence, & Donovan, 2009) and recurrent pain (Hicks, von Baeyer, & McGrath, 2006) have been shown to be effective but have not yet measured therapeutic alliance. King, Bambling, Reid, and Thomas (2006) conducted a study with Kid's Help Phone trained counselors who provided one help session to youth either by telephone (n=100) or online (n=85). They found that youth reported a stronger alliance with the telephone counselor. Recently, 14 adolescents (ages 12-18 years) with chronic pain related to juvenile rheumatoid arthritis participated in a pilot study of a distance, web-based self-management program (White et al., 2011). The intervention called "Teens Taking Charge: Managing Arthritis Online" was based on the Strongest Families model and included 12 weekly telephone calls from a non-professional health coach. Based on youth report on the WAI, a strong therapeutic alliance existed with their health coach (M= 230.5, SD= 10.9) and findings

showed a correlation with health outcome. The results were similar to our pediatric distance

therapeutic alliance scores (M= 236, SD=16) (Lingley-Pottie & McGrath, 2008b) and normative

face-to-face data reported by Ely, Alexander, & Reid (2005) (M = 236.14, SD=10.32). Distance

applications for child mental health can be an effective means of delivering services but more

research is needed to understand the distance treatment experience, therapeutic processes such as

therapeutic alliance and whether differences exist between delivery systems.

Since virtually no empirical evidence was found that examined child mental health

delivery system differences (i.e., face-to-face versus distance), based on the consumer or

participant's perspective, this was the focus of the next phases of our research. The goal was to

develop a scale, grounded in the participant experience, to examine differences in perceived

barriers between delivery systems. After initial development and validation, the scale would be

used with a clinical sample to examine whether differences between delivery systems exist.

Understanding perceived treatment barriers from the participants' perspective may inform

treatment delivery and program design improvements aimed at increasing access to families in

need (Seid, Sobo, Gelhard, & Varni, 2004; Seid, Opipari-Arrigan, Gelhard, Varni, & Driscoll,

2009).

Chapter 6 includes a publication under review by the Advances in Nursing Science,

entitled "Development and initial validation of the treatment barriers index (TBI) scale: a content

validity study" followed by a brief summary in section 6.1.

CHAPTER 6: DEVELOPMENT AND INITIAL VALIDATION OF THE TREATMENT BARRIERS INDEX (TBI) SCALE: A CONTENT VALIDITY STUDY

Patricia Lingley-Pottie and Patrick J. McGrath

6.1   Abstract

Distance delivery systems are being developed to increase access to mental health care. Although development is progressing rapidly, there has been little work delineating the differences between distance and face-to-face interventions from the participants' viewpoint. This paper describes scale development and a content validity study of the Treatment Barrier Index (TBI). The TBI scale has acceptable content validity (Content Validity Index = 0.96). The TBI scale will be used to examine delivery system differences. Evidence of the differences between systems may help to inform delivery system designs, ensuring that participant needs are met by enhancing access to evidence-based care.

Key words (10) : Content Validity Index; scale development; distance treatment; disinhibition; self-disclosure; stigma; visual anonymity; barriers to treatment; delivery systems; accessibility.

6.2   Background

Novel distance mental health delivery systems are being developed as access solutions. Varied technology such as the telephone (Lingley-Pottie & McGrath, 2008b), videoconferencing

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(Bouchard et al., 2004), the internet (Taylor et al., 2008; Kiropoulous et al., 2008) and email (Murphy & Mitchell, 2009) have been used to deliver evidence-based distance mental health treatment to adults and children. Distance treatment systems eliminate the need to travel, a common barrier with face-to-face services. Moreover, distance treatment systems that do not permit the exchange of visual cues (e.g., the telephone) provide visual anonymity to the participant and the therapist. Visual anonymity, or physical identity concealment, can reduce the stigma often associated with receiving mental health care. Fewer treatment barriers may increase utilization of child mental health services. However, some individuals may prefer the physical presence with their therapist in face-to-face treatment. Although distance treatment can help enhance access to care, little is known, from the participants' perspective, about differences that may exist between system delivery modalities.

In a distance treatment study, Lingley-Pottie and McGrath (2007) asked participants to describe the advantages and disadvantages of distance versus face-to-face treatment. Content analysis was employed to identify themes that described the participants' distance treatment experience as well as their opinions about face-to-face treatment. The themes emerging from the disadvantages of face-to-face interventions were inaccessibility, feeling uncomfortable or intimidated, lack of privacy, being stigmatized, feeling inhibited and the participants' judgment of the therapist. More than half of the sample (82/131) shared concern about the stigmatizing and inhibiting effects of face-to-face therapy. These results suggested barriers or obstacles to treatment imposed by the mode of treatment delivery. There has been little examination of differences in treatment barriers between different delivery systems (e.g., Face-to-face versus distance treatment).

The perceptions of users should be evaluated when new approaches to care are introduced. Gaining an understanding of differences in treatment barriers may inform selection of treatment options to best address participant needs (Rochlen, Beretvas, & Zack, 2004), enhancing service access and utilization.

The purpose of this study was to develop a scale, grounded in the participants' experiences, designed to measure differences in treatment barriers between child mental health delivery systems, in the contexts of distance versus face-to-face treatment. Phase one of this article includes the scale development methodology employed to develop the Treatment Barrier Index (TBI) sale. Phase two details the Content Validity Index (CVI) Study conducted to evaluate TBI content validity (Lynn, 1986; Rubio, Berg-Weger, Tebb, Lee, & Rauch, 2003; Streiner & Norman, 2003).

6.3   Phase I: Scale Development

A comprehensive approach to scale development was used for construct and theme definition, item generation and content validation. Our goal was to ensure that scale content was derived from the participants' experiences (Lincoln & Guba, 2000) and was complemented by the literature, clinician and expert opinion (Streiner and Norman, 2003). Scale development methodology was guided primarily by Streiner and Norman (2003) but also informed by Nunnally (1978), Nunnally and Bernstein (1994), Lynn (1986), and DeVellis (2003). For new research areas, Streiner and Norman (2003) suggest that preliminary data be used as a basis for item generation because existing scales may be theoretically incongruent with the new research findings.

To ensure that the TBI item pool would adequately examine concepts relevant to distance and face-to-face treatment, scale content was grounded in the participants' experience. After an extensive review of the data collected in the Lingley-Pottie and McGrath (2007) study, definitions were developed and items created by the authors. We will introduce main construct and theme definitions followed by a literature review and finally item generation.

6.3.1 Main construct and theme definition

The main themes that emerged from the original participant data (Lingley-Pottie & McGrath, 2007) included how the mode of treatment delivery influences the participants' perception of: 1) their own personal safety or comfort; 2) privacy or anonymity; 3) stigma or the judgment by others (public and therapist); 4) their own judgment of the therapist; and 5) treatment accessibility. These five themes comprise the overall treatment barrier construct. We will briefly define each theme in the context of our research, present a few sample participant excerpts that support these themes and provide a summary of the relevant literature.

Safety and Comfort Theme

Definition: The participant's perception of their personal comfort or safety when receiving treatment via a face-to-face versus a distance, visually anonymous delivery system. How the patient responds in treatment may be influenced by feelings of personal comfort/safety. This includes the impact that personal safety/comfort in the treatment setting may have on the client's feelings of inhibition (i.e., hold back information) and comfort level with talking freely, openly and honesty with the therapist.

Sample participant excerpts

-Distance: "more comfortable being not face-to-face"; "'coach' is thinking about me when on the phone and not worried about who is waiting next in the waiting room"; "More relaxed…you have time to think"; "I could cry on the phone didn't have to worry and feel uncomfortable".

-Face-to-Face: "You are less relaxed; not comfortable; uptight in the clinical environment"; "Uncomfortable as if every move is analyzed"; "Some of the things we talked about may have been uncomfortable face-to-face".

Literature on face-to-face treatment explains that the context of the mental health setting can have beneficial or hampering effects on the participants' treatment experience. While a welcoming, comfortable and protective treatment environment helps a person feel safe, an unfamiliar and confined setting can produce a negative experience (Glass & Arnkoff, 2005). Similarly, Greenberg and Pascual-Leone (2006) report that a calm, safe treatment environment can help an individual gain better control of emotions that are typically difficult to regulate (such as anxiety, shame or embarrassment) and which are often associated with the effects of stigmatization prevalent in the face-to-face setting. The distance treatment setting can provide comfort to the participant being within one's 'safe haven: own home'(Caplan & Turner, 2007; McKenna & Bargh, 2000) and provides visual anonymity, eliminating social anxiety caused by the exchange of visual cues.

Privacy/Anonymity

Definition: The participant's perception of their personal privacy or visual anonymity (i.e., whether their identity is known or not).

Sample participant excerpts

- Distance: "Privacy of your own home; didn't have to be seen going in or out of a psychologist's office"; "more willing to say more over the phone than she would have in person; she could write a list and say it over the phone and 'coach' would never know".

- Face-to-Face: "If you disagree they are seeing your reaction"; "On the phone feels more confidential"; "When you meet someone you see everything and the body language you react to it so it may have been more intimidating and harder to get a good fit".

In the computer mediated communication literature, research by Joinson (2001) has shown that the private versus public self-awareness theory seems to explain the effects that visual anonymity has on personal disinhibition. If an individual feels less vulnerable and less intimidated because of visual anonymity, he/she is more likely to disclose information openly (Suler, 2004). Concern about public awareness in face-to-face treatment can inhibit participant responses by suppressing self-disclosure (Pennebaker & Beall, 1986) as a mechanism of privacy protection (Larson & Chastain, 1990). Perhaps the reverse is true with distance treatment that provides increased privacy through visual anonymity which may positively influence client self-disclosure.

Stigma by others (public and therapist)

Definition: The participant's perception of public awareness that he/she is receiving therapy. This includes the influence the delivery system has on the participant's perception of how others (public/peers) and therapist judge or view him/her.

Sample participant excerpts

-Distance: "Good for child to not have to see someone and feel stigmatized…Didn't feel looked-down on."; "More objective over the phone, not seeing how someone is dressed etc";" I never felt that 'coach' was being judgmental".

- Face-to-Face: "You would recognize me on the street and might judge me, would be a worry";

may be bias (body language, etc.), worry about opening up. On phone you have anonymity".

Stigma associated with receiving mental health services is a well known treatment

barrier. This psychological phenomenon can cause concern, even for those with mild mental

health issues, if they perceive that others may stereotype them or socially reject them because of

their problems (Perlick et al., 2001). Similar to Perlick et al., the data in our study (Lingley-

Pottie & McGrath, 2007) suggested that stigma concerns associated with treatment are prevalent

and should be more widely addressed. The effects of perceived stigma, such as avoiding

rejection by peers and/or therapist (Glass & Arnkoff, 2005; Perlick et al.), can deprive many of

needed services, resulting in untreated mental health conditions.

Therapist judgment by the participant

Definition: The participant's personal judgment and acceptance of the therapist. Therapist

verbal (e.g., voice quality, tone, inflection and what the therapist says) and non-verbal (e.g.

therapist appearance, body language) cues can influence the participant's opinion of the

therapist.

Sample participant excerpts:

- Distance: "Developed a better trust. No judgment. Appearance or body language will make a

difference. Developed a bond quicker"; "No distractions from 'coach' body language; focused

on voice".

- Face-to-Face: "You can take physical appearance and change how you feel about a person";

"Coach may have body language you don't like"; "You may not think person is so friendly when

you meet them"; "You look to see approval in their eyes, judgments".

The participant's judgment of the therapist, specifically negative opinions based on appearance and body language as a barrier to treatment, was an emerging theme in our data (Lingley-Pottie & McGrath, 2007). There is a scarcity of literature in this area. Fenigstein, Scheier, and Buss (1975) theory explains two aspects of self-consciousness as social stigma or perception of public judgment concerns but also one's own private concerns. The latter would explain the cognitive nature of an individual's own judgment of a therapist. Wheeless's (1976) theory of interpersonal solidarity (i.e., closeness or trustworthiness) in a relationship has been shown to correlate positively with self-disclosure which parallels closely with our data emerging about personal judgment of the therapist.

Treatment accessibility

Definition: The participant's perception of treatment accessibility. Perceived treatment barriers imposed by the delivery system can impact treatment acceptance and attendance.

Sample participant excerpts

- Distance: "Don't have to travel; easier to talk on the phone than to get out and make appointment, no travel or babysitter needed; "Never had to worry about the weather"; "Could do the dishes while talking. Don't have to drive or pay."

- Face-to-Face: "Travel, inconvenience, time and expense to go someplace"; "Not convenient for most families, having to drag him out of class in front of friends to appointments. Time off work. No evening/weekend service. Strange environment for child; sends message to child that something is wrong with them".

Gaining and maintaining access to traditional face-to-face mental health treatment services can be impeded by obstacles to treatment (Lipman, 2003). The Health Belief Model (HBM) (Becker & Maiman, 1975), developed to predict an individual's health behaviour,

includes a construct which hypothesizes that perceived barriers to behavioural change may affect an individual's readiness to seek or to accept services.

Existing scales did not cover these dimensions. For example, the Distance Communication Comfort Scale (DCCS) (Schneider, 1999) measures comfort with three modes of psychotherapy (i.e., face-to-face, telephone, video) in the context of adult therapy. The Barriers to Care Questionnaire (BCQ) (Seid et al., 2004), developed by professional opinion, evaluates participants' perception of how well the clinic and doctor met their needs, in the context of face-to-face child mental health services. The Barriers to Treatment Participation scale (Kazdin, Holland, Crowley, & Breton, 1997), also based on professional opinion, measures treatment barriers in the context of face-to-face treatment with a focus on accessibility and treatment participation. Colonna-Pydyn, Gjesfjeld, and Greeno (2007) acknowledged the importance of developing new treatment barrier scales that capture the participants' opinions and can be utilized across settings.

6.3.2 Item generation

Caution was used when creating the items so that the wording was clear, concise and relevant with current-day language (DeVellis, 2003; Streiner & Norman, 2003) and applicable to both treatment delivery settings. To be inclusive, preventing the omission of an essential item, many items were generated to ensure theme content coverage (Clark & Watson, 1995; Nunnally, 1978; Streiner & Norman, 2003). Although the authors edited the participant responses, caution was taken to ensure that the meaning was captured. The literature was reviewed to determine if important items were missing but no new items emerged.

Between 16 and 20 items per theme were created for an item pool of 94 items. Some of the items were reverse-scored to address the potential of response bias (DeVellis, 2003). Once

the authors established the initial item pool, grounded in the participants experience, we proceeded to the next phase to conduct a content validity study.

6.4   Phase II: Scale Validation

A content validity index (CVI) study was conducted to evaluate the content validity of the TBI scale (Lynn, 1986; Polit & Beck, 2006; Streiner & Norman, 2003). A Content Validity Index is an indicator of content relevance inter-rater agreement (Polit & Beck, 2006). Emphasis was placed on development of strong theme definition; comprehensive instructions; clear, unambiguous and relevant items and a select variety of qualified content judges.

The sample size was determined *apriori* to be 6-10 participants per group to optimize the opportunity to gain information about the measure (Rubio et al., 2003) by ensuring variability within expert groups (Lynn, 1986) and to decrease chance agreement between judges (Polit & Beck, 2006).

Participants

We targeted participants from three specific content expert groups: 1) Psychometric experts; 2) Therapists and coaches; 3) Community Members. Although content validity studies do not typically include community members in the expert panel,
we included them, because we considered the participants as experts with the phenomenon of interest (Beck & Gable, 2001; Grant & Davis, 1997; Mastaglia, Toye, & Kristjanson, 2003). Professional opinions about perceived barriers could vary from participant opinion (Mastaglia et al.), especially when dealing with stigma and judgment of the therapist. Exclusion of the participant opinion in this phase could introduce professional bias, risking loss of items that are very important to the participant and the underlying phenomenon of interest.

To ensure representation from both distance and face-to-face treatment perspectives, at least 50% of the latter two groups were required to have distance therapy experience. Participants in Groups 1 and 2 were recruited through local universities and hospitals. Group 3 members with distance treatment experience were recruited from a sample of convenience through the Strongest Families Program (formerly the Family Help Program), a distance treatment program (Lingley-Pottie & McGrath, 2007, 2008b). Other community members with face-to-face treatment experience were recruited through word of mouth.

Twenty-three participants, in Nova Scotia, Canada, took part in this study (i.e., Psychometric/Academic experts: **8** (Mean age = 42, Standard Deviation (SD)= 11.8); Therapists: **6** [3 distance experience] (Mean age= 28, SD= 2.8); Community Members: **9** [5 distance experience] (Mean age= 42, SD= 8.6) between October and December 2008. The majority of the sample was female (n= 3 males). Eighty-seven percent (n=20) were Caucasian, 9% African-Canadian (n=2) and 4% Hispanic (n=1). Sixty-five percent (n=15) had completed university, including 8 with a graduate level degree.

Ethical approval was granted by the IWK Research Ethics Board. Participants received a $25.00 honorarium for the return of the completed initial questionnaire evaluation and a $10.00 honorarium for follow-up item revision re-evaluation.

6.4.1 Methods

Participants received a package that contained:

- Study introduction cover letter;

- Study information form introducing the study and detailing study purpose and design;

- Questionnaire package (included: a cover page explaining the contents and an example of how to complete the CVI sections; an instruction sheet about how to complete the CVI sections; the theme definition table; the TBI scale).

The 5 scale themes were defined. Item rating scales were provided for content relevance or fit (Content Validity Index: 1= Item does not fit; 2= Item somewhat fits; 3= Item fits quite well; 4= Item definitely fits), item clarity (1=not clear; 2= major revision; 3=minor revision; 4= is clear) and item inclusion (1=delete item; 2=retain item) with a comment section to make recommendations. The participant ratings were calculated to yield a Content Validity Index for each item (I-CVI) and an overall Scale Content Validity Index (S-CVI). To identify scale deficiencies (Clark & Watson, 1995) participants were encouraged to add comments or suggestions corresponding to each item, suggestions for additional items to be added per theme and suggestions for other themes not covered by the scale.

A 5-point Likert scale was chosen as the response rating scale for the TBI questionnaire because we felt it would be more comprehensive for telephone administration. Although the 7-point Likert scale offers more precision in measurement (Streiner & Norman, 2003), it can be cumbersome to administer over the phone and can cause respondent confusion if anchor differences are ambiguous (Clark & Watson, 1995). We found no consensus in the literature supporting the assumption that a 7-point scale is substantially superior to a 5-point scale (Clark & Watson, 1995), with telephone administration. Therefore, two, 5-point response rating scales (with different anchors) that fit the TBI items were selected for participant evaluation.

The TBI scale telephone administration instructions were: "I would like for you to think about your experience with the help you received in <face-to-face> or <distance> treatment

(staff state the relevant treatment delivery term). Based on your experiences with the help that you received, <face-to-face> or <distance>, please respond to the following questions.".

6.5   Analysis

Item Content Validity Index (I-CVI)

Criteria for evaluating feedback from the participants were established *a priori*. I-CVI was calculated by the number of participants who rated the item relevancy as 3 or 4 divided by the total number of participants (Polit & Beck, 2006). Items with a minimum I-CVI of 0.78 would be retained (Lynn, 1986; Polit & Beck, 2006). Any items deemed to be important to include in this scale were revised and re-evaluated to yield at least the minimum recommended I-CVI value.

Scale Content Validity Index (S-CVI)

The method proposed by Polit and Beck (2006) was used in this study to evaluate S-CVI as a measure of average item quality by summing the I-CVIs and dividing by the number of scale items (SCVI/Ave). An SCVI/Ave of 0.90 or higher indicates excellent content validity (Polit & Beck, 2006). Once the An S-CVI was at an acceptable level, the scale would be ready for use in the next phase.

Item Inclusion

We reviewed the rationale participants provided for item deletion to insure that items, identified as important to the participants, were not deleted (Lynn, 1986).

Item Clarity

Any items deemed unclear by more than 20% of the reviewers were revised for re-evaluation.

6.6   Results

Although a few new *items* were suggested, no additional *themes* were suggested. Re-evaluation was required for 19 revised items and 8 new items (see Table 6.1). Some low I-CVI ratings were related to inappropriate theme categories. Such items were re-evaluated under the recommended theme. All members participated in the revision evaluation. In the end, 102 items were evaluated, 52 deleted, yielding a final scale of 50 items.

Among the items retained, each yielded a content validity index rating of greater than 0.80 (See Table 6.2 for the final TBI scale with content validity ratings). The I-CVI ranged from 0.83-1.0 and sub-theme CVI ranging from 0.94-0.96 all with acceptable ratings regarding clarity. The overall S-CVI rating of 0.96 suggests that this initial scale design yields excellent evidence of face and content validity.

The majority of the members in each group (62% over all) preferred the Strongly Disagree to Strongly Agree response rating system for the TBI scale compared to the *Not at all* to *Always* rating scale.

6.7   Discussion

If perceived barriers to treatment affect decisions to receive services, it is essential to gain an understanding of any differences between treatment modalities, from the participants' perspective, so that solutions for improvements can be implemented.

To examine perceived obstacles to treatment differences between modes of service delivery, a scale reflective of the participants' perspective was developed. This initial scale development research phase was the foundation of establishing face and content validity of the TBI scale. The final TBI scale has been shown to have excellent content validity and is

acceptable for the intended use in a future study to examine treatment delivery differences from the participants' perspective. Since the purpose of scale development was not intended to establish psychometric properties, some item redundancy was maintained and will be reviewed in later development and testing stages (Streiner & Norman, 2003). In addition, the number of items retained (50) is excessive and burdensome to be useful in clinical care. Future developments will include using factor analysis to reduce the item set (Streiner & Norman, 2003).

6.8   Conclusion

Although there is a need for rapid integration of new service delivery options, we do not yet fully understand the effects that different modes of treatment delivery may have on the participant. The TBI scale will be utilized to examine differential characteristics between distance treatment and face-to-face, as perceived by the participant. Knowledge gained about perceived obstacles to treatment and treatment delivery differences/influences may inform health systems design and evidence-based clinical care. Ideally, health delivery system options should be designed to meet the participants' needs without posing personal obstacles.

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Table 6.1: Revised Items

Revised item **Theme 1: Personal comfort/safety**	*Original Item (Original iCVI)*	Revised iCVI	Retained Y=Yes/N=No
I found it hard to focus during my sessions	*Distracted by other things going on around me (0.78); It was easy to think and focus on what I needed to (0.73)*	0.81	**N**
I felt uncomfortable when people made notes about what I said	*Self-conscious or uncomfortable when others write things about me (0.86)*	1.0	**Y**
I felt relaxed enough in this setting to dress any way I wanted to	*Like I could dress any way I wanted to and no one would know (0.65)*	0.95	**Y**
I felt as though I was being analyzed	*Like my every move was being watched or analyzed (0.78)*	0.87	**Y**
I felt uncomfortable when asked personal questions	New item suggested to be added under theme	0.96	**Y**
Theme 2 : Privacy/anonymity			
I worried that someone would find out that I was getting counseling	*As if no knows I am getting help (0.83)*	1.0	**Y**
The privacy I felt in the treatment setting helped me to admit my problems openly	*Easy to admit that you have a problem because no one knows you (0.91)*	0.96	**N**
I felt that what I talked about was confidential	*Like my discussions or what I say is private (0.96)*	1.0	**Y**
I felt that what I did during my treatment sessions was private	*That how I act or what I do is secret (0.68)*	1.0	**Y**
I felt that my identity was protected	*I felt sort of anonymous(0.61)*	0.96	**Y**
The privacy I felt in the treatment setting helped me open-up about things I would usually keep to myself	*That I could open-up about things I would usually keep to myself because it was private (0.91)*	0.96	**Y**
The treatment setting provided me with enough privacy	*As if my problem is private (0.95)*	0.96	**Y**
I was concerned that people talked about me when my sessions were over	*Self-conscious because my therapist and others may talk about me when I am not there (0.90)*	1.0	**Y**
Theme 3 : Judgment by others Stigma			
I felt that I was accepted for who I am	*Accepted by my therapist (0.91)*	1.0	**Y**
I felt as though no one cared how I looked	*Like I could dress any way or have my hair anyway I wanted to and no one would judge me for the way I looked (0.87)*	0.91	**Y**
I felt that people looked down on me for needing counseling	*Nervous that other people would judge me because I was getting help (0.91)*	0.96	**Y**
Theme 4 : Client's judgment of therapist			
My therapist annoyed me during my sessions	*Like my therapist does things that annoy me (0.82)*	0.96	**Y**
I formed a negative opinion of my therapist (e.g. appearance, voice, or what he/she did)	*Like I judged my therapist for how he/she looked or behaved (0.91)*	1.0	**Y**
I felt that my therapist knew what he/she was doing	New item suggested to be added under theme	1.0	**Y**
I got the help I needed from my therapist	New item suggested to be added under theme	1.0	**Y**
Theme 5: Accessibility/convenience			
There were costs to me to have counseling sessions (e.g. financial, time or psychological)	*As though there was a financial burden to have the sessions (1.0)*	1.0	**Y**
It was easy to commit to making my sessions.	New item suggested to be added under theme	0.96	**Y**
I would be worried about missing a session if something came up (bad weather, childcare issues, illness, work)	New item suggested to be added under theme	0.87	**Y**
The wait to get counseling was too long	New item suggested to be added under theme	1.0	**Y**
My sessions kept me from getting important things done	New item suggested to be added under theme	0.86	**Y**
The treatment location was convenient for me	*Like sessions were easy to get to (0.91)*	0.96	**Y**
There was a lot to organize in order to make the sessions	New item suggested to be added under theme	0.91	**Y**

Table 6.2: Final scale items: Item Content Validity Index (I-CVI noted in bold font)

Personal comfort/safety	Privacy/anonymity	Judgment by others Stigma (public/therapist)	Client's judgment of therapist	Accessibility/convenience
1. I felt intimidated by my surroundings **1.0**	1. I worried that someone would find out that I was getting counseling **1.0**	1. I worried about what my therapist thought of me **0.96**	1. I got the help I needed from my therapist. **1.0**	1. The session was scheduled at a time that was convenient to me **1.0**
2. I felt comfortable in the treatment setting. **1.0**	2. I felt that my problems were private **0.95**	2. I worried that I was judged negatively because of my appearance **0.96**	2. My therapist's expressions made me feel good about myself **0.91**	2. I had to hurry to make my session on time **0.91**
3. During my session I felt rushed, like someone else was next in line waiting. **0.96**	3. I felt that what I talked about was confidential **1.0**	3. I worried that my therapist judged me because of how I act **1.0**	3. I felt intimidated by my therapist **0.87**	3. There were costs to me to have counseling (e.g. financial, time or psychological costs) **1.0**
4. I felt relaxed enough in this setting to show my true emotions. **1.0**	4. I felt that what I did during my treatment sessions was private. **1.0**	4. I worried that if I told the truth my therapist would judge me **1.0**	4. I felt confused by my therapist's reactions **0.87**	4. I felt that I had access to someone at anytime **0.96**
5. I felt safe to talk openly about private things. **0.96**	5. I felt that my identity was protected. **0.96**	5. I was at ease telling my therapist if I disagreed about something because he/she would not judge me **0.96**	5. I felt that I could trust my therapist **1.0**	5. It was easy to commit to making my sessions. **0.96**
6. I felt uncomfortable when people made notes about what I said. **1.0**	6. I was open about answering embarrassing questions **1.0**	6. I held back telling my therapist things because he/she would judge me. **0.91**	6. My therapist annoyed me during sessions **0.96**	6. I would be worried about missing a session if something came up (e.g. bad weather, childcare issues, illness, work) **0.87**
7. I felt uncomfortable when asked personal questions. **0.96**	7. I was concerned that people talked about me when my sessions were over. **1.0**	7. I felt I was judged by others as if our problems were worse than they actually were **0.83**	7. My therapist paid attention to what I said **0.96**	7. The wait to get counseling was too long. **1.0**
8. I felt relaxed enough in this setting to dress any way I wanted to. **0.95**	8. I felt that if I had tears, I would not feel embarrassed. **0.91**	8. I felt that I was accepted for who I am **1.0**	8. I formed a negative opinion of my therapist.(e.g. appearance, voice or what he/she did) **1.0**	8. My sessions kept me from getting important things done **0.86**
9. I felt as though I was being analyzed. **0.87**	9. The privacy I felt in the treatment setting help me to open-up about things I would usually keep to myself. **0.96**	9. I felt as though no one cared how I looked. **0.91**	9. My therapist truly cared about my situation **1.0**	9. The treatment location was convenient for me. **0.96**
	10. The treatment setting provided me with enough privacy. **0.96**	10. I felt that people looked down on me for needing counseling. **0.96**	10. Issues important to me to talk about were avoided by my therapist. **0.87**	10. There was a lot to organize in order to make the sessions. **0.91**
			11. I felt that my therapist knew what he/she was doing. **1.0**	
Score: 0.97	**Score: 0.97**	**Score: 0.95**	**Score: 0.95**	**Score: 0.94** **Overall Scale Score: 0.96**

6.10 Summary and Transition to Chapter 7

Participants in our studies reported their opinions of the distance treatment experience and made comparisons with face-to-face treatment. These results suggested differences in perceived treatment barriers between delivery systems. In addition, the participant responses suggest possible enhancement of therapeutic alliance and self-disclosure with distance treatment. The results described by the participants enriched our understanding of their experienced treatment barriers, adding to the existing literature on barriers in child face-to-face mental health treatment (Kazdin et al., 1993; Kazdin & Wassell, 1999). Kazdin's seminal work in this area has been valuable to identifying potential treatment barriers in face-to-face therapy. However, Kazdin's research was limited by using only professional opinion for development of the Barriers to Treatment Participation scale (BTPS). As well, the results may not be generalizable to distance treatment delivery systems as the BTPS scale was developed on face-to-face samples. For example, perceived stigma, a prominent theme emerging from participant opinion in our study, may be a treatment barrier from some individuals that could potentially hinder outcome if services are avoided (Perlick et.al, 2001). Since professionals' vs participants' opinions on perceived treatment barriers could vary, we planned to develop a scale that was grounded in the participants' experience (Sobo, Seid, & Gelhard, 2006) to further explore delivery system differences. Kazdin et al. (1993) acknowledged that clinic setting elements may limit generalizability of the BTPS scale and study results. Therefore, we believed it was important to use a scale derived from participant experiences (Colonna-Pydyn et al., 2007) that is also relevant to both delivery systems (i.e., Distance versus Face-to-face) to examine differences between perceived treatment barriers.

The objective of developing the Treatment Barriers Index (TBI) scale was to examine perceived barrier differences between child mental health treatment delivery systems from the participants' point of view (i.e., face-to-face vs distance). TBI scale has been shown to have acceptable content validity (Lingley-Pottie & McGrath, 2011).

Chapter 7 is a manuscript that is prepared for journal submission "Barriers to mental health care: perceived delivery system differences". Finally, chapter 8 consists of a general discussion, future directions and conclusion.

CHAPTER 7: BARRIERS TO MENTAL HEALTH CARE: PERCEIVED DELIVERY SYSTEM DIFFERENCES

Patricia Lingley-Pottie, Patrick J. McGrath and Pantelis Andreou

7.1　Abstract

Background Barriers to access of mental health services have prompted the development of new ways to deliver care. Distance, telephone-based interventions can bridge the access gap, making interventions more readily available. Understanding differences between face-to-face and telephone treatment, from the participants' perspective may prompt improvements in care.

Methods Sixty participants with face-to-face treatment experience and who were parents of a child who had received Strongest Families, telephone intervention for behaviour disorder took part in this study. Based on their experiences with both face-to-face and distance treatment, they completed a telephone questionnaire to explore perceived treatment barriers (Treatment Barriers Index-TBI), therapeutic alliance, self-disclosure and health outcome. The order in which questionnaires were administered regarding their experiences with the different treatment modalities (face-to-face vs distance treatment) was controlled by random assignment.

Results The TBI scale was shown to have strong internal reliability (Cronbach alpha: 0.95 and 0.90, face-to-face and distance treatment respectively). Exploratory factor analysis supported the use of the TBI scale as one composite score (eigenvalues: 3.04, 3.02 and 2.89 for the total sample, face-to-face and distance respectively). Statistically significant differences were found between face-to-face and distance TBI mean scores, indicating fewer perceived barriers with distance treatment. Therapeutic alliance and self-disclosure were shown to have a significant

influence on TBI scores. In general, mean scores were found to be higher with distance treatment.

Conclusion Treatment barriers are higher with face-to-face than distance treatment. There is preliminary evidence that there may be some differences in therapeutic processes between delivery modes suggesting enhanced therapeutic alliance and self-disclosure scores with distance treatment. The combination of increased access, convenience and privacy with distance treatment may provide an enhanced treatment experience for some individuals.

7.2   Background

Barriers to mental health services can impede access to care. Individuals vulnerable to stigma, such as those with perceived stigmatizing conditions (e.g., mental health, physical disabilities, overweight); children (Kazdin et al., 1997; Kendall & Sugarman, 1997; Palermo, Wilson, Peters, Lewandowski, & Somhegyi, 2009); or rural residents (Befort et al., 2010; Griffiths & Christensen, 2007), may avoid or resist treatment to spare themselves of heightened anxiety caused by fear of public rejection (Perlik et al, 2001;Titov, 2007; Titov, Andrews, Schwencke, Drobny, & Einstein, 2008). The decision to attend therapy sessions can also be affected by the participant's judgment of the therapist (e.g., appearance, mannerisms) or even misinterpretation of visual cues (e.g., facial expressions, body language) (Lingley-Pottie & McGrath, 2011). Moreover, travel barriers imposed by clinic appointments can hinder access if the individual is constrained financially, physically, geographically or by routine responsibilities (e.g., work, school, commitments).

Regardless of age, gender, race, religion, sexual orientation, or socio-economic status, anyone can be affected by challenging treatment barriers. Resultant avoidant, resistant or

noncompliant behaviours can prevent individuals from accepting, engaging in and adhering to regular treatment appointments, adversely affecting health outcomes (Seid et al., 2009).

Recently, efforts have been made to develop distance mental health delivery systems using technology to overcome physical and psychological access barriers. Video-conferencing can overcome the travel barrier, especially for those in rural regions (Bouchard et al., 2004; Swinton, Robinson, & Bischoff, 2009). Similarly, web-based (Taylor et al., 2008) and telephone-based (Lingley-Pottie & McGrath, 2008a) mental health interventions not only address travel barriers but have the potential to reduce stigma and fear of public rejection because participants can not be seen (Beattie, Shaw, Kaur, & Kessler, 2009), enhancing perceived privacy. Distance treatment that does not permit exchange of visual cues provides the participants with visual anonymity. Participants vulnerable to stigma or who are uncomfortable with the exchange of visual cues may prefer the physical and psychological detachment with distance treatment. However, others may prefer the physical presence offered by face-to-face treatment.

Although distance treatment systems hold promise to increase access, little is known about how the delivery system influences the participant. There are some indications that there may be differences. For example, Lingley-Pottie and McGrath (2006; 2008b) established that a strong distance therapeutic alliance can exist with no visual contact and that the distance therapeutic alliance may be enhanced compared to face-to-face. Similar findings were reported by Day and Schnieder (2002). Furthermore, Lingley-Pottie and McGrath (2007) found that participants reported feeling relaxed with a sense of disinhibition and non-stigmatization, in the distance setting, enabling them to disclose information more openly and honestly over the telephone. Visual anonymity may influence therapeutic alliance and level of self-disclosure differently in distance than in face-to-face therapy.

The literature on treatment barriers is limited to face-to-face therapy and requires further exploration (Colonna-Pydyn et al., 2007). Due to the scarcity of research exploring the participants' distance treatment experience, existing scales (Kazdin et al., 1997; Seid et al., 2004) did not seem to adequately assess the visual anonymity phenomenon, a distinct difference between delivery systems. Lingley-Pottie and McGrath (2011) developed the Treatment Barriers Index (TBI), grounded in the participants' experience, to examine possible differences between the experience of distance and face to face interventions and to begin to understand how perceived barriers may influence treatment processes differently between systems.

The primary study objective was to determine if there were differences in perceived treatment barriers between participants' experiences with distance versus face-to-face therapy. It was hypothesized that perceived barriers would be lower with distance treatment. To explore other differences between delivery systems, secondary objectives included examination of therapeutic alliance, self-disclosure and outcome scores. TBI scale internal consistency reliability and exploratory factor analysis was planned.

7.3   Methods

7.3.1 Study Design

This single-site, within-subject questionnaire study was conducted from the IWK Health Centre in Halifax, Nova Scotia, Canada from June to October of 2009, using a convenience sample from the Strongest Families service program (formerly Family Help). The Strongest Families distance intervention programs teach families evidence-based skills to overcome pediatric mental health problems (Lingley-Pottie & McGrath, 2006). Families receive educational materials (i.e., handbooks and skill demonstration videos) and 12 weekly telephone

sessions from a trained, non-professional coach. The coach and participant never meet face-to-face. All contact is by telephone.

7.3.2 Participants

Eligible participants were adult caregivers who received Strongest Families intervention for their child with behaviour difficulties. They were also required to have some experience with face-to-face counseling (i.e., defined as help provided by a social worker, case worker, nurse, psychologist, therapist or equivalent). There were no restrictions for the type or purpose of the face-to-face help received that involved the parent (e.g., therapy for him/herself; for the same child as treated in Strongest Families, for another child in the family or couple therapy). The protocol was ethically approved by the IWK Research Ethics Board. Participants received $25CAN (i.e., check or gift certificate) for their time commitment to complete the questionnaire.

One hundred and sixty seven participants were sent a study information letter and consent form in the mail. Ninety participants were successfully contacted with 30 ineligible (e.g., 6 refused; 24 did not have relevant face-to-face experience). Sixty participants took part in this telephone questionnaire study (Table 1). The type of help received, provider of face-to-face treatment (See Table 1) and recipient of care varied (parent: 23/60, 38%; child: 31/60, 52%; both: 6/60, 10%). The experience with face-to-face treatment was not necessarily the same child who participated in Strongest Families. The majority of the participants were female caregivers (n=58/60, 96.7%) living in urban regions of Halifax municipality, Nova Scotia (n=44/60, 73.3%).

Sample size calculations were completed *a priori* based on paired data. Sixty participants were required to achieve 90% power to detect a five point difference in scores with alpha set at 0.05. We were interested in detecting a small, within subject difference in TBI scores.

7.3.3 Measures

The TBI scale explored the participant's perception of perceived treatment barriers when comparing two different delivery systems (i.e., Distance versus Face-to-face). The TBI scale has 50 items and consists of five main themes, identified in previous research as potential treatment barriers (e.g. comfort/safety in the setting; privacy/anonymity; stigma or judgment by the public or therapist; the participant's own judgment of the therapist; and accessibility/convenience) (Lingley-Pottie & McGrath, 2011). With a 5-point likert scale (1= Strongly disagree to 5= Strongly agree), a high total composite score indicates few barriers and a low score suggests more barriers. TBI has excellent content validity (Lingley-Pottie & McGrath, 2011). Participants were asked to rate their perceived therapeutic alliance (0- 5 rating scale: not strong at all to very strong), self-disclosure (0- 5 rating scale: not comfortable telling my therapist things at all to very comfortable telling my therapist things) and health outcome (4 point likert sale: 0= no improvement to 3= very good improvement) experience with each delivery system.

7.3.4 Procedures

Once consent was obtained, the participants completed the telephone questionnaire once from each perspective (experience of face-to-face versus distance treatment), according to a random sequence.

The sequence was generated with a 1:1 ratio using a computerized random permuted block sequence generator (Random Allocation Software http://mahmoodsaghaei.tripod.com/Softwares/randalloc.html *last accessed on January 12, 2011)* with block sizes 4 and 6.

Study staff administering the questionnaire were blinded to the sequence and block sizes until administration. There were no sequence or protocol violations.

7.3.5 Analysis

Data were inspected via use of scatter-plots to identify any violations of underlying assumptions (i.e., normal distribution, extreme outliers). SAS version 9.2 and SPSS version 17 were used for data analysis with statistical significance set at $p < 0.05$ for 2 sided-tests.

To examine mean differences between conditions (face to face versus distance treatment), cross-over t-test and General Estimated Equations (GEE) analysis of variance, an extension of General Linear Modelling (GLM) for correlated data, were performed on TBI scores (primary effect). McNemar test of agreement was used *post hoc* to confirm GEE findings. Subjects were assigned to a category depending on TBI scores (i.e, high or low) by condition (i.e, face-to-face or distance). TBI, therapeutic alliance, self-disclosure and outcome score means were examined to identify trends between conditions. GLM GEE was used to explore possible influences of therapeutic alliance, self-disclosure and outcome on TBI scores. In addition, GLM MANOVA was used to explore multivariate associations of perceived barriers, alliance and self-disclosure between conditions by using mean score group differences for the two conditions (i.e., distance versus face-to-face). Score differences between systems were used in the repeated measures MANOVA to control for between subject comparisons with this with-in subject design. GEE GLM was performed to explore possible associations between demographic data and the TBI score. The statistical tests used account for multiple comparisons. Relationships between therapeutic alliance, self-disclosure and outcome scores were examined using Pearson Correlation Coefficient.

Internal reliability of the TBI scale was evaluated using Cronbach alpha coefficient. Exploratory factor analysis was used to determine the acceptability of using the scale as one factor, composite score.

7.4   Results

There were no violations of assumptions underlying the statistical tests used.

Mean TBI, therapeutic alliance, self-disclosure and health outcome scores are reported in Table 2. Examination of score frequencies (TBI, therapeutic alliance and self-disclosure) identified a trend with limited variability and possible data truncation of distance treatment scores compared to face-to-face. Participants rated outcome quite high for both conditions (Table 2).

The mean Total TBI scores were higher for distance than face-to-face treatment regardless of order of questionnaire administration (Table 3). The results of the crossover t-tests for the Total TBI scores indicated a statistically significant condition effect (Table 4) indicating that there are fewer perceived barriers with the distance setting compared to the face-to-face setting. A significant GLM GEE test (β=10.97, 95%CI (2.99, 18.94), p = 0.007) and McNemar test (see table 5) provided additional support of this finding. The McNemar's test for marginal homogeneity indicated that the marginal probabilities are not the same. The results also indicate that 67% of the subjects who had face-to-face first rated distance had fewer perceived barriers, whereas 30% of subject who had distance first rated face-to-face having fewer barriers. There were no significant associations with demographic factors.

The period effect, as calculated by the cross-over design t-test for paired data (table 4), was approaching statistical significance. Similar results were shown when TBI scores were examined using GLM GEE test (β= 13.0, 95%CI (-0.39, 26.4), p = 0.057). Although we observed that a cross-over effect was approaching statistical significance, we decided to use the pooled data from both conditions in the analysis to estimate main effects. The results of this near interaction effect indicated that regardless of questionnaire administration order, there was little

difference in the mean Total TBI scores for the distance setting (214.6 versus 216.7 for periods 1 and 2 respectively). However, the face-to-face Total TBI scores, on average, dropped by 15 points when it was administered second in the sequence compared to when it was administered first. Similar trends were observed with therapeutic alliance and self-disclosure means but less obvious for health outcome (Table 2).

We examined possible influences on the TBI score using GLM GEE. When entered into the model, Therapeutic Alliance and Self-disclosure score were found to have a significant effect on the TBI score (β = 6.83, 95% CI (3.57, 10.09), $p <0.001$ and β= 6.80, 95% CI (2.10, 11.5), p=0.005 respectively) favoring distance treatment but health outcome did not (β =3.02, 95% CI (-0.73, 6.77), p = 0.11). Regardless of delivery mode or order of questionnaire administration, therapeutic alliance scores were consistently found to correlate moderately to highly with fewer perceived barriers (See Table 6). Therapeutic alliance scores were also highly correlated with self-disclosure scores except when participants reported on their distance experience when distance was second in the questionnaire sequence. Similarly, therapeutic alliance scores were moderately correlated with outcome scores except when participants reported on their distance experience when distance was first in the questionnaire sequence.

The Wilks' Lambda multivariate test suggests that the mode of treatment delivery has a significant effect on perceived treatment barriers, therapeutic alliance and self-disclosure ($F_{(3,55)}$ = 2.80, p= 0.05).

Initial internal reliability indicated strong reliability when the TBI scale was delivered based on either mode of treatment (Cronbach alpha ratings of 0.95 and 0.90 for face-to-face and distance treatment respectively) (Nunnally & Bernstein, 1994; Streiner & Norman, 2003). An exploratory factor analysis performed on all 120 scores showed an eigenvalue of 3.04 and

separately for each treatment modality (Face-to-face=3.02; distance= 2.89) supporting the scale being used as one composite score.

7.5   Discussion

The results provide evidence that there are differences in perceived barriers between delivery systems. There were significantly more perceived barriers associated with face-to-face than distance treatment. Additionally, therapeutic alliance and self-disclosure contribute to perceived treatment barriers but perceived health outcome may not have. Perceived barriers, therapeutic alliance and self-disclosure, as a group of variables, differed significantly between delivery systems.

The strong, significant correlation found between therapeutic alliance and fewer perceived barriers is consistent with findings reported by Kazdin et al., (2005) in face-to-face child mental health services. Kazdin et al., (1997) also found significant correlations between perceived barriers and parental stress. It is possible that some individuals who perceive fewer access and psychological barriers with distance treatment are less stressed and more comfortable to talk openly in their home setting, positively impacting therapeutic alliance and outcome. The two instances where lack or correlation was found between distance therapeutic alliance and outcome or self-disclosure scores were likely affected by ceiling and the interaction effects.

Generally scores were higher for distance treatment. However, when the distance survey was administered first, score differences were larger than when the face-to-face experience was reported first. This trend may be explained by the individuals' baseline starting point. Recalling past face-to-face experiences first and rating them on a 5 point scale may not provide much room for rating the distance setting in the second case. However, if the distance experience is the

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baseline comparator (where the results show agreement that the setting has fewer barriers producing higher ratings), it is logical that the ratings for the face-to-face setting would have room on the 5 point scale to choose lower ratings to indicate more perceived barriers in comparison to the distance setting. This means that, in general, participants' face-to-face experiences were positive so when rating it first there would have been little room remaining on a 5-point scale to rate the distance experience higher.

Increased concern about societal norms or stigma, when receiving mental health services, may cause participants' to find ways to protect themselves (Gangestad & Snyder, 2000). In an attempt to self-preserve, some individuals may purposefully hide true emotions (Pennebaker & Beall, 1986) or falsely portray oneself (Kelly, 2000; Suler, 2004) to avoid rejection, discrimination or disapproval. For the same reasons, others may keep secrets or conceal information from a therapist (Vrij, Nunkoosing, Paterson, Oosterwegel, & Soukara., 2002). Moreover, the emotions related to stigma may become difficult to self-regulate (Greenberg & Pascual-Leone, 2006) that some may hold-back information in a face-to-face setting (Pennebaker & O'Heeron, 1984) to protect them from escalating anxious or embarrassing feelings. The inhibiting effects of stigma could negatively impact self-disclosure and therapeutic alliance. The results of this study support the assumption that distance treatment may overcome some of the effects of stigma.

Bouchard et al. (2004) found that the sense of presence with the therapist may explain high therapeutic alliance scores in videoconferencing mental health. Furthermore, Murphy and Mitchell (2009) suggest textual-based presence techniques in email therapy to help establish therapeutic alliance in the absence of visual cues and voice/tone. In distance education, social learning theory explains that a student will be more engaged if the teacher creates an

environment where the student feels a sense of social presence and belonging (Belderraine, 2006). Computer-mediated communication research suggests that visual anonymity with internet interactions may decrease the pressure of societal norms (Ben-Ze'ev, 2003) and significantly increases self-disclosure compared to face-to-face interactions (Joinson, 2001). Without the exchange of visual cues, there is less risk of the participant feeling judged or judging the therapist based on appearance, facial expressions or body language. In distance treatment, perhaps the combination of a comfortable home setting (Caplin & Turner, 2007), visual anonymity and the coaches' ability to create a virtual presence with the participant through supportive and motivating voice tones (Murphy & Mitchell, 2009) enhances therapeutic alliance and self-disclosure.

Conceivably, participants vulnerable to the effects of visual cue exchange (e.g., public stigma or fear of rejection, body language misinterpretation or stigmatization of the therapist), may find the distance treatment setting more private, comfortable and safe. In turn, increased perceived personal security and identity protection may foster a sense of self-confidence (Caplan & Turner, 2007), self-control (McKenna & Bargh, 2000; Leibert, Archer, Munson, & York, 2006) and disinhibition (Suler, 2004), facilitating open and honest disclosures. In other words, the effects of increased self-awareness and decreased public awareness offered by visual anonymity (Joinson, 2001) may explain the study findings.

There is a scarcity of evidence exploring the role that visual anonymity has on therapeutic processes and participant perspectives or attitudes towards different mental health delivery systems. However, results of this study provide some evidence that visual anonymity and increased access offered by distance treatment can overcome psychological and physical barriers, bridging the marginalization gap for some populations (McKenna & Bargh, 1998). Although

some individuals may prefer the physical connection and other advantages associated with face-to-face therapy, others may benefit from the availability of a distance service option. This is consistent with the mental health service preference survey results reported by Cunningham et al. (2008) reported by parents for a distance treatment option similar to the Strongest Families design. Likewise, in an online anxiety and depression study, Leibert et al. (2006) found that participants chose online help because of convenience, privacy and visual anonymity. Since perceived barriers are important predictors of care (Seid et al., 2009) acknowledging user preferences to improve system designs may positively impact service utilization.

7.6   Strengths and Limitations

This is one of the first studies to examine possible differences between different modes of treatment delivery. One of the strengths of this initial, exploratory study was the use of a clinical sample. The results of this study are grounded in the participants' experience. The TBI scale showed acceptable internal consistency reliability.

This was not a controlled clinical trial and the comparison with the face-to-face group in this study should be interpreted carefully. There was limited control with the face-to-face condition. The time since receiving either condition varied. Therefore, it was not a direct comparison with the distance Strongest Families intervention (i.e., one child for 12 weeks with a non-professional). The participants were aware that the study was being conducted with a distance sample. Validated therapeutic alliance, self-disclosure and outcome scales were not used because we were concerned about the burden of time it would add to study participation. It was discovered that the order of administration did affect the face-to-face results when face-to-face was administered first. However, it was clear that all mean scores were generally higher for

distance treatment. Due to limited variability between participant characteristics it was difficult to explore trends that may suggest what participant would do better with either system. However, given that this was an initial exploratory study, there is sufficient evidence to suggest that there are differences between systems.

7.7   Future Directions

This is an initial study to explore differences. There is a need for direct comparisons between modalities (Reynolds, Stiles, & Grohol, 2006) and further exploration of whether certain participants will benefit more from a particular delivery system (Titov et al., 2008). Therefore, a randomized clinical trial with a sample receiving the same treatment delivered in different ways would be recommended to explore such processes more closely.

7.8   Conclusion

These preliminary results suggest differences between treatment modalities indicating less perceived barriers, stronger therapeutic alliance and higher self-disclosure with distance treatment. The distinctive differences between face-to-face vs. distance treatment are the access and psychological barriers, both of which are reduced with distance treatment. Integration of distance treatment service options can potentially bridge the gap for those otherwise marginalized by such barriers. Providing a choice of delivery systems to the consumer would allow individuals to choose services or a combination of options that may best meet their needs.

Acknowledgement

7.9 References

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Table 7.1: Sample description

Participant Data N = 60	No. (%)
Sex	
female	58 (96.7)
Male	2 (3.3)
Age	
19-25	2 (3.3)
26-35	19 (31.7)
36-45	31 (51.7)
46-55	8 (13.3)
Residence	
urban	44 (73.3)
Rural	16 (26.7)
Highest level of education achieved	
some Secondary or High School	9 (15.0)
completed Secondary or High School	10 (16.7)
some Community College	6 (10.0)
completed Community College	15 (25.0)
some University	6 (10.0)
completed University	14 (23.3)
Marital Status	
married/common law	36 (60.0)
widowed	1 (1.7)
divorced/separated	13 (21.7)
never married	10 (16.7)
Employment Status	
employed	39 (65.0)
financial assistance	7 (11.7)
unemployed	14 (23.3)
Annual Income	
$0-9,999	8 (13.3)
$10,000-19,999	5 (8.3)
$20,000-29,999	8 (13.3)
$30,000-39,999	4 (6.7)
$40,000-49,999	7 (11.7)
$50,000-59,999	2 (3.3)
greater than $60,000	19 (31.7)
Unknown	7 (11.7)
Face-to-face: type of help	
Parental	
stress/coping	13 (21.7)
depression/Anxiety	10 (16.7)
relationship issues	7 (11.7)
Child	
behaviour	17 (28.3)
depression/Anxiety	4 (6.7)
developmental/learning issues	6 (10.0)
disease management	3 (5.0)
Face-to-face: type of therapist/provider	
psychologist	39 (65.0)
counselor	11 (18.3)
social worker	4 (6.7)
psychiatrist	3 (5.0)
other: nurse, medical team, pediatrician	3 (5.0)

Table 7.2: Outcome means and standard deviations based on group and condition

Order	Condition (n)	TBI Mean (SD)	Therapeutic Alliance Mean (SD)	Self-disclosure Mean (SD)	Outcome Mean (SD)
Face-to-face first	Face-to-face (30)	205.7 (23.2)	3.8 (1.1)	4.4 (0.9)	2.3 (0.8)
	Distance (30)	*216.7 (16.3)*	*4.0 (0.7)*	*4.6 (0.6)*	2.3 (0.7)
Distance first	Face-to-face (30)	190.7 (30.7)	3.0 (1.9)	3.8 (1.6)	1.7 (1.1)
	Distance (30)	*214.6 (17.6)*	*4.4 (0.6)*	*4.5 (0.7)*	2.1 (0.9)

Table 7.3: Table of means for total TBI scores

*Sequence	Setting	Questionnaire Administration Period	Mean (SD)	95% CI
Distance, Face	**Distance**	**First (1)**	214.6 (17.59)	208.1, 221.2
Face, Distance	**Distance**	**Second (2)**	216.7 (16.34)	210.6, 222.8
Face, Distance	**Face-to-Face**	**First (1)**	205.7 (23.22)	197.0, 214.4
Distance, Face	**Face-to-Face**	**Second (2)**	190.7 (30.66)	179.2, 202.1
Distance (1), Face (2) Difference D-F			24.0 (30.57)	12.55, 35.38
Face (1), Distance (2) Difference D-F			11.0 (22.67)	2.50, 19.43

*D= Distance; F= Face-to-Face

Table 7.4: Crossover t-test results for Total TBI scores

*Setting Differences	Period Differences	Mean Difference (SD)	95% CI Mean	t (df)	p
Both settings Diff D-F		17.5 (13.46)	10.51, 24.42	5.03 (58)	<0.0001
	Both Periods Diff 1-2	6.5 (13.46)	-0.45, 13.45	1.87 (58)	0.0664

Table 7.5: McNemar's test of agreement of TBI scores

	Face-to-Face TBI: # agreed fewer Obstacles (%)	Distance TBI: # agreed fewer Obstacles (%)	Total # (%)	McNemar test
Face-to-Face TBI administered first	10.0 (33)	20 (67)	30 (50)	4.17 (*df*=1) *p*= 0.041
Distance TBI administered first	9 (30)	21 (70)	30 (50)	
Total	19 (32)	41 (68)	60 (100)	

Table 7.6: Correlation Table (Pearson Coefficient)

	Order	TBI Face exp	Dist exp	Outcome Face exp	Dist exp	TA Face exp	Dist Exp	SD Face exp	Dist exp
TBI	Face 1st			*0.36	0.14	*0.63	*0.48	*0.48	0.20
	Dist 1st			0.30	*0.44	**0.71	*0.55	**0.7	0.18
Outcome	Face 1st	*0.36	0.14			*0.53	0.01	0.12	-0.04
	Dist 1st	0.29	*0.44			*0.51	*0.38	0.34	0.11
TA	Face 1st	*0.63	*0.48	*0.53	0.01			*0.50	**0.64
	Dist 1st	**0.71	*0.55	*0.51	*0.38			**0.64	-0.03
SD	Face 1st	*0.48	0.20	0.12	-.04	*0.50	**0.64		
	Dist 1st	**0.70	0.18	0.34	0.11	**0.64	-.03		

* p-value <0.05
** p-value <0.0001

CHAPTER 8: DISCUSSION AND CONCLUSIONS

8.1　Discussion

The results of this dissertation provide evidence that visual cues may not be an essential component of therapy for some individuals. We have shown that a strong therapeutic alliance can exist between an adult or child participant and their non-professional coach when psychological interventions are delivered with no face-to-face contact. The studies have shown that therapeutic processes such as therapeutic alliance and self-disclosure may be enhanced with distance treatment. In our third study (Lingley-Pottie & McGrath, 2007), participants identified possible differences between delivery systems. Differences in therapeutic processes, such as therapeutic alliance and self-disclosure, and perceived treatment barriers emerged as prominent themes. Our final study (Lingley-Pottie, McGrath, & Andreou, 2011) validated these findings.

Participants in our final study (Lingley-Pottie et al., 2011) reported significant differences with perceived barriers between face-to-face versus distance treatment, in favor of the distance delivery system. Moreover, our final study results suggest that therapeutic processes may be influenced differently between systems with higher scores with distance treatment. Although participants reported comparable health outcomes between systems, the results indicated enhanced therapeutic alliance and self-disclosure scores with distance treatment. Fewer perceived barriers were positively correlated with therapeutic alliance, regardless of treatment delivery mode. This finding was consistent with results reported by Kazdin et al. (2005) in face-to-face child mental health services. Similarly, positive correlations were found between therapeutic alliance and self-disclosure scores as well as outcome indicating that, from the participants' perspective, therapeutic alliance plays an important role in therapy (Hawley & Weisz, 2005; Kazdin et al., 2005) regardless of delivery mode.

Researchers have shown that therapeutic alliance and service satisfaction are highly correlated in face-to-face therapy (Hawley & Weisz, 2005; Kazdin et al., 2005). The distance therapeutic alliance scores in our studies, for both adults and children, were overall very high with little variability. Similar results were found with Strongest Families satisfaction scores, limiting predictability in relationship with therapeutic alliance scores. Ceiling effects were found with therapeutic alliance, self-disclosure, outcome and satisfaction scores indicating a very positive experience with distance treatment. Therefore, caution should be used when interpreting the lack of correlation found in the results of these studies. A summary of the study results and possible explanations for differences and influences between systems will be discussed in the following paragraphs.

Although Bordin's (1979) therapeutic alliance theory seemed to generalize to distance treatment, according to the participants' experience, it may not adequately describe the distance therapeutic alliance. Bordin's theory has been instrumental in explaining face-to-face therapeutic alliance and the relationship with outcome, but it may be limited because it was developed based on professional opinion focused on adult therapy. Elements important to the participant's opinion of the therapeutic alliance may have been overlooked. For example, treatment tasks and goal agreement, two of Bordin's three alliance components, are undeniably important to treatment success and certainly an inherent focus from a clinical point of view. However, task and goal agreement themes did not prominently emerge from this research when participants described their distance relationship. Although achieving the goals of treatment would be important to the participant, there are likely other factors contributing to therapeutic alliance that are considered important from the participants' perspective, especially in child mental health (Kazdin et al., 1997). Since Bordin's theory was developed in face-to-face therapy, we had anticipated that new

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dimensions may emerge because Bordin's theory would not have accounted for the lack of visual cue exchange. Emerging themes from this research suggest that there may be dimensions important to distance therapeutic alliance not covered by Bordin's theory such as: effects of visual anonymity (perceived decreased public stigma, decreased therapist judgment and disinhibition); child factors (acceptance of therapy and therapist); and increased satisfaction with the treatment (therapist skill or program attributes).

In the third study (Lingley-Pottie & McGrath, 2008b), the Working Alliance Inventory (WAI) bond subscale scores for adults and children were on average 82 and 80, respectively, suggesting that children as young as 6 years old reported that a strong bond existed with their telephone coach. Child task and goal subscale scores were on average lower than adult scores, which likely influenced the statistically significant differences between child-parent pair total WAI scores. Reasons for this slight difference may be because the WAI was designed for adults and may have been less comprehensive for children who may not understand the gains of achieving treatment goals. However, parents commented that the Strongest Families structured, step-by-step approach was helpful. Satisfaction with a manualized approach to treatment is consistent with results reported by Kendall and Sugarman (1997) in face-to-face pediatric anxiety therapy.

In child therapy, the child is often admitted by a parent who believes there is a problem, whether the child agrees or not. The child is dependent upon the parent to take the child to appointments. Also, many child interventions require parental motivation to implement or help the child implement learned skills. More emphasis and pressure is placed on parental commitment to treatment implementation in behavioural therapy. If a parent experiences barriers with parent intervention that impacts treatment compliance or completion, there will be a direct

effect on child outcome. Similarly, if the child resists going to therapy every week, the parent

may give-in to the struggle by avoiding therapy to alleviate the additional stress cause by child

refusal. If the parent does not have the means to attend weekly daytime appointments regularly,

the child will be affected. Also, a parent or child's treatment experience with the therapist or

treatment regime, whether positive or negative, may influence each others' therapeutic alliance

ratings over time. The results in the child-parent pair study may be explained by less child

resistance since treatment is in the comfort and privacy of their own home during after

work/school hours. Also, the attrition rate was low (1%). Treatments designed to overcome

barriers may enhance the treatment experience for both child and parent and lead to improved

retention (Garcia & Weisz, 2002; Hawley & Weisz, 2005). Future research efforts should focus

on exploring the child's perspective in face-to-face therapy to determine if results are congruent

with existing adult theories or if new theories emerge. It will be equally important to continue

similar work with distance therapy. Qualitative examination of the child's experience in various

forms of therapy may be most effective in uncovering their perceptions (e.g., focus groups).

     Distance delivery systems that provide treatment to the participant in their own home can

overcome access barriers associated with traditional mental health services. In studies by

Bouchard et al. (2004) and Morgan, Patrick and Magaletta (2008) found that therapeutic alliance

scores were not statistically different when therapy was delivered from a distance via

videoconference versus face-to-face. Although videoconferencing offers increased access, the

comparable results found in the Bouchard et al. (2004) study may be explained by setting

similarities with open exchange of verbal and non-verbal cues. The distinctive difference

between distance treatments using videoconferencing versus telephone interfaces is visual

anonymity. Visual anonymity, an element unique to systems that do not permit visual cue

exchange (i.e., telephone or internet with no web-cam) may overcome psychological barriers, providing increased privacy and reducing the risk of non-judgment between participant and therapist. In the Lingley-Pottie & McGrath (2007) study, participants reported accessibility and the effects of visual anonymity (i.e., non-stigmatizing and disinhibition) as advantages of Strongest Families. They also described that visual anonymity (i.e., decreased concern about public awareness or stigma by peers or therapist) enabled them to feel more relaxed and uninhibited, leading to increased level and honesty of self-disclosures. Similar experiences have been reported in online, text-based professional therapy for depressions adults (Beattie et al., 2009). Self-disclosure and therapeutic alliance, important therapeutic processes, have been found to be positively correlated in face-to-face therapy. In child face-to-face mental health, Kazdin et al. (2005) found a correlation between perceived treatment barriers and therapeutic alliance. Our final study results confirm correlations between perceived treatment barriers and important therapeutic processes. Therefore, it is possible that, from the participants' perspective, the security of visual anonymity (less risk of psychological barriers) may explain the high self-disclosure scores that may have influenced enhanced therapeutic alliance scores.

Videoconferencing or face-to-face therapy offers a physical social presence (being present) that the telephone, or internet alone, can not. Some individuals who are uninhibited in face-to-face settings may find therapy involving a physical social presence more personal. Beattie et al. (2009) found lack of a visual presence, in online, text-based depression therapy, an important factor in participants withdrawing from therapy. In contrast, individuals who are vulnerable to stigma and the pressure of societal norms (less comfortable with visual presence) may avoid face-to-face therapy or become influenced by social desirability. The desire for public acceptance (i.e., by peers and therapist) may cause self-conscious individuals to falsely portray

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themselves in a favorable manner and self-preserve by holding back information that may negatively portray them (Gangestad & Snyder, 2000; Greenberg & Pascual-Leone, 2006). Kelly and Yuan (2009) conducted a randomized trial with face-to-face therapy that showed that clients who held back information rated lower therapeutic alliance with their therapist. The results held after controlling for social desirability. Perhaps lack of visual cues combined with the coach's ability to create a sense of 'presence' with the participant, using only verbal cues and tones projecting warmth and compassion (Karver et al., 2005), can enhance therapeutic alliance and self-disclosure scores. The results of this research show that it is possible for individuals to experience a sense of presence and strong therapeutic alliance with their telephone coach.

Although this dissertation research excludes the therapist perspective, it is important to consider potential challenges related to lack of visual cue exchange. Therapists rely on observation of body language or facial expression exchange to determine if the participant is attentive during the therapy session and to evaluate child behaviour or child-parent behavioural interaction (Bouchard et al., 2004). Subjective evaluation of these cues can provide information that may influence the therapist's treatment plan or approach. Some therapists may worry about missing important clinical signs in the absence of visual cues which may limit their ability to help the participant (Swinson et al., 1995). Therapists also rely on exchange of physical cues to demonstrate exercises or skills to the participant (Bouchard et al., 2004). Moreover, therapists may worry about the ability to establish therapeutic alliance if their participant cannot see expressed acceptance, praise and compassion. It is our hope that the research results reported herein may allay these concerns by therapists.

Some therapists may be more satisfied with and suited to therapy involving a physical presence (i.e, Face-to-face; videoconferencing, web-camera). Others may prefer a mode with

visual anonymity (i.e, telephone; online; email) or some may find benefit with mixed delivery approaches. If a therapist believes distance therapy may be of benefit to their participant but is concerned about the absence of physical presence, techniques can be used to overcome therapy barriers imposed by visual anonymity. For example, written material combined with therapist explanation or coaching may aid in exercise demonstration (Rochlen, Zack, & Speyer, 2004). Comprehensive evaluation scales and questions allowing the therapist to probe for information about the participant's situation can provide descriptive clinical information when subject observation is limited by visual anonymity. Therapist voice tone and descriptive speech can be used to make a connection over the telephone. In text-based therapy such as email or web-based discussion boards, contextual meaning can be portrayed in therapist responses using descriptive text and use of emotional symbolic icons (e.g.,☺) (Murphy & Mitchell, 2009).

The use of techniques to create a 'virtual' social presence, in the absence of visual cues, is common to computer mediated communication (Helton, 2003; Rogers & Lea, 2005), distance education (Richardson & Swan, 2003) and text-based adult internet therapy (Beattie et al., 2009; Murphy & Mitchell, 2009) research. Similar to the results from our qualitative data, participants in Murphy and Mitchell (2009) study reported forming a mental picture of their coach (therapist). Some participants in our study described their experience with this type of mental imagery created by verbal cues. The mental pictures of the coach generally resembled someone with whom the participants related to in their own life, such as a sister or a best friend. Imagery is a cognitive-behavioural strategy used in psychotherapy for anxiety (March, 1995). Creating, or imagining, a positive mental picture of a relaxing place is often used in cognitive behaviour therapy for anxiety. A similar type of imagery may occur in distance treatment. If the participant finds that the coach's verbal cues resemble a trustworthy person in their life (such as their best

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friend), the participant may create an image of the coach in her/his mind. Potentially, if the participant creates a mental image of an "ideal coach" with whom sharing information openly is comfortable, therapeutic alliance and self-disclosure may be enhanced. The disinhibiting effects of visual anonymity combined with the verbal imagery and a feeling of coach presence, may lead to higher level and quality of self-disclosure and enhanced therapeutic alliance. To create this positive effect in distance treatment, the coach voice quality, tone, pace and inflection would be an important factor. Participants in our study (Lingley-Pottie & McGrath, 2007) reported that the coach voice did make a difference in their distance treatment experience.

Service satisfaction has been shown to have a strong association with therapeutic alliance in face-to-face treatment (Hawley & Weisz, 2005). Regardless of the modality of treatment delivery, personal coach and program design attributes would be important components of service satisfaction which could directly impact therapeutic alliance or treatment retention.

Personal coach attributes and coach skill were prominent themes that emerged when Strongest Families participants described the distance relationship. The results reported in Lingley-Pottie and McGrath (2007) provide evidence that judgment of coach or therapist personal attributes is very important from the participants' view. Strongest Families coaches are selected carefully at hiring based on voice quality, motivation and demonstrated problem-solving ability. Coaches receive extensive training on treatment protocols, the importance of establishing and maintaining a positive therapeutic alliance. Coach or therapist selection and assignment may be important considerations for either system modality, to ensure a good match with the family to yield high satisfaction for the duration of treatment.

Many of the Strongest Families attributes were credited by the participant to the coach, but, in fact, were program design elements. For example, coach schedule flexibility (e.g.,

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extended hours of operation included evening and weekends; accommodation of family schedule demands); coach appointment reminder calls; mid-week check-in calls; missed appointments pursued actively by the coach; and the step-by-step treatment approach are specific Strongest Families protocol. Strongest Families coaches follow treatment session protocols to ensure limited coach variation and maintenance of intervention fidelity. If a participant is of limited capacity or if the demands of treatment are stressful, the coach will work with the supervisor to customize the treatment so that skills are broken down further into manageable segments for the participant. Treatment protocol quality and adherence by the coach is monitored regularly by management. All telephone coach interactions are digitally recorded. Quality assurance monitoring and competency evaluation ratings are completed on a regular basis. Coaches are provided constructive feedback and ongoing training to ensure maintenance of the protocol, high therapeutic alliance with the participant and outcome quality. Weekly review by a supervisor of the coach's caseload allows for ongoing evaluation of each families' progress and treatment plan advice. Weekly outcome evaluation is completed with each family. Outcome progress is graphically depicted in mid-treatment letters sent to parents and primary care practitioners (Lingley-Pottie, Janz, McGrath, Cunningham, & MacLean, in press). The Strongest Families clinician will provide treatment plan guidance for those who are not progressing as well as expected. In addition, coaches are accountable to identify, early in treatment, families who are difficult to engage or who are not able to commit or effectively implement program skills. At the end of treatment, outcome and service satisfaction is measured and reviewed by a clinician. A high percentage of participants access Strongest Families services after usual business hours (Lingley-Pottie & McGrath, 2008b; Lingley-Pottie et al., 2005) and the attrition rate is less than 10% (Lingley-Pottie & McGrath, 2008b). Existing systems could consider adopting similar

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protocols, policies, service quality measurement and consider expanding hours of operation to address perceived treatment barriers (Colonna-Pydyn et al., 2007). Based on our research, families prefer to access child mental health services after usual business/school hours so expansion of hours alone might increase retention rates.

Decreased service satisfaction (with the coach or program attributes) could certainly result in pre-mature service termination. If a parent or child perceives barriers that are impossible to overcome, the result can lead to untreated conditions that will continue to worsen overtime. Seminal work by Kazdin (e.g., Kazdin, 1990, 1996; Kazdin et al., 1993, 1997 & 1999) on perceived barriers in child mental health has provided valuable information about at risk individuals for early treatment termination and associations with therapeutic alliance. Kazdin and Wassell (1999) found significant correlations between increased perceived barriers and low therapeutic alliance scores as well as increased parental stress (Kazdin et al., 1997). It is possible that the Strongest Families policy to customize treatment so it is manageable for all types of individuals may decrease parental stress and increase motivation to engage in treatment.

The Barriers to Treatment Participation Scale developed by Kazdin et al. (1997) has some limitations because it was developed from professional opinion and the characteristics of the clinic setting used may limit generalizability (Kazdin et al., 1993). It is possible that important factors have been missed by not including consumer opinion (Colonna-Pydyn et al., 2007), especially in the context of comparing barriers that exist when comparing distance and face-to-face delivery systems (or settings). Perceived treatment barriers and the effects of the treatment experience is complex and can vary per individual and family. The parental role in child mental health, especially parent training for behaviour disorders, is very important to treatment success. If the demands of treatment combined with other perceived barriers cause too much parental

stress, the parent will likely drop-out of treatment (Kazdin et al., 1997), directly impacting the child's outcome. Therefore, it is essential that we gain a full, comprehensive understanding of perceived barriers to child mental health services from the participant perspective (Colonna-Pydyn et al., 2007) to ensure that future system options and program designs are able to address the needs of each family improving attrition rates (Kazdin et al., 1993). Processes as basic as therapist assignment or a treatment plan approach can pose treatment barriers to a family if there is a mismatch that causes dissatisfaction (Kazdin et al., 1993).

A variety of approaches to treatment delivery and program designs must be available to bridge the current system gaps (Manion, 2010). Mode of treatment delivery or where participants can receive services may be an important factor to consider in service allocation at the individual level (Glass & Arknoff, 2000). It will be important to conduct research to determine what type of individual or family composition will do best with what type of treatment program, delivery system or combination thereof. For example, meta-analysis results of adult psychotherapy randomized trials (Beattie et al., 2009) suggest that distance delivery approaches may be more effective for those suffering from anxiety or depression. Individuals with these types of internalizing conditions may find fewer psychological barriers with the distance medium because of visual anonymity. From a clinical perspective, some severe or complex cases may warrant direct observation. In such cases, videoconferencing may be the mode of choice if a traditional face-to-face visit poses barriers for the participant. Some individuals may prefer community-based services delivered in a group setting, which have been shown to be cost-effective alternatives for adult pain management (Lefort, Gray-Donald, Rowat & Jeans, 1998) and parenting programs (Cunningham, Bremner & Boyle, 1995). Once more evidence is available about differences between clinical delivery systems, innovations in designing computerized

decision-making algorithms may facilitate effective care-planning for complex cases involving multiple perceived barriers and treatment needs.

8.2 Research Contributions

In this section I will outline a few of the research contributions arising from these studies. Overall, the main contribution was the demonstration of therapeutic alliance in distance child mental health treatment. In the first two studies, the results established that a distance therapeutic alliance can exist between an adult and their non-professional telephone coach, as well as a child and coach, in the absence of visual cues. Moreover, the results suggested a possible enhancement in therapeutic alliance. The results of the third and final study supported these initial findings. These were two of the first studies on distance therapeutic alliance in child mental health with treatment delivered by non-professionals over the phone in the absence of face-to-face contact.

The results described in Chapter 5, illustrate the participants' experiences and opinions, contributing to knowledge about distance mental health treatment modalities delivered by non-professionals with no exchange of visual cues. Participant reports confirmed that a distance therapeutic alliance was possible with no face-to-face contact. Furthermore, in general, participants described the quality of the coach relationship with a depth that suggested that bonds were very strong. The data suggested that the privacy offered by visual anonymity may have facilitated feelings of disinhibition helping individuals feel more comfortable disclosing information openly and honestly. Participants' reports on the advantages and disadvantages of distance treatment versus their experiences with or opinions of face-to-face treatment, suggested fewer perceived treatment barriers associated with distance treatment. Themes emerging from the data implied possible differences in therapeutic processes and perceived treatment barriers

between types of delivery systems (i.e., face-to-face vs distance with no visual cue exchange). The knowledge gained contributes to this relatively new field of research in child mental health on visually anonymous, distance treatment applications using non-professionals.

The findings from Chapter 5 shaped the research objectives outlined in Chapters 6 and 7. The Treatment Barrier Index, grounded in the participants' experiences, is likely the first scale developed (Chapter 6), in the context of child mental health, to compare barriers relevant to visually anonymous distance treatment modalities. The final study (Chapter 7) provided initial evidence of perceived treatment barrier differences between treatment delivery modalities, indicating fewer barriers with distance treatment. Additionally, we have learned that some processes such as therapeutic alliance may be enhanced in distance treatment, possibly influenced by the effects of visual anonymity. Finally, the results provide an indication that positive correlations exist between therapeutic alliance, self-disclosure and outcome, suggesting these processes are important in the context of distance intervention.

Knowledge generated from this research advances our understanding of participant service needs and perceived treatment barriers, relating to both types of delivery systems. This information can be advantageous to pediatric mental health service delivery by increasing the adoption of distance delivery models of care and informing design improvements of both types of delivery systems. It is my hope that the findings in these studies contribute to the knowledge about utilizing distance treatment modalities to deliver child mental health services and inspire future research in this field.

8.3   Research Limitations

In this section I will describe six of the main limitations of this research. First, because the final study was not a randomized controlled trial, the results should be interpreted cautiously. There was little control with the face-to-face condition in that the participant's experience varied by a number of factors including who received the treatment (i.e., the participant or one of their children); the type of help received; when help was received and for how long; and the type of professional. Conversely, the distance condition was more controlled because the study sample consisted of a convenience sample from the Strongest Families program. Second, there were limitations to these initial pilot studies. A qualitative approach using grounded theory, including focus groups (Flick,1998; Kitzinger, 1995; Mays & Pope, 1995) to explore the participants' responses in more detail and utilizing member-checking procedures with the focus group members to confirm researcher interpretation of the participant experiences (Creswell, 1998; Lincoln & Guba, 2000), may have provided a deeper understanding of the participants' experiences. Additionally, we may have gained a better understanding of theoretical implications of our research results based on the participants' perspective. Third, outcome data in the first two studies were collected at the end of treatment and only on those who completed treatment. Scores may have been confounded by the influence of positive outcome. Fourth, the adult data in all studies was primarily from female primary care-givers. Therefore, generalizations to male or father caregivers can not be made. The Strongest Families intervention is typically targeted toward the primary care-giver of the child. Fifth, our research lacked a thorough exploration of the treatment experience from the child perspective. There was concern about the potential burden on the child if required to complete the Working Alliance Inventory (WAI) (36 item,

seven point likert scale) via the telephone in addition to describing details of their experience with open-ended questions. The final limitation relates to the lack of inclusion of the therapist or coach perspective on therapeutic alliance and distance treatment experience.

8.4   Future Research Directions

As previously mentioned a more rigorous research design may be warranted to more thoroughly understand perceived treatment barriers and possible differences in therapeutic processes between delivery systems. It would be important to ensure that a future randomized trial design included a face-to-face comparison group, a limitation of past distance therapy trials as reported by Bee et al., (2008). Perhaps Strongest Families could be modified for face-to-face delivery as a comparison group.

The knowledge gained from the exploration of the adult participants' distance treatment experience may have theoretical implications. The results of these studies suggest that Bordin's theory may not adequately cover the constructs composing the distance therapeutic alliance, based on the participants' perspective. Moreover, visual anonymity may enhance therapeutic processes such as therapeutic alliance and self-disclosure in distance treatment. A qualitative approach using grounded theory may be warranted to begin to explore theory development in distance treatment.

There is global concern about insufficient exploration of child and parental views about pediatric therapeutic processes (Kazdin, 1999) and service preferences (Cunningham et al., 2008; 2009) and inadequate development of theories specific to the pediatric population (Creed & Kendall, 2005; Kazdin, 1999; Shirk & Karver, 2003). Currently, most pediatric therapeutic alliance research has been influenced by adult therapeutic alliance theories (Kazdin, 1999).

Pediatric therapeutic alliance scales are often comprised using a variety of adult scale constructs (developed primarily from professional opinion) and existing adult literature, assuming that the pediatric dimensions are similar. Further exploration of pediatric therapeutic alliance (face-to-face and distance) and treatment experiences in child mental health, to fully understand the constructs, is needed (Shirk & Karver, 2003; Sapyta, Karver, & Bickman, 1999; Weisz, 1998).

Better understanding of the dimensions of the child-therapist and parent-therapist dyads and related associations are necessary (Hawley & Weisz, 2005; McLeod & Weisz, 2005) to completely understand the complexity of pediatric mental health care. Moreover, the influence that the parent's role has on the child's perception of the therapeutic alliance is important to explore given the dyadic nature of parent-mediated child therapy. Emphasis should be focused on appreciation of the child's perception of therapeutic alliance (in face-to-face and distance treatment) to begin to understand the influence the child-parent pair dyadic therapist relationships have on health outcomes, treatment readiness and attrition rates. Creed and Kendall (2005) believe that the child's need for autonomy may impact therapeutic alliance development in face-to-face therapy which may not be applicable in self-directed, distance intervention.

Lingley-Pottie and McGrath (2007) reported that participants preferred distance treatment but many longed to meet their coach (with whom they had a very strong therapeutic alliance) to 'put a face to the voice'. It is unclear whether meeting the coach face-to-face, receiving a picture of or even a verbal description would enhance or rupture therapeutic alliance or be perceived as a treatment barrier. There has been limited research in this area in child distance mental health; however, Strongest Families has experienced two situations. For example, a participant reported that she had learned that her coach was very beautiful 'like Barbie". The parent reported this

information adversely affected the therapeutic alliance she had with her coach. The parent revealed that in her real life, she could never relate with someone who looked that beautiful and 'plastic'. Hearing about her coach appearance may have lead to coach stigmatization possibly rupturing the therapeutic alliance. Another anecdotal situation occurred when Strongest Families was featured in a television news program. A family and their coach were interviewed separately. The family was nearing treatment completion with a strong relationship with their coach (as evidenced by the many positive things the parent said about the coach and progress made). After the show was televised (and the participant saw her coach for the first time), during the next telephone contact the parent reported to the coach that she couldn't believe how young the coach looked, lost credibility and confidence in the coach and was no longer interested in finishing treatment. This apparent therapeutic alliance rupture, dissatisfaction of services and premature termination may have been preventable. Perceived barriers attributed to therapist stigmatization (i.e., non-verbal cues or physical traits), may be important to explore further from adults and pediatric participant perspectives and different delivery systems. It would be interesting to explore what might happen if the participant's mental image of the coach is influenced by introduction of a physical description or exposure to a picture of the coach. Would the timing of the introduction of the coach description (e.g., mid-treatment, close to the end of treatment, after treatment completion) make a difference in therapeutic alliance scores?

Future steps for TBI scale development would include a plan for item reduction such as factor analysis. Another alternative may be to consider Item Response Theory (IRT) as a more robust method of item reduction because it focuses on item-level information, whereas factor analysis focuses on the scale as a whole (Streiner & Norman, 2002). Additionally, studies would be required to gain additional evidence of reliability and validity of the TBI scale. Test-retest

studies would provide internal consistency information. A series of studies utilizing the reduced item TBI scale would investigate construct validity (Streiner & Norman, 2002).

8.5   Conclusion

In consideration of child mental health care reform, adoption of family-centered (DeVany, Alverson, D'Iorio, & Simmons, 2008), child-friendly (Wilson, Deane, & Ciarrochi, 2005) distance treatment delivery systems may prove to be valuable additions to service options that are easily accessible to families. The distance modality using trained non-professionals to deliver the intervention is a model of care that is a cost-effective solution to access issues. Moreover, the Strongest Families program is family-centered care, offering early intervention focused on meeting the client's needs because it is convenient, readily accessible and private/non-stigmatizing. The cumulative results from this program of research have shown that therapeutic processes such as therapeutic alliance and self-disclosure can exist without visual cue exchange. Additionally, participants were very satisfied with this model of care and reported outcomes that were comparable to their experience with face-to-face therapy.

For some individuals, therapeutic alliance and self-disclosure may be enhanced in distance treatment because of the comfort and privacy of the home setting, visual anonymity as well as increased access and convenience. However, the isolating effects of distance treatment applications may not be suitable to those with isolating disorders (e.g., social anxiety), unless the intervention is specifically design to treat such conditions.

Knowledge gained can help inform both types of delivery systems by adopting procedures to increase the fidelity of existing programs, modifying program policies by extending working hours to include evening and weekend options, enhancing existing training

and ongoing quality assurance practices. Modifying existing intervention programs and models

of care to meet the participants' needs will likely lead to increased treatment retention and

ultimately improved health outcome.

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APPENDIX A: ADDITIONAL METHODOLOGICAL DETAIL FOR CHAPTER 5 DATA COLLECTION AND ANALYSIS

Published Manuscript: Distance Therapeutic Alliance: The Participant's Experience

Investigator Bias

The investigator's bias regarding the therapeutic alliance was identified by maintenance of a reflexive journal that also detailed a record of research processes during the analysis (Murray & Chamberlain, 1999; Ryan & Bernard, 2000). As the principal researcher, a licensed health care professional, I had good background knowledge of therapeutic alliance that was enhanced with an extensive literature search. Additionally, as the manager of the Family Help Program, I was responsible for all activities of the research program and dealing directly with any participant or coach issues. These biases were considered during the design of this research study.

After completing a literature search it was evident that there was a scarcity of evidence on the distance alliance. Because I was also the manager, often in contact with the participant and often reviewing calls, the study was designed to try to control for researcher bias. An independent person who had not had previous contact with the participant administered the questionnaire. This way we were able to minimize the chance of the participant's responses being influenced.

Participants

The broad representation of participants consisting of either caregivers or treatment recipients, living in rural or urban areas, different modes of treatment delivery, and variety of disorders is a method of triangulation in that the results are more likely transferable to other settings and saturation was reached (Krueger & Casey, 2000; Mays & Pope, 1995).

Data collection

The researchers created a semi-structured interview utilizing open-ended questions designed to explore the meaning of distance therapeutic alliance from the participant's perspective. In order to ensure the participants responses were not influenced by any investigator bias and were a pure account of their personal experience (Greenhalgh & Taylor, 1997; Murray & Chamberland, 1999), the questions were telephone administered to the participants by a research assistant (who was not involved with the participant) after the final treatment session was completed. The participants were informed that their responses would not be shared with their coach. If the participant had more than one coach during treatment, the questions were focused on the coach with whom most time was spent. The calls were digitally recorded for the purposes of quality assurance and data entry verification to enhance the confirmability and trustworthiness of study findings (Lincoln & Guba, 2000; Mays & Pope, 1995). The data were directly entered by the research assistant at the time of the telephone calls.

Analysis

Responses were retrieved from the SQL database and converted to Excel to begin the descriptive, content analysis. The primary researcher segmented the responses into different themes/thoughts (Creswell, 1998; Murray & Chamberlain, 1999; Ryan & Bernard, 2000) first by hand and then electronically for ease of coding. Dr. Patrick McGrath (Supervisor, Psychologist and Family Help Research Program Principal Investigator) was consulted to verify thematic segmentation agreement. The primary researcher became immersed in the data (participant responses) and began to enter specific thematic ideas into an Excel spreadsheet with corresponding examples as a draft codebook (Ryan & Bernard, 2000).

To ensure the researcher stayed true to the voice of the participant a reflexive process was maintained by returning to previous responses and telephone calls to verify that the meaning was understood (Benner, 1994; Maggs-Rapport, 2001). Once the researcher thoroughly reviewed the content and the themes initially identified (10 in total: Quality of relationship, Coach Skill, Trust, Encouraged Self-esteem/confidence, Dependable/reliable, Sincere/honest/comforting, Coach Traits, Expressions of affection, Significance of relationship, and Inapprehension/Disclosure) it was obvious that some categories could be collapsed (such as Trust, Sincere/ honest/comforting, Dependable/Reliable as Coach Traits) into broader themes to ensure the meanings of the units were non-overlapping (Murray & Chamberlain, 1999; Ryan & Bernard 2000). Dr. McGrath was consulted to provide professional feedback on the thematic segments in the real dataset and the initial specific themes identified. It was agreed to collapse the categories into non-overlapping themes (e.g., See final code book in Appendix B) and another category for uncodable themes that did not fit (Creswell, 1998; Ryan & Bernard, 2000). In the absence of member-checks conducted with the participants (study design limitation), this additional professional check provided confirmability of data prior to coding the real dataset (Creswell, 1998; Lincoln & Guba, 2000). The first draft of the codebook was prepared and critiqued by Dr. McGrath.

According to Ryan and Bernard (2000) it will add reliability to the study results if the researcher does not code the original dataset in an effort to minimize bias during the coding process (since much time is spent immersed in the data and thematic codes created that it would introduce a bias). Ryan and Bernard also suggest that two independent coders be used so that an inter-rater reliability check (Pope & Mays, 2000) using a statistical test "Cohen's Kappa", could be performed. Therefore, two independent coders were trained. A strong kappa result confirms that the codebook is non-ambiguous, with themes/definitions that are not overlapping (Ryan &

Bernard, 2000). Finally, Ryan and Bernard recommend that the codebook be tested with the coders using a test dataset so that any revisions can be made before releasing the original dataset. The researcher created ten sample test cases that were used for test coding. This type of *peer review* is recommended as an outside check or confirmation of the researcher's steps and interpretations (Creswell, 1998).

The test data were entered into a SPSS database with the entries double-checked as a data verification process prior to running the analysis. The Cohen's kappa test was performed and yielded an inter-rater reliability of *kappa* = 0.78, indicating very good reliability (Ryan & Bernard, 2000).

Following the results of the test cases, the researcher met with coders to review any ambiguous or overlapping issues with the codebook. Any coding differences were discussed and agreement reached regarding which category was more appropriate than another. Therefore, the codebook was revised and finalized (see attached Appendix B) before releasing the true data set for coding.

Once the codebook was revised, the real dataset and revised codebook were released in sealed envelopes to the independent coders and they were asked to review the codebook revisions; code the dataset of 131 participants (Family Help participant study IDs were replaced with a sequential nominal ID to ensure confidentiality and blindness of coders was maintained); and return the completed set to the researcher in a sealed envelope. The coding data were entered into SPSS database, entries double-checked and Cohen's kappa test performed. Additionally, other descriptive content analysis was performed to identify patterns and frequencies (Creswell, 1998; Murray & Chamberlain, 1999).

Plans for future research

The thesis research provided a basis for future, in-depth mixed methodological designs to better explore and understand distance treatment experiences. An Interpretive phenomenological approach using individual interviews and focus groups as data collection methods can be considered to be undertaken as the next step to thoroughly explore the epistemological and ontological nature (Benner, 1994) of this experience with adults and children. The researcher would become more involved with data collection, reflexivity to enhance findings and identify any gaps in the data after continuous analysis known as the Hermeneutic Circle (Benner, 1994; Leonard, 1994), and by participating as a facilitator in the focus groups.

Appendix A References (not included in the main text and general reference list):

Benner, P. (Ed.). (1994). The tradition and skill of interpretive phenomenology in studying health, illness, and caring. In *Interpretive phenomenology. Embodiment, caring, and ethics in health and illness* (p. 99-127). Thousand Oaks, CA: Sage.

Krueger, R. A. & Casey, M. A. (2000). Focus groups: a practical guide for applied research (3rd edn.). Sage Publications Inc., California.

Leonard, V. (1994). A Heideggerian phenomenological perspective on the concept of person. In *Interpretive phenomenology. Embodiment, caring, and ethics in health and illness* (p. 43-63). Thousand Oaks, CA: Sage.

APPENDIX B: FINAL CODEBOOK DESIGNED FOR CHAPTER 5 (INSERTED ON THE NEXT PAGE)

Published Manuscript: Distance Therapeutic Alliance: The Participant's Experience

Therapeutic Alliance Content Analysis
Final Code Book

Theme	Code #	Page #
Program Delivery		**p. 2-5**
Quality/significance of relationship formed with therapist (POSITIVE)	1	p. 2
Accessibility	2	p. 2
Participant Inapprehension/ Disinhibition (Ability to disclose information openly)	3	p. 2
Non-stigmatization	4	p. 2
Cost Benefit	5	p. 3
Ability to observe child behaviour *Refers to face-to-face programs*	6	p. 3
Ability to interpret body language *Refers to face-to-face programs*	7	p. 3
Enable client to meet therapist *Refers to face-to-face programs*	8	p. 3
Lack of relationship formation with coach/ therapist. (NEGATIVE)	9	p. 4
Inaccessibility	10	p. 4
Participant apprehension/ inhibition (Inability to disclose information openly)	11	p. 4
Stigmatization	12	p. 4
Cost Burden	13	p. 5
Inability of Parent/child to meet therapist *Refers to distance programs*	14	p. 5
Inability to observe child behaviour *Refers to distance programs*	15	p. 5
Misinterpretation of body language *Refers to face-to-face programs*	16	p. 5

Theme	Code #	Page #
Coach/Therapist Attributes		**p. 7**
Coach/therapist Personal Traits (Positive)	21	p. 7
Coach/Therapist Skill (Positive) (Technical/Professional)	22	p.7
Coach/therapist skill (Negative) (Technical/Professional)	23	p. 7
Coach/therapist Personal Traits (Negative)	24	p. 7
Hypothetical		**p. 8**
Hypothetical Advantages (Positive)	25	p. 8
Hypothetical Disadvantages (Negative)	26	p. 8
Treatment Goals		**p. 8-9**
Desire to gain control/manage child's problem	27	p. 8
Desire to strengthen relationships (family/friends)	28	p. 9
Early Intervention/ preventative measures	29	p. 9
None/Doesn't know (incl. no issues/problems)	30	p. 9
Other: Unable to code	99	p. 9

Program Content/Design		p. 6
Treatment Program Content/design **Attributes** (Positive)	17	p. 6
Positive Outcomes	18	p. 6
Treatment program content/design **Limitations** (Negative)	19	p. 6
Adverse outcomes	20	p. 6

Note to coders:
If a participant response seems uncertain please review it in context of the question being asked to determine whether the rest of the statement is a hypothetical statement or a statement of personal experience/opinion.
Example:
What you think the disadvantages of the Family Help system are?
"I don't know, not meeting my coach" = 14 (Inability to meet therapist)
"I don't know, others might prefer to meet the coach" = 26: (Hypothetical Dis.)
"I don't know, maybe not being able to meet my coach" = 26: (Hypothetical Dis.)
"I don't know, others may prefer to meet the coach but it was fine for me" = 26; 30 (Hypothetical Dis.; None)
"Sometimes seeing someone face-to-face, they can show you things, but I didn't feel that way" = 30 (None)

Therapeutic Alliance Content Analysis Code Book

Theme	Code	*Definition*	*Inclusion*	*Exclusion*	*Examples*
Program Delivery		Comments about the mechanics of program delivery (mode of system)			
Quality/ significance of relationship formed with therapist (Positive)	1	Refers to positive comments that describe the quality/ strength/ significance of the relationship, not to the professional or personal attributes of the coach.	Comments about: - quality/strength/significance of relationship formed - Feelings about the relationship lasting/ending - describing the relationship (i.e. open relationship, like my sister) - expressions of affection or wanting to meet coach/therapist	*Exclude comments about:* - *Therapist skill (techn./profess.)* - *therapist personal attributes* - *Program Delivery themes 2-16* - *Program Content* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- Good/great/positive relationship - - - formed a bond - developed a strong trust - wished I could have met 'coach' - I love her - Hard to say goodbye - Looked forward to calls - even though I never met her I feel like I know her/she's like my sister
Accessibility	2	Refers to comments that describe increased accessibility to services (convenience, location, short wait lists, no travel)	Comments about: -after hour access to treatment - treatment session location (i.e. Remote from a distance) - Feelings referring to less stress about going to appointments - convenience - short wait lists - no travel - flexible scheduling when referred to in the context of program delivery	*Exclude comments about:* - *the 'coach' being flexible; it is a therapist personal attribute* - *Program Delivery th. 1,3-16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- no wait times - can do it from home/work - can do other things while on phone - don't have to take kids out of school - didn't have to travel - I didn't have to worry about rushing to an appointment after work - reach people who otherwise couldn't get to appointments - flexible scheduling of appointments - couldn't do 9-5
Participant Inapprehension/ Disinhibition (Ability to disclose information: Self Disclosure)	3	Refers to participant's expressions of ability to tell or talk to his/her coach about anything. Self Disclosure (Describes the participant's feeling).	Comments about parent/child: - ability to openly disclose information/communication. - being uninhibited/inapprehensive to share/exchange information (like talking to: sister/best friend) - ability to display emotion/ anonymity	*Exclude comments about:* - *Program Delivery th. 1,2,4-16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- Talk about anything - Easy to talk to - Didn't have to hold anything back - Child would not have spoken up if face-to-face - Advantages to anonymity - say things wouldn't say in person - could cry on phone - like talking to my sister/friend

Non-stigmatization	4	Refers to participant's expressions of feeling not judged, not stigmatized or not intimidated. (Describes the participant's feeling).	Comments about parent/child: - the setting environment (i.e. comfortable/relaxed). - not feeling judged, No bias, no stigma (for parent or child) - feelings of less intimidation (i.e. because it seems less professional from a distance) - reference to child (i.e. Would not go to see someone Face-to-face)	*Exclude comments about:* - *Program Delivery th. 1-3, 5-16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- non-judgemental/no biases - child/parent not intimidated - no pressure because not face-to-face - less uncomfortable because not face-to-face - felt less nervous than face-to-face - more comfortable/relaxed environment/stay in PJs -don't have to be ashamed
Cost Benefit	5	Refers to anything to do with money that describes cost savings. Cost savings that is related to the way treatment is delivered.	Include comments about: - cost savings - no need for babysitters - less time off work - travel should be included only if participant stated a cost savings associated with no need to travel	*Exclude comments about:* - *no need for travel that implies increased accessibility (no associated comment about cost savings)* - *Program Delivery th. 1-4, 6-16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- less time off work - didn't have to pay for parking - no babysitters - no cost to travel - did not have to pay for gas - way cheaper than going out
Ability to observe child behaviour	6	Refers to positive comments about face-to-face program attributes that enable the therapist to observe the child behaviour.	Include positive comments about: Therapist ability to observe child behaviour during treatment sessions.	*Exclude comments about:* - *Program Delivery th. 1-5, 7-16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- able to get a visual of behaviour - someone else can give an assessment of my child other than me - being able to observe child directly rather than to have me explain

Ability to interpret body language	7	Refers to positive comments about face-to-face program attributes that enable the participant/ therapist to interpret or read body language or facial expressions.	Include positive comments about: Therapist/parent ability to observe and interpret body language during treatment sessions.	*Exclude comments about:* *- Program Delivery th. 1-6, 8-16* *- Program Content* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals* *- None/Doesn't know* *- Unable to code*	- general body language - see their facial expressions - can pick-up on nuances not evident over the phone, body language
Enables Client to meet therapist	8	Refers to positive comments about face-to-face program attributes that enable participant to meet therapist.	Include positive comments about: -the benefit of meeting the therapist during treatment sessions (include the benefit of physical contact)	*Exclude comments about:* *- Program Delivery th. 1-7, 9-16* *- Program Content* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals* *- None/Doesn't know* *- Unable to code*	- would be able to receive physical contact (hug/touch) - would be good to meet the person you are talking to - put a face to the name
Lack of relationship formation with coach/ therapist.	9	Refers to negative comments about ineffective or lack of relationship formation with coach/therapist.	Include: Comments about lack of relationship formation with coach/therapist. - criticism about coach	*Exclude comments about:* *- Program Delivery th. 1-8, 10-16* *- Program Content* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals* *- None/Doesn't know* *- Unable to code*	- a little too happy - lack of getting to know someone - bond would have been closer if in person
Inaccessibility	10	Refers to comments that describe difficulty accessing services (inconvenience, wait lists, need for travel)	Include comments about: - inaccessibility to treatment (no after hour session/remote location) - Feelings referring to stress about going to appointment or clinics - inconvenience, not flexible - lengthy wait lists - need to travel	*Exclude comments about:* *- Program Delivery th. 1-9, 11-16* *- Program Content* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals* *- None/Doesn't know* *- Unable to code*	- hard to get out without kids - travel - driving in to Halifax - inconvenient leaving your home - extra time it takes - need to make time - have to wait - not flexible with appointments

Participant apprehension/ inhibition (Inability to disclose information openly)	11	Refers to participant's expressions about the inability to tell or talk to his/her coach/therapist about anything. (Describes the parent or child experience)	Comments about parent/child: - inability to openly disclose information/communication. - being inhibited/apprehensive to share information - inability to display emotion/anonymity	*Exclude comments about:* - *Program Delivery th. 1-10, 12-16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- might hold back - may not say as much - not as open - forget what you wanted to ask - not say what you are thinking - harder to speak with you - less likely to be honest - child would not talk to a stranger
Stigmatization	12	Refers to participant's expressions of feeling judged, stigmatized or intimidated during treatment sessions with the coach/therapist. (Describes the parent or child experience).	Include comments about: - the setting environment (i.e. uncomfortable). - feelings of being judged, bias, stigmatized (parent/ chid) - feelings of intimidation - *feelings of being or feeling 'judged' due to ability to see body language/reactions*	*Exclude comments about:* - *misinterpretation of body language* - *Program Delivery th. 1-11, 13-16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- you could be judged - not as comfortable - meeting face-to-face there can be something about the person that you don't feel comfortable with - biases/ lack of anonymity - mom would have felt there was something wrong with her relationship with her son - harder to deal with disagreements/conflict
Cost Burden	13	Refers to anything to do with money that describes cost burden or expense incurred by parent to receive treatment.	Include comments about: - costs incurred to receive treatment - cost for babysitters - need to take time off work - travel should be included only if participant stated a cost burden associated with the need to travel	*Exclude comments about:* - *Program Delivery th. 1-12, 14-16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- time of work - expense - sitters - transportation - financial - cost more - cost to travel
Inability of Parent/child to meet therapist	14	Refers to negative comments about distant program limitations that restrict the ability of the participant to meet the coach.	Include comments about: -the desire to meet the coach (include the desire for physical contact)	*Exclude comments about:* - *Program Delivery th. 1-13,15,16* - *Program Content* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- didn't get to see her face-to-face - lack of one-on-one - difficult to keep focus/loss interest

Inability to observe child behaviour	15	Refers to negative comments about distant program limitations that restrict the ability of the therapist to observe child behaviour.	Include comments about: Inability of therapist to observe/evaluate child behaviour during treatment sessions.	*Exclude comments about:* *- Program Delivery th. 1-14, 16* *- Program Content* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals* *- None/Doesn't know* *- Unable to code*	- without seeing child's behaviour it is hard to see how he is on a daily basis - program based on what I told them about my child
Misinterpretation of body language	16	Refers to negative comments about face-to-face program limitations that can lead the participant/ therapist to misinterpret or misread body language or facial expressions.	Include comments about: How face-to-face treatment sessions can lead to misinterpretation or misreading of body language and facial expressions during treatment sessions.	*Exclude comments about:* *- feelings of being or feeling '* *judged' due to ability to see body* *language/reactions* *- Program Delivery themes 1-15* *- Program Content* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals* *- None/Doesn't know* *- Unable to code*	- not agreeing, you can see the body language - kids will behave and make a liar out of you - daughter would have been stressed out drawing attention to herself - if you disagree they see your reaction

Program Content/Design					
Treatment program content/design attributes (Positive)	17	Refers to positive comments about program materials/skills, program design (e.g. focused sessions, time to learn/apply skills)	Include comments about: - Program skills/materials - time management - inclusion of spouse/partner in treatment sessions	*Exclude comments about:* - *Program Delivery themes (i.e. flexibility/convenience comments are included under accessibility)* - *Program Content/design 18-20* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- easy to contact - Skills were helpful - stuck to the focus - go at own pace - if something didn't work had more time - family and child come first - easier to cancel a phone call than an appointment
Positive Outcomes	18	Refers to comments about treatment content/design leading to positive outcomes.	Include comments about: - positive outcomes associated with treatment - parental/child preference for treatment system	*Exclude comments about:* - *Program Delivery themes* - *Program Content/design 17, 19, 20* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- it worked - made things easier with son - it was better - mom preferred it - taught me to be more calm/not to stress over the small stuff
Treatment program content/design limitaitons (Negative)	19	Refers to negative comments about program materials/skills, program design limitations (e.g. program length issues; difficulty learning/ applying skills)	Include comments about: - program content/design issues	*Exclude comments about:* - *Program Delivery themes (i.e. inconvenience comments are included under accessibility)* - *Program Content/design 17, 18, 20* - *Coach/Therapist Attributes* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- lack of resources - inability to make contact with therapist directly (had to leave a message and call not returned until later) - assessments too long - lack of time - rushed in and out - no handbook or video possibly - child might not be good so you don't get the direct contact you need/too many distractions

| Adverse outcomes | 20 | Any reference to an adverse outcome experience | Include comments about:
- adverse outcomes associated with treatment
- parent/child dissatisfaction with treatment system | *Exclude comments about:*
- Program Delivery themes
- Program Content/design 17-19
- Coach/Therapist Attributes
- Hypothetical Adv. & Disadv.
- Treatment goals
- None/Doesn't know
- Unable to code | - misdiagnosis
- drug pushing
-third party helping, not mom
- he may be having bad day when it's time to book the assessment
-… and then the program wouldn't have been effective |

Coach/Therapist Personal Attributes					
Coach/Therapist Personal Traits (Positive)	**21**	Refers to positive comments about qualities/traits/ characteristics that specifically describe their coach/therapist.	- Comments that describe coach characteristics/ qualities/traits. - Personal attributes that might contribute to relationship formation (i.e. Voice)	*Exclude comments about:* - *Therapist Attributes 22-24* - *Program Delivery* - *Program Content/Design* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- Supportive - Smart - Dependable - Warm/friendly - Trustworthy/honest - Humorous "she made me laugh" - she did not judge me - Empathetic "she cared about me"
Coach/Therapist Skill (Technical/ Professional) (Positive)	**22**	Refers to ability of coach/therapist to teach/guide participant.	Positive comments about: - coach/therapist's technical/ professional skill and skills related to the coa (trainable skills). - coach/therapist ability to relay information/ teach/guide participant	*Exclude comments about:* - *Therapist Attributes 21, 23, 24* - *Program Delivery themes* - *Program Content/design* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- Good teacher/professional - Knowledgeable - Suggestions/answers - Knew what she was talking about - Explained things well - She has given me confidence to make decisions on my own - made me feel like a good mom - always professional
Coach/Therapist Skill (Technical/Profession al) (Negative)	**23**	Refers to inability of coach/therapist to teach/guide participant.	Negative comments about: - coach/therapist's technical/ professional skill and skills related to the coach/therapist role. - coach/therapist inability to relay information/ teach/guide participant	*Exclude comments about:* - *Therapist Attributes 21, 22, 24* - *Program Delivery themes* - *Program Content/design* - *Hypothetical Adv. & Disadv.* - *Treatment goals* - *None/Doesn't know* - *Unable to code*	- did not listen to what mom was saying - she made me feel like there was always someone waiting after me

| Coach/Therapist Personal Traits (Negative) | 24 | Refers to negative comments about qualities/traits/ characteristics that specifically describe their coach/therapist. | - Comments that describe coach characteristics/ qualities/traits.

- Personal attributes that might inhibit relationship formation (i.e. Voice pitch/talking too fast) | *Exclude comments about:*
- Therapist Attributes 21-23
- Program Delivery themes
- Program Content
- Hypothetical Adv. & Disadv.
- Treatment goals
- None/Doesn't know
- Unable to code | - a little too happy
- talked too fast
- unreliable |

Theoretical					
Hypothetical Advantages (Positive)	25	Responses that refer to a positive description or speculation of what another individual's opinion or preference may be or an uncertain personal response.	Include positive comments about other individual's opinion or preference or uncertain personal response. "maybe"	*Exclude comments about:* *- parent/child personal experience/opinion* *-Program Delivery themes* *- Program Content/design* *- Coach/Therapist Attributes* *- Hypothetical Disadvantages* *- Treatment goals* *- None/Doesn't know* *- Unable to code*	- if the person feels better face-to-face, it would be good for them - I suppose if you were face-to-face they could read your emotions - a more challenging child may need face-to-face - maybe getting to met your coach
Hypothetical Disadvantages (Negative)	26	Responses that refer to a negative description or speculation of what an experience may be like or of another individual's opinion or criticism may be.	Include negative comments about other individual's opinion or criticism - negative speculation of what an experience may be like or uncertain personal response "maybe"	*Exclude comments about:* *- parent/child personal experience/opinion* *-Program Delivery themes* *- Program Content/design* *- Coach/Therapist Attributes* *-Hypothetical Advantages* *- Treatment goals* *- None/Doesn't know* *- Unable to code*	- maybe sometimes face-to-face could develop personal relationships and favour one over the other (child vs parent) - may get them on an off day and session not go well resulting in false diagnosis - if you don't like someone maybe - others may prefer face-to-face
Treatment Goals					
Desire to gain control/manage child's problem	27	Refers to comments that imply the desire for change to gain control or manage the child's problem. This can relate to the parent's desire to gain control as well as the desire that the child will learn ways to gain control and understanding of problem.	Include comments about: - desire to change (learn new skills to help; to find ways to cope and gain control so life/ situations are manageable. - should include comments about the parent's desire to gain control but also the parent's desire for child to learn ways to cope.	*Exclude comments about:* *-Program Delivery themes* *- Program Content/design* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals themes 28, 29* *- None/Doesn't know* *- Unable to code*	- make things easier - learn new ways/skills to help - to learn how to cope - didn't want child to get backlash from teachers - trying not to hit/grab hold of my child - make child feel better about self - another approach to handling my child

Desire to strengthen relationships (family/friends)	28	Refers to comments that specify the desire to strengthen relations with the child, family unit and/or friends.	Include comments about: - parent's desire to strengthen relationships with family/ child/friends - parent's desire for child to strengthen relationships with family/friends	*Exclude comments about:* *-Program Delivery themes* *- Program Content/design* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals 27, 29* *- None/Doesn't know* *- Unable to code*	- wanted a better relationship with my family - trying to make my relationship with son easier - wanted to be a better parent - help child with peers - so child would go on sleepovers
Early Intervention/ preventative measures	29	Refers to comments that identify that the parent sought treatment as a plan or means to prevent the problem from becoming worse.	Include comments about: - desire to prevent problem from becoming worse - prevent child from difficulties later in life	*Exclude comments about:* *-Program Delivery themes* *- Program Content/design* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals 27, 28* *- None/Doesn't know* *- Unable to code*	- trying to get a grasp before it was too late - prepare for teenagehood - to get child ready for school - prevent child from getting so many grey hairs
None/Doesn't know	30	Participant responses that refer to no comment, no opinion and no issues/ problems.	Include statements about no comment, no issues/problems and doesn't know. Statement that denotes a possible theoretical disadvantage but had no effect on participant experience	*Exclude comments about:* *-Program Delivery themes* *- Program Content/design* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals* *- Unable to code*	- mom thinks no, what ever works for your situation - I would have like to have met who I was talking to but it's OK the way we did it - I don't know
Other: Unable to code	99	Any segments that do not fit within above themes/definitions or do not apply to the question asked.	Include comments that are uncodable and do not correlate with above listed themes.	*Exclude comments about:* *-Program Delivery themes* *- Program Content/design* *- Coach/Therapist Attributes* *- Hypothetical Adv. & Disadv.* *- Treatment goals* *- None/Doesn't know*	-has never gone to a clinic - mom has 2 children - doctor asked her to join program

APPENDIX C: COPYRIGHT PERMISSION FORM FROM THE JOURNAL OF TELEMEDICINE AND TELECARE FOR TWO MANUSCRIPTS-CHAPTER 3 AND CHAPTER 4

CHAPTER 3: A THERAPEUTIC ALLIANCE CAN EXIST WITHOUT FACE-TO-FACE CONTACT

AND

CHAPTER 4: A PEDIATRIC THERAPEUTIC ALLIANCE OCCURS WITH DISTANCE INTERVENTION

July 7, 2010

Journal of Telemedicine and Telecare
Royal Society of Medicine Press
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1. Lingley-Pottie, P., & McGrath, P.J. (2008). A paediatric therapeutic alliance occurs with distance intervention. Journal of Telemedicine and Telecare, 14, 236-240.

2. Lingley-Pottie, P., & McGrath, P.J. (2006). A therapeutic alliance can exist without face-to-face contact. Journal of Telemedicine and Telecare, 12, 396-399.

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APPENDIX D: COPYRIGHT PERMISSION FORM- CHAPTER 5: DISTANCE THERAPEUTIC ALLIANCE: THE PARTICIPANT'S EXPERIENCE

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