Adapting Parent Child Interaction Therapy to Custodial Grandparents

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ABSTRACT

As the structure of the American family changes, it is becoming more common for children to be raised by their grandparents. In fact, over the past 40 years, there has been a 50% increase in grandparent-headed homes in the US (Ellis & Simmons, 2014). Custodial grandparents, who provide primary caregiving responsibilities for their grandchildren, often become responsible for their grandchildren due to distressing situations and report many social-emotional, physical, and psychological difficulties (e.g., Hayslip & Kaminski, 2005). Additionally, children of custodial grandparents have been found to have significantly more emotional and behavioral problems than non-custodial grandchildren (Smith & Palmieri, 2007). The main parenting resource for this population is often support-groups, which often do not provide needed assistance with discipline and behavior management. The overall purpose of this study was to adapt Parent Child Interaction Therapy (PCIT) to custodial grandparents, using a consumer-oriented approach. The study was completed in three discrete stages. During Stage 1, qualitative interviews with custodial grandparents were completed to collect further information about custodial grandparents' experience parenting their grandchildren, use of parenting resources, and opinion of parenting strategies and PCIT. Findings from this stage indicated that custodial grandparents were amenable to PCIT procedures, but experienced significant barriers in accessing parenting services. Due to these barriers, a service delivery adaptation was developed and an online intervention was created (Stage 2) to transcend treatment barriers. Finally, during Stage 3, this online intervention was tested in a small single-subject design pilot study. Multiple metrics supported the feasibility, accessibility, satisfaction, and initial treatment

efficacy of this intervention. All participants demonstrated clinically significant reductions in at least two symptom measures and reported satisfaction with the online intervention. Overall, results provide preliminary support for the use of online interventions to teach PCIT strategies and support future research on online interventions for this population.

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GENERAL AUDIENCE ABSTRACT

The overall purpose of this study was to adapt Parent Child Interaction Therapy (PCIT) to custodial grandparents, using a consumer-oriented approach. The study was completed in three stages. During Stage 1, interviews with custodial grandparents were completed to collect further information about custodial grandparents' experience parenting their grandchildren, use of parenting resources, and opinion of parenting strategies and PCIT. Findings from this stage indicated that custodial grandparents were amenable to PCIT procedures, but experienced significant barriers to accessing parenting services. Due to these barriers, a service delivery adaptation was developed, and an online intervention was created (Stage 2) to transcend treatment barriers. Finally, during Stage 3, this online intervention was tested in a small pilot study. Multiple metrics supported the feasibility, accessibility, satisfaction, and initial treatment efficacy of this intervention. Overall, results provide preliminary support for the use of online interventions to teach PCIT strategies and support future research on online interventions for this population.

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Chapter 1: Introduction

The Rise of Grandparent-Headed Homes

American family structures have changed over time, and it is no longer possible to label one type of family unit as the traditional or "predominant" family structure (Vespa, Lewis, & Kreider, 2013). Both in the US and abroad, there has been a steady increase in prevalence of grandparent-headed homes. Recent US Census reports indicate that over the past 40 years, there has been a 50% increase in the number of grandparent-headed homes (Ellis & Simmons, 2014). Notably, there has been a surge in both custodial grandparents (i.e., grandparents who maintain full primary caregiving responsibilities for their grandchildren), as well as caregiving grandparents (i.e., grandparents who care for their grandchildren on a limited secondary basis). Currently, approximately 10 percent of US children reside in a home with a grandparent (Ellis & Simmons, 2014) and almost one-fourth of preschool children receive care from their grandparents (Laughlin, 2013). While current census estimates indicate that 4.2 million households include a grandparent and grandchild, approximately 2.7 million of these households (64%) include grandparents that are the primary caregiver of their grandchildren (Ellis & Simmons, 2014). Only about one third of grandparent-headed households also included two parents. Grandparent caregiving is even more prevalent in other Western continents. In Australia, approximately 25% of children 12 and under are regularly cared for by their grandparents while approximately 40% of children in Europe have grandparents as their regular caregivers (Australian Bureau of Statistics, 2012; Glaser et al., 2013).

Unique Stressors of Custodial Grandparents

Notably, custodial grandparents, defined in this paper as grandparents who maintain primary parenting responsibilities of their grandchildren (i.e., are actively raising them), often experience more significant stressors than other grandparent caregivers. Custodial grandparents can become responsible for their grandchildren due to distressing situations (e.g., parent incarceration, parent illness) and are often not prepared for re-entering parenthood (e.g., Roberto & Qualls, 2003). Studies have found that grandchildren of custodial grandparents have significantly more emotional and behavioral problems than non-custodial grandchildren (Smith & Palmieri 2007). Notably, parenting a grandchild with behavioral or emotional problems has been linked to negative affect, increased anxiety, and psychological distress in grandparent samples (Doley et al., 2015; Kelley, Whitley, & Campos, 2013; Pruchno & McKenney, 2002). Studies of custodial grandparents indicate significant difficulties with discipline, the parent-child relationship, changing family roles, and family stress (e.g., Dolbin-MacNab, 2006).

While custodial grandparents are a heterogenous group (Hayslip, Fruhauf, & Dolbin-MacNab, 2017) that cannot be described as one homogenous unit with the same difficulties, custodial grandparents in general report significant social-emotional, physical, and psychological stressors (e.g., Hayslip & Kaminski, 2005). Specifically, many report a lack of social support (e.g., Minkler, Roe, & Robertson-Beckley, 1994; Musil et al., 2009), losing friendships (Erhle, 2001; Wohl, Lahner & Jooste, 2003), feeling lonely and socially isolated (e.g., Hayslip & Kaminski, 2005; Hayslip, Maiden, Page & Dolbin-MacNab, 2015; Wohl, Lahner, & Jooste, 2003), feeling taken for granted (Goodfellow & Laverty, 2003) and experiencing role ambiguity and confusion (e.g., Emick & Hayslip, 1999). Several studies also report that custodial grandparents experience more frequent physical health concerns, including difficulties

accomplishing acts of daily living (Minkler & Fuller-Thomson, 1999), physical exhaustion (Jendrek, 1993), and higher incidence of diabetes and hypertension (Minkler, Fuller-Thomson, Miller, & Driver, 2000). In regard to mental health concerns, custodial grandparents have been found to have an increased risk of depression (e.g., Baker & Silverstein, 2008; Fuller-Thompson, Minkler & Driver, 1997; Musil et al., 2009), as well as higher rates of anxiety, anger, and irritability (Burnette, 1999). Furthermore, those that lack social support, report self-esteem difficulties (Giarusso, Silverstein, & Feng, 2000). Overall, several studies comparing custodial grandparents to non-caregiving grandparents have found that custodial grandparents have significantly worse physical and mental health problems, controlling for race and socioeconomic status (e.g., Burnette, 1999; Fuller-Thomson, Minkler & Driver, 1997, Robinson & Wilks, 2006). Overall, custodial grandparents experience higher overall stress than non-caregiving grandparents (e.g., Kirby, 2015; Musil & Ahmand, 2002).

Custodial Grandparents Attitudes Toward Parenting

As previously noted, studies have found that grandchildren of custodial grandparents have significantly more emotional and behavioral problems than non-custodial grandchildren (Smith & Palmieri 2007). Recently, several studies have sought to examine custodial grandparent attitudes toward parenting. Notably, these studies are generally completed through focus groups and interviews, and are predominantly of custodial grandmothers. Through examining in-depth interviews of 16 custodial grandparents, Robinson and Wilks (2006) found that grandparents reported difficulty enforcing discipline, generational gap issues pertaining to discipline (i.e., strategies they had used previously no longer work when their grandchildren), biases from outsiders (i.e., people think they cannot discipline their children because they are grandparents), discomfort when attending school meetings (i.e., unease being the oldest person in teacher-

conferences), disruption of their marital relationships, and a desire to learn new parenting strategies, as well as strategies to deal with traumas of their grandchildren. In a study of attitudes of 40 custodial grandmothers, Dolbin-MacNab (2006) found that custodial grandparents reported that changing family roles (e.g., parenting someone else's child, simultaneously trying to serve as a grandparent and parent) was associated with increased family stress. Additionally, over one third of participants noted the changing social world (i.e., age-gap and different attitudes toward alcohol, drugs, and sexuality) caused significant parenting difficulty. Lastly, Kirby and Sanders (2012), examined the parenting attitudes of non-custodial (i.e., secondary caregiving) grandparents in a 14-person focus group and found several themes including difficulty disciplining, wanting to learn new parenting strategies, and parenting role stressors (e.g., frustration, guilt). Overall, several studies indicate general difficulties with discipline, increased parental stress, and socioemotional difficulties relating to the parenting role. Notably, several studies also lend support to the idea that while grandparents might not be very knowledgeable of current evidence-based parenting approaches (i.e., Hayslip & Kaminski, 2005), they are open to learning new strategies (i.e., Dolbin-MacNab,2006; Kirby & Sanders, 2012). However, Kirby and Sanders (2012) note that there is very limited research on how grandparents would view a parenting program adapted specifically for their parenting needs.

Common Parenting Services for Custodial Grandparents

Support Groups. Support groups are generally the most popular type of psychological intervention services for custodial grandparents (Strom & Strom, 2000). While some studies have found support groups to be beneficial (e.g., Dannison & Smith, 2003; McCallion, Janicki, Grant-Griffin, & Kolomer, 2000), especially in helping reduce feelings of isolation and assisting in adjusting to new roles, other suggest that support groups generally only provide "venting"

services and that this lack of direction does not lead to adequate change or improvements post-group (Strom & Strom, 2000). Additionally, while there are a plethora of available support groups, most groups do not run persistently and thus are not effective long-term grandparent parenting interventions (Wohl, Lahner, & Jooste, 2003).

Psychoeducational Programs. There are several psychoeducational groups for grandparents raising grandchildren, which focus on providing resources on several topics including coping, navigating the school system, and child development issues (Kirby, 2015). For a review of this subject see Kirby (2015). Examples of psychoeducation programs include Project Healthy Grandparents (Kelley et al., 2001), Becoming a Better Grandparent and Achieving Grandparent Potential (Strom & Strom, 1997), and the Parental Skills/ Psychosocial Skills Training Program (Hayslip, 2003).

Behavioral Parent Training. Among other experiences, custodial grandparents frequently cite difficulties managing disruptive behavior and attentional difficulties in their grandchildren (Carlini-Marlatt, 2005). Evidence-based parent training programs (i.e., Parent Child Interaction Therapy (PCIT), Parent Management Training- Oregon Model (PMT-O), Triple-P Positive Parenting Program, Incredible Years Parenting Treatment (IYPT)) are recommended as the first line of treatment for young children with disruptive behavior disorders (Eyberg, Nelson, & Boggs, 2008). However, while many researchers presume that these approaches will be successful with grandparents, (Carlini-Marlatt, 2005; Silverthorn & Durrnat, 2000) and encourage the use of parent training treatments with this population (Goodman & Hayslip, 2008) this assumption has not been tested in controlled studies of evidence-based parent-training programs (EBPPs) with solely grandparent samples. Additionally, while there is extensive research on grandparent attitudes and barriers to caregiving, there is only limited

research on attitudes toward parent-training, parenting strategies, and barriers to parent-training therapy. Until quite recently, there were very few studies on the parenting practices of grandparents, and even less about whether grandparents required or wanted parent training. However, several research studies by Kirby and Sanders have begun to solve these questions.

Kirby and Sanders- A Model of Adaptation of Evidence-Based PT for Grandparent Caregivers. Kirby and Sanders used a multi-step "consumer" focused approach to adapt and validate a version of Triple P for grandparents acting as secondary caregivers (i.e., providing 11 to 20 hours of care weekly). This included assessing grandparent views on parenting challenges through focus groups (Kirby & Sanders, 2012); assessing acceptability and barriers to parenting strategies (Kirby & Sanders 2014a), completing an RCT of the adapted program (Kirby & Sanders, 2014b), and providing recommendations for other parent-training adaptations for grandparents (Kirby, 2015). Notably, Kirby and Sanders advocate for a "consumer perspective" and community participatory approach, noting that this improves ecological validity of the adapted program. They note that "one way of increasing both the participation rate and the fidelity of parents accessing EBPPs is to offer a program informed and developed by that specific consumer group." Specifically, Kirby and Sanders (2012) provide a framework for adapting parent training to diverse groups including consulting epidemiological survey research and conducting a comprehensive literature review (including population-specific risk-factors, concerns and interests), basing adaptations on well-validated theories and mechanisms of change, and using qualitative and quantitative techniques to assess group specific barriers and interests.

Additionally, Kirby (2015) provides specific recommendations on the modification of evidence-based parent practices for grandparent populations. Specifically, he suggests that

researchers involve the consumer (i.e., target group) in adaptation development, consider the heterogeneity of the grandparent population, use "minimally sufficient interventions" (Sanders, Kirby, Tellegen & Day, 2014) (i.e., interventions selected to reach the most positive clinical outcomes in the least time and most cost-effective manner), use stringent RCT methodology, evaluate mechanisms of change, and test adapted treatments against the original unadapted program (Kirby, 2015). Aspects of these recommendations were considered in the current study.

Overall Study Aims, Rationale, and Orientation to Dissertation Document

The current study sought to adapt Parent Child Interaction Therapy (PCIT) to custodial grandparents, using a derived etic community participatory approach. Aspects of study development were modeled after Kirby and Sanders' work adapting Triple-P to caregiver grandparents. This dissertation was originally proposed as a Stage 1 manual development project, following Carrol and Nuro's (2002) Stage Model for Psychotherapy Manual Development. However, after completing the first stage of the study, it was determined that based on feedback from qualitative interviews with custodial grandparents, an adapted manual of the treatment was not the appropriate course of action to address barriers that reduced treatment accessibility in this population. Thus, rather than adapting the manual, adaptations of treatment delivery were made, and the adapted program was tailored to custodial grandparents.

The dissertation project was completed in multiple stages, which are discussed in subsequent chapters of this document. The first stage (Chapter 2) included in-depth qualitative interviews with custodial grandparents, to better understand their experiences, difficulties, and barriers, in order to best adapt PCIT to meet their needs. Based on the feedback in this first stage, the second stage (Chapter 3) entailed developing an online adaptation of PCIT for custodial

grandparents. The third stage (Chapter 4-6) involved testing this intervention with a small pilot of custodial grandparents.

Parent-Child Interactive Therapy (PCIT) is an evidence-based parent-training treatment that was first developed in the 1970s for young children with disruptive behavior problems (Funderburk & Eyberg, 2011). PCIT was first studied with children between 2-6 years of age, but now it is often used in community and research settings with children from 2 to 8 years of age. New emerging research also suggests it can be adapted for children younger than two, and as old as ten years of age (McNeil & Hemberee- Kigin, 2010). PCIT includes two stages: Child Directed Interaction (CDI), which focuses on improving the parent-child relationship and increasing praise, positive attention, and child-directed play, and Parent Directed Interaction (PDI), which focuses on increasing compliance and enforcing consequences (i.e., discipline) for disruptive behavior (McNeil & Hembree-Kigin, 2010). Core components of PCIT include selective use of attention, appropriate use of praise, play-therapy techniques, direct command instruction, and enforcement of consistent consequences. Treatment efficacy has been extensively evaluated in many research studies (e.g., McNeil, Capage, Bahl, & Blanc, 1999; Nixon, Sweeney, Erickson, & Touyz, 2003; Schuhmann, Foote, Eyberg, Bogs, & Algina, 1998; Thomas & Zimmer-Gembeck, 2007) and PCIT is considered a well-established treatment (Elkins & Comer, 2014).

PCIT was chosen as the baseline intervention to adapt for several reasons. First, PCIT is a first-line EBPP for children under six years of age with conduct problems. Notably, the US Census Bureau reports that the majority of grandparent-headed homes include children under the age of six (US Census Bureau, 1996), and an extensive study of over 3,000 grandparents in the US found that most grandchildren begin to live with their grandparents before the age of five

(Fuller-Thomson, Minkler, & Driver, 1997). Second, PCIT targets both poor parent-child interactions and parent discipline/child misbehavior, which are both described as needed intervention targets in the literature. Third, PCIT has been adapted to be used in various cultures (e.g., Matos et al., 2006; McCabe et al., 2005), in various settings including in-home treatments (e.g., Ware, McNeil, Masse, & Stevens, 2008), and using various treatment modalities including 12-20 -session individual treatment, community-based 12-week group treatment (Nieter, Thornberry & Brestan-Knight, 2013), and two-day workshops (e.g., McNeil, Herschell, Gurwitch, & Clemens-Mowrer, 2005). Thus, PCIT was chosen as it appeared to be an ideal intervention to flexibly adapt to a heterogeneous population who may prefer a treatment modality different than standard individualized therapy sessions. In order to adapt this intervention, a qualitative interview-based study was completed to assess the appropriateness of adapting PCIT to this population, and to gather further information on the needs, experiences, and barriers of custodial grandparents.

Chapter 2: Stage 1: Consumer-Oriented Qualitative Interview Study

Methods

Participants. Participants included 15 custodial grandmothers. A two-stage eligibility screening process was utilized. First participants had to meet the following baseline eligibility criteria to be screened for further eligibility in the study: (1) provide the majority of care for their grandchild(ren) (i.e., 25 or more hours a week) and classify themselves as the primary caregiver; (2) raise a grandchild between the age of 2 and 8; and (3) have concerns about behavioral difficulties of their grandchild(ren). As the researcher sought to interview custodial grandparents with grandchildren who would be a good fit for PCIT, the following secondary eligibility requirements were determined through a brief phone screening session, in which measures were

administered over the phone: Participants had to meet the above initial criteria and demonstrate high parenting stress (85^{th} percentile or above) as measured by the Parenting Stress Index- Short Form (PSI-4-SF; Abidin,1995, 2012) and/or have grandchildren with significant behavioral difficulties as measured by a clinically significant score ($t \geq 60$) on the *Problems* or *Intensity* subscales of the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) or borderline or clinically significant difficulties ($t \geq 65$) on the *Oppositional Defiant Problems* subscale of the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). Exclusionary criteria included that a grandchild must not have a severe mental illness (i.e. Schizophrenia), severe chronic medical illness (e.g., severely disabled, cancer, cerebral palsy) or be hearing or vision impaired.

Notably, after several months of recruitment efforts, the secondary eligibility requirements were loosened, and some participants were conditionally accepted, with chair approval. As the main purpose of this stage was to gather information on custodial grandparents experience of parenting their grandchildren, utilization of parenting resources, and view of PCIT, participants that had elevated but subclinical elevations on behavioral measures, had lower elevations in behavioral difficulties because of frequent access to parenting resources, or had a significant history that would provide valuable information for interviews (i.e., great grandmother who raised her grandchildren and great grandchildren) were determined to be potentially valuable contributors and allowed to participate in the study. Ultimately two participants were deemed “conditional” and one continued to participate in the interview component of the study.

Recruitment was conducted in all 50 states through emailed recruitment messages, emailed/mailed flyers, and phone-calls to all organizations listed on the AARP GrandFacts in

each state over a seven-month period. Additionally, further recruitment efforts were made to large mental health organizations (e.g., Family Preservation Services) and fliers were disbursed locally (e.g., day-cares, meeting places). Twenty-two participants met initial screening criteria and were eligible to continue the eligibility phone screen. Of these seven participants were ineligible due to a number of reasons (e.g., inability to contact after screen, declined participation after screen, difficulties with child related to medical rather than behavioral difficulties, children removed from home between screen and interview). Ultimately, 15 phone interviews were completed.

Demographic characteristics of the final sample are presented in Table 1. Although custodial grandmothers and grandfathers were recruited, the final sample included only custodial grandmothers (i.e., 100% female) who ranged in age from 48 to 73 years (M = 57.80 yrs; SD = 6.97). Notably, two participants were great grandmothers. The sample was primarily Caucasian (73.3% Caucasian, 26.7% African American). Five grandmothers identified as married, four as single/never married, four identified as widows, and two as divorced. Eight participants (53.3%) identified as employed, six noted that they were retired and receiving benefits, and one participant listed that she was unemployed. Participants education level varied, ranging from some high school to an advanced/professional degree. Although recruitment was nationwide, 73.3% (n = 11) of participants came from southern states, with one participant from the West and three participants from the North East. Lastly, 60% (n = 9) reported having more than one grandchild under their custodial care. The length that grandparents had been primary caregivers of their grandchildren greatly varied, ranging from 9 to 72 months (Mean length of caregiving = 37.33; SD = 23.83).

Measures

***Eligibility Measures*.** The author acted as "phone screener" for all eligibility assessments. The phone-screener asked several questions to assess initial eligibility (see phone screen script and eligibility questions in Appendix A). Then the following child-behavior eligibility questionnaires were completed by phone:

Eyberg Child Behavior Inventory (ECBI, Eyberg & Pincus, 1999). The ECBI is a 36-item measure of parent-reported disruptive behavior. It includes two subscales which measure the frequency of disruptive behavior (on a scale from 1= "never" to 7= "always"), and whether each type of behavior is a "problem" for the parent at the given time. The ECBI has been used extensively in PCIT research, and across evidence-based parenting programs and disruptive behavior disorder research. Additionally, the ECBI has been validated in studies of grandparent caregivers with high internal consistency (Kirby & Sanders, 2014b; α = .93 for the intensity subscale and α= .91 for the problem subscale). Internal consistency for the current sample was α= 0.92 for the intensity subscale and α= 0.87 for the problem subscale.

Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). The Oppositional Defiant Disorder subscale of the preschool or school age (depending on child age) version of the *Child Behavior Checklist* was also used as inclusionary measure. The CBCL has been used with several grandparent caregiver samples (e.g., Leder, Grinstead & Torres, 2007; Harrison, Richman, & Vittimberga, 2006).

Parenting Stress Index, Fourth Edition, Short Form (PSI-4-SF; Abidin, 1995, 2012).The PSI-4-SF is a 36-item questionnaire which provides a measure of parenting stress and includes a total stress score and three subscales : parent distress (i.e., distress over parenting competence),

parent-child dysfunctional interaction (i.e., perceived negative interactions with child), and "difficult child" (i.e., behavior difficulties). The short-form and long form of the Parenting Stress Index have been used in several grandparent samples (e.g., Leder, Grinstead & Torres, 2007; Harrison, Richman, & Vittimberga, 2000; Ross & Aday, 2006). Notably, Leder and colleagues (2007) administered the short-form in phone interviews, providing support for the validity of using this measure during a telephone interview. This measure demonstrates acceptable internal consistency in grandparent samples (e.g., total score α ranged from .87-.95; Leder Grinstead & Torres, 2007; Ross & Aday, 2006). Internal consistency for the current sample was: parent distress α= .90, parent-child dysfunctional interaction α=.88; difficult child α= .85; total α= .92).

***Parenting Behaviors*.** Additionally, two measures about parenting behaviors were added to supplement qualitative data from interviews. These measures were administered by phone, at the beginning of the scheduled interview.

The Parenting Scale (PS, Arnold, O'Leary, Wolff, & Ackler, 1993). The PS is a 30 item questionnaire that measures three dysfunctional discipline styles: laxness (i.e., permissive parenting, awareness of misbehavior, but avoidance of discipline), over-reactivity (i.e., authoritarian, punitive, harsh discipline), and verbosity (i.e., discipline with overly-long verbal explanations). The PS is commonly used to assess parenting practices and evaluate the effects of parenting treatment programs (Pritchett et al., 2011; De Graaf et al. 2008). Internal consistency estimates range from α= .63-.84 (Hawes & Dadds, 2003) Several factor analytic studies have examined various structural models, and removed items, shortening subscale versions. Yet, results from these studies are ambiguous and often times contradictory. Salari, Terreros, & Sarkadi (2012) discuss that the PS may be too sensitive to sample characteristics. Following suggestions from two psychometric studies of this measure (Salari, Terreros, & Sarkadi, 2012;

Lorber, Xu, Smith, Bulling, & O'Leary, 2014); the original longer subscales were utilized. This measure was utilized in Kirby and Sanders' (2014b) RCT with caregivers (non-custodial grandparents). It demonstrated adequate internal consistency in each scale: laxness (α= .73), over-reactivity (α= .72), verbosity (α= .88). Internal consistency for the current small sample study was as follows: laxness (α= .58), over-reactivity (α= .82), verbosity (α= .75), total (α= .78). This measure was used as quantitative data to supplement the qualitative data on parenting strategies received during the interview. Additionally, it was used to supplement data as it discusses negative discipline strategies, which some grandparents may be less apt to describe in detail during phone interviews.

The Parenting Task-Checklist (Sanders & Woolley, 2005). The Parent Task Checklist, also used in Kirby and Sanders' RCT, is a 28-item scale which measures parents "task-specific self-efficacy" and confidence in dealing with disruptive behaviors. Parents rate several scenarios or tasks (e.g., "waking and getting your child out of bed," "visiting friends or relatives with your child," "your child gets upset when they do not get their own way") on a 0 to 100 rating scale of their confidence in successfully completing these tasks. It includes two subscales which measure self-efficacy in dealing with difficult behaviors and self-efficacy in dealing with difficult behaviors in various settings. Kirby and Sanders (2014b) indicate that this measure demonstrated good internal consistency: behavioral (α= .95) setting (α= .99) with grandparent caregivers. Internal consistency for the current sample was: behavioral (α= .88), setting (α= .77).

***Telehealth Survey*.** Based on responses during the course of interviews, an additional telehealth survey was sent to all interview participants. Participants were asked to complete an online survey regarding their attitudes toward a telehealth adaptation of PCIT. The survey asked participants to list their largest barriers to accessing parenting resources, whether they would be

interested in an online-training version of PCIT, whether they have access to a computer with internet in their home, and whether they would like to be contacted to participate in a pilot study of an online PCIT intervention.

Procedure. Once a participant expressed interest in the study, a brief phone screen was conducted to determine if the participant met initial eligibility criteria as described above. The author acted as phone screener for all participants. The phone screener summarized the nature of the study, and obtained verbal consent for phone screening. The phone screener then administered the secondary eligibility measures over the phone. After completing the screen, all eligibility criteria were scored to determine if the participant was eligible for the study. If eligible, or conditionally eligible, the phone screener called the participant to schedule the longer interview. At this time, the phone screener emailed or mailed a pre-interview packet of information to the Participant, which included handouts that would be referenced in the interview. (See pre-interview packet in Appendix B).

The author then conducted all interviews. All interviews were recorded. Interviews were semi-structured interviews that lasted from approximately 50 to 90 minutes, including the time to administer questionnaires. Average length of the actual interview (excluding administration of measures) was 53.44 minutes (*SD* = 11.14, range: 33.85- 69.75). The majority of the interviews (80%) were between 45 and 69 minutes. Interviews began with the administration of three questionnaires (i.e., demographics, Parenting Scale, Parenting Task Checklist) and then proceeded with the interview questions. Interviews included a set of questions (see Appendix C) that assessed the following four areas: (1) their experiences parenting their grandchildren (e.g., attitudes toward parenting, challenges parenting, what things were easy versus difficult); (2) their use and opinions of various parenting strategies (e.g., time-out, praise, reinforcement,

contingency systems); (3) their experience with, and thoughts regarding, parenting resources (e.g., support groups, parent-training programs); (4) and their opinions of Parent Child Interaction Therapy (which was discussed in detail by the researcher). Three questions were taken verbatim from Kirby and Sanders' (2012) study which utilized focus group methodology to gain consumer information for adapting parent training interventions for non-custodial (i.e., caregiving) grandparents. These questions were extended to custodial grandparents following their model. Additionally, at several points, handouts were referenced during the interview, to assist with discussing various topics. (See Appendix B).

Data Analysis. Kirby and Sanders' (2012) consumer adaptation focus group study of caregiving grandparents was used as a model for this component of the dissertation. Following Kirby and Sanders, the author used the specific thematic analysis procedure outlined in Braun and Clarke (2006). Additionally, tools in grounding theory were consulted and utilized (e.g., constant comparison). Braun and Clarke argue that thematic analysis, often viewed as a tool or component of qualitative analysis, should be considered a qualitative method in its own right, and can be used within several qualitative theories. They provide a 6-step guide to thematic analysis procedure and checklists for good thematic analyses. Additionally, they note that one advantage of this approach is that it can be utilized by researchers with minimal experience in qualitative research. Braun and Clarke's identified stages of thematic analysis include (1) transcribing, reviewing, and re-reading the data several times for familiarity; (2) creating initial codes; (3) organizing data into initial themes; (4) reviewing themes; (5) refining, defining, naming, and finalizing themes; (6) producing the report of analyses, including extracts. Similar procedures were followed as described below. Notably, not all aspects of the interviews were thematically coded, as some components were coded using counts (e.g., how many people

reported using a specific parenting resource, how many strategies participants had, how many participants reported that they agreed with PCIT).

Trained undergraduate research assistants transcribed the interview data verbatim. The first author then reviewed transcripts to re-familiarize herself with the data and note initial ideas. While open coding was utilized (i.e., codes/themes were not predefined before coding), coding domains were created. For example, coders were to focus coding on the following topics: 1) benefits of caregiving; 2) challenges of caregiving; 3) use and opinions of parenting strategies; 4) experience with parenting resources- benefits and barriers; and 5) opinions of PCIT. The author and one trained research assistant then coded each interview for initial codes, and ultimately organized these into themes. For example, coders read the transcripts, and created initial codes to begin categorizing the information. At times codes were "in vivo" (i.e., coming directly from participant language; Glaser & Strauss, 1967), while other codes were constructed codes. Categories were organized into major themes, with some major themes including subthemes. The two coders met weekly to review/compare codes and resolve any minor discrepancies by reviewing the data and coming to a consensus agreement. When all interviews were coded, an additional research assistant was utilized as a "quality check" and reviewed all data to assist with ensuring that all data relevant to each theme was coded. The first author ultimately reviewed/refined all finalized themes and wrote the report analyses. Notably, not all aspects of the interview analyses are included in this discussion, as they do not fully pertain to the ultimate dissertation project (which was revised after stage 1). Relevant aspects of qualitative coding are included in the results section below.

Results

Descriptive Statistics. Although not the primary focus of this mainly qualitative study, descriptive statistics of the sample are included in Table 2. For descriptive purposes, bivariate correlations of demographic and study variables are included in Table 3. Notably, grandparent age was negatively correlated with parental distress on the PSI (r = -.57, p = 0.025) such that higher scores of parental distress were associated with younger grandparents. Number of grandchildren in a grandparent's custodial care was correlated with higher scores on the laxness (r = .64, p = 0.010) and verbosity (r = .65, p = 0.009) scales of the Parenting Scale, suggesting that grandparents raising multiple grandchildren were more likely to report higher levels of permissive parenting, or overly verbalized responses. Not surprisingly, total stress on the Parenting Stress Index was negatively correlated with both self-efficacy scales of the Parenting Task Checklist, suggesting that higher stress was associated with lower parenting self-efficacy. Similarly, higher ratings of dysfunctional child-parent interactions, were correlated with higher child behavior difficulties scores (as measured by ECBI intensity and problem scales) as well as lower parenting self-efficacy as measured by the Parenting Task Checklist.

Because of eligibility criteria that only required elevations in one measure, and later loosening of eligibility criteria, not all participants demonstrated clinically significant scores on the ECBI or PSI-4-SF. However, 60% of the sample demonstrated clinically significant ECBI intensity scores (i.e., raw score ≥ 131, t score ≥ 60) and 86.67% of the sample demonstrated clinically significant ECBI problem scores (raw score ≥ 15, t score ≥ 60). Notably, mean ECBI intensity and problem scores were higher than those reported in the intervention condition of Kirby and Sanders' RCT of Triple-P with caregiving (noncustodial) grandparents (Kirby & Sanders, 2014b). In this study, grandparent caregivers reported lower ratings on the ECBI than

parent respondents. While most grandparents in the current study reported child behavior problems, only 53.33% reported high total parenting stress (PSI percentile score ≥ 85).

Parenting Behaviors. Overall ratings of parenting self-efficacy fluctuated throughout the sample. Average total behavioral self-efficacy ranged from 53-100 (*M* =79.80, *SD* = 13.94). Setting self-efficacy ranged from 66-93 (*M* = 80.13, *SD* = 8.09). Across the sample, the two tasks that grandmothers reported the least confidence in managing their grandchild's behaviors were dealing with defiant behaviors and dealing with food-refusal. The three settings that grandmothers reported the least confidence in managing behaviors included while shopping, when visitors were at home, and when talking on the telephone.

Regarding parenting styles, only one participant flagged above the cutoff for laxness on the Parenting Scale, and similarly only one participant flagged about the cutoff for permissive parenting. However, seven participants (46.67%) endorsed high levels of verbosity, which is associated with reprimands/discipline using overly verbose descriptions about behavior, which often can give more attention to negative behaviors.

The following results are all from the qualitative interviews.

Positives about raising grandchildren. During the course of interviews, the following two major themes emerged regarding the positives of raising grandchildren.

Grandchildren bring love, laughter, and joy (i.e., improving grandparent's wellbeing). Eight grandmothers (55.33%) noted that parenting their grandchildren had improved their own wellbeing, through increased laughter, joy, or affection. They described that while parenting was difficult, they experienced significant feelings of positivity and love from their grandchild. For example, one grandmother shared how she felt picking up her grandchildren from school: "They

have really showed me a lot of affection and they always act as though they're glad to see me when I come to pick them up from daycare and school. Uh they do like to go places with me and I enjoy being with them." Another noted how parenting her grandchildren had changed her outlook on things: "I see things differently. I am way less judgement and they make me laugh. They make me laugh a lot. They are a lot of fun". Several grandparents also described the experience as rewarding.

Opportunities to protect and guide. Seven grandmothers (46.67%) discussed how providing primary care for their grandchildren allowed them to ensure their grandchild's safety and take an active role in their grandchild's upbringing by influencing or guiding their grandchildren. One grandmother noted "I want to protect them first and foremost!". Another commented on maintaining safety "… that I can lay down at night and know they're safe. I don't have to stress about which house they're living in, if their around drugs, what people they're surrounded by." Other examples of guiding mentioned included helping their grandchildren to develop positive skills (i.e., confidence), influencing their grandchild's education, and ensuring that their grandchildren are in a nurturing environment. These discussions were coded under the major theme of "opportunities to protect and guide". Subthemes within this major theme included ensuring grandchild's education, ensuring grandchild's social emotional health, ensuring grandchild's safety, and influencing grandchild's future.

Challenges about raising grandchildren. Participants reported several challenges raising their grandchildren. The major themes, and associated subthemes, are included in Table 4. The major themes included: challenges managing behavior, loss of grandmother role, addressing traumas, changes in lifestyle, and difficulties navigating resources.

Managing grandchild's behavior. Fourteen of 15 participants (93.33%) reported significant challenges managing their grandchildren's behavior. This was broken up into six core subthemes: difficulty with defiant/disruptive behavior, difficulty managing hyperactive/inattentive behavior, difficulties with discipline, the need to maintain constant attention and vigilance of grandchild's problem behaviors, the need for grandmother's energy/patience, and the need to correct "parenting mistakes" make by the child's biological parents. Notably, thirteen participants reported challenges in at least two of the sub-domains. The most common challenges were symptom based, with grandparents reporting significant difficulty managing their grandchildren's defiant, aggressive, hyperactive, or inattentive behaviors. For example, ten grandparents (66.67%) discussed difficulties with defiance/disruptive behaviors; while nine grandparents discussed difficulties managing hyperactivity/inattention.

Notably, several grandparents (*n*= 6) who had taken over custody from the grandchild's biological parents noted significant difficulty addressing behavioral problems, due to prior parenting practices of their grandchild's biological parents. This difficulty was coded in a subtheme of "*Retroactive Parenting: Correcting Mistakes of Biological Parent*" One grandparent noted this difficulty on several occasions during her interview:

> There is a lot missing from these children that your parents taught you, my parents taught me...these kids didn't get that so having to go backwards, teaching them ethics and values and morals…When I got these kids they had no discipline in them at all. They are used to getting their way, getting their way all the time. Her mom even said to me 'I just let them do whatever they want to.' These kids had to be taught, to these kids they didn't know that they were kids.

Similarly, another grandmother reflected on the difficulties she had witnessed from her grandchild's biological parents and what she had to correct when she became the primary caregiver:

> One thing that they tended to do that I always stressed that they shouldn't do was threaten something that you can't follow through on. If she was touching something they would threaten to cut her fingers off. I felt like I was parenting her parents with not very good results.

Loss of the grandmother role. While discussing parenting challenges, seven grandmothers (45.67%) reported a significant sense of loss, specifically that they had lost the opportunity to be a grandmother. While discussing this, the majority mentioned that it affected their ability to discipline. One grandmother bluntly noted, "I don't really want to be a parent and have to discipline him. I would like the opportunity to be a grandparent, to spoil him and I think that really sucks." While most expressed frustration over loosing this role, they did not regret their decision. For example, another participant responded: "…grandchildren usually have a mother and a father, not just a grandparent, and that's been the hardest. I want to be that grandmother, but I think about it and in my heart, I would still do it all over again."

Addressing Traumas. Eight of 15 participants (53.33%) expressed parenting challenges involving addressing traumas that their grandchildren experienced, or addressing their own traumatic triggers surrounding the biological parents. Several grandmothers (*n*= 6) noted that their grandchildren had experienced neglect and inconsistency that caused them to be mistrustful, clingy, angry, or emotional. Participants also reported instances of biological trauma, due to mother's drug usage. Most reported frustration and sadness over seeing their grandchildren's emotional reactions. For example, one grandmother reported:

> One of things I had to deal with, has been they are missing their mom and when they are overwhelmed it comes out, emotionally crushes or emotionally, you know, hurt. I want to help them pick up the pieces from someone else, but then again, it's their mom. No matter what effects the parent has, the children still want their parent, they still want that relationship so its traumatizing.

Participants also expressed frustration and concern over their grandchildren's loss of a biological parent, as one grandmother simply noted "Difficult trying to make sure that they, that the kids don't have any after effects of not having their parents." Several noted that their own children's lack of interest parenting caused the grandparent traumatic difficulties as well. For example, one grandmother noted:

> Knowing my son doesn't want to get up and do his job as a dad, it eats you up. And you are sitting here having to sacrifice your life for the sake of your grandchildren because you don't want strangers taking care of your blood relative, because your kids won't get up and do this. The same thing you did, that's the hardest part. Then that kid of yours calls up and says "Hey, how are my kids doing?"

Changes in Lifestyle. When discussing difficulties parenting their grandchildren, seven participants (46.67%) noted a marked change in lifestyle that had come with deciding to raise their grandchildren. Participants noted that raising their grandchildren had caused them to feel a significant loss of independence or freedom (e.g., "I just can't get in my car and go [laughs]. Number two, I don't have much time to do much on my own. It is all pretty much for them."), made it difficult to navigate personal responsibilities (i.e., occupation, community work), caused them difficulty in managing time, and strained relationships with family members and peers. One grandmother discussed how even the smallest aspects of her life had changed:

> Your whole life changes. We had a very good friend who came over shortly after <grandchild's name> came to live with us and were talking about going out on a Friday evening. And she told me we'd love to go out but we don't want to go out with a five year old.

Difficulties navigating resources. Lastly, eight grandmothers (53.33%) noted that difficulties accessing or navigating resources contributed to challenges parenting their grandchildren. This included difficulties navigating the legal process to become an official custodial grandparent, difficulties with working with the department of children and families, and difficulties assessing support or services.

Knowledge and Use of Parenting Resources. Participants expressed knowledge of the parenting strategies discussed in Interview Handout 2 (see Handout 2, Appendix B). All participants described at least one technique as helpful/effective. Ten participants reported using praise and finding this technique effective. This was followed by use of rewards/reinforcement systems (n =8), and use of limitations/restriction of privileges (n =8). Seven participants reported using a time-out (i.e., time out chair, time out corner) or modified time-out (i.e., calm down period in room) technique and finding this effective. However, seven other participants noted difficulties implementing time out and found that it was not effective. Eight participants also noted talking it out was not an effective strategy. While several grandparents reported using ignoring as a strategy to improve behavior, others noted concern about ignoring, based on abuse/neglect histories of the children.

Access and Experience with Parenting Resources. In total, 12 participants (80%) reported currently or recently accessing parenting resources. Six reported accessing a support group only; 5 reported accessing a support group and another resource (i.e., individual therapy,

parenting workshop, parenting class, in-home therapy); and 1 participant reported utilizing individual therapy only**.** Eleven of 15 (73.33%) grandparents reported currently or recently accessing a support group. No participants reported accessing family therapy. Three of the 15 participants (20%) reported that they had not currently or recently accessed any parenting resources. When discussing parenting resources, the following themes emerged:

"Realized I wasn't Alone": Camaraderie, Eye-Opening Experiences, and Support. Seven of the eleven grandparents who attended support or parenting groups, specifically reported that these programs helped them to realize that they were not alone, and that there were other grandparents going through this same experience. Many reported learning "eye-opening" statistics about the amount of custodial grandparents nationally. For example, one grandmother reported:

> I had no idea that there were so many people doing what we're doing [laughing]. I had no idea. The statistics are really scary. When I first started doing this, I felt totally… I don't know… I had no idea that there were other people out there experiencing what I was experiencing. When I was referred to this program…I said alright and the first week I went there was a gentleman telling my story… And it's amazing these people have the same challenges we have, it's amazing.

Similarly, another grandmother commented on her spouse's reaction: "It was eye-opening, how big a problem this is number one, but I think it also helped him to realize that we're not the only ones in this situation."

Ability to share ideas and resources. Seven of the eleven grandparents who attended support or parenting groups also reported that they enjoyed being able to learn from other group

members, share strategies, and share or connect to new resources. One grandmother simply noted: “Support groups really give you a chance to talk to real people in real situations about real solutions on what they have tried.”

***Desire for more*.** Although most participants reported positive experiences with the parenting resources that they accessed, eight participants reported a significant “desire for more”. Seven of these participants had accessed resources but felt that they wanted more specific instruction or resources. One grandmother had not accessed any parenting resources, because she did not feel that support groups or other program met her needs. Some grandparents noted generalized desires, simply wishing they had access to more resources: “That is pretty much as far as resources go that I have done so far. I wish there was more, because you have so many questions and nobody to answer them.” Other’s noted that they wanted instruction to change “It was like please not another handout. I’m really tired of this”. Six of the eleven participants who had accessed a support or parenting group noted that they were lacking more specific instruction on discipline, parenting, and symptom-based concerns (e.g., ADHD, defiance, understanding a child’s diagnosis). Commenting about the lack of discipline-focused content in group meetings, one grandparent simply noted “Well they didn’t get into that during the eight weeks that we went.”

Barriers to Accessing Parenting Resources. All of the participants interviewed (100%) noted barriers to accessing parenting resources. Thirteen participants (86.67%) noted one or more barriers that personally affected their ability to access parenting resources, while two participants reported that they had not encountered barriers but identified barriers that they were aware other custodial grandparents had encountered. The most commonly reported barriers were access to childcare (n = 9; 60.00%), time (n = 8; 53.33%), lack of access/knowledge or

availability of resources (*n* = 7; 46.67%) and cost concerns (*n* = 7; 46.67%). Other noted concerns were transportation (*n* = 2; 11.33%) and personal stigma (*n* = 2; 11.33%). Notably, the three participants who were not currently accessing parenting resources reported specific barriers related to time.

View of PCIT. In total 14 participants (93.33%) reported favorable views of PCIT, after it was discussed by the interviewer. Notably, 13 participants (86.67%) reported that they would attend a PCIT program adapted for custodial grandparents. When asked what components they found most helpful, participants highlighted an interest in CDI techniques, and instruction on discipline, specifically two-staged time-outs and commands.

When discussing what they liked about PCIT, ten participants (66.67%) endorsed that learning CDI would be helpful. Participants commented on the importance of praise, encouraging children's self-esteem, and strengthening their relationships with their grandchildren. For example, one grandmother noted:

> I really think that because my focus is on trying to have the children, you know, especially < grandchild name> have good self-esteem. But I think having a good relationship and having a good positive home life would really be what I need help with that. Showing him, you know, giving him praise, telling him that I'm proud of him, to help him build those skills.

When discussing CDI, another grandmother commented that she agreed with the therapy sequence of PCIT: "I really thought that was wonderful to build that relationship with the child first before you start initiating any other behavior changes. To be able to build that relationship, spending time with the child, with positive play time."

In total, all thirteen participants who conveyed interest in attending PCIT remarked on the helpfulness of learning discipline strategies. Five of these participants specifically mentioned needing additional instruction on giving commands, while six remarked on the benefits of a two-stage time-out and how they would be interested in learning this technique to improve the effectiveness of their time-outs. One grandmother noted: "I like the steps and the stepping stones where you go from sitting in the chair to going into the time-out room. I never thought of staging it before."

Participants were also given an opportunity to discuss any reservations they had regarding trying PCIT. Four of the thirteen participants (30.77%) who expressed interest in completing PCIT noted some concerns. One participant noted that she was very interested in the program but that she felt like the time-out sequence was "how jail works". While she noted that she was ok with a one-stage time-out, she described the two-stage approach as "It's just too much like jail. That's why I do not particularly agree with that particular method. I think it is too much like jail and I personally don't believe that jail does work." Another participant noted reservations about her child's amount of hyperactivity, and whether these skills would work with a child that demonstrated so many hyperactive behaviors. Two grandmothers noted that they were concerned their grandchildren would not show "real-life" behaviors in a therapy room. One of these grandmothers also noted concerns about her grandchild realizing the coaching was occurring, and noted that it would be hard for her to have an available secondary time-out "room" in her home based on space concerns.

Of the two participants (13.33%) who noted they were not interested in attending a PCIT program, one participant noted that PCIT would likely benefit custodial grandparents, but it would not be helpful for her at this time:

> I think they'd be beneficial. Personally, I don't see it benefiting me at this point. But I don't doubt based on the experiences from the few people I know at the support group I go to it would be beneficial because there's a lot of them, they're just so overwhelmed. And that just [inaudible]… because if you can't adapt because you find something when raising your kids that doesn't work where do you go from there? There's going to be a lot of people who could benefit from that type of therapy. But like I said personal I do not feel like I need…but I do recognize that there are a lot of people that would benefit."

The other participant reported that she felt that PCIT required too much effort noting: "Sometimes I think it is too much work to do all of that. I think it boils down to that we just don't discipline them enough, we don't' keep doing things consistently." This participant frequently noted that in her opinion, caregivers knew what to do, but they just didn't do this consistently. For example, when the interviewer described the coaching and modeling components of PCIT, she noted "I mean I feel like everyone knows how to do it; they just don't."

Lastly, participants were given the opportunity to discuss any recommended adaptations or suggested additions to PCIT. When discussing length of treatment, most participants requested a shortened treatment course, generally ranging from 6 to 14 weeks (Mean preferred length of treatment: 10.06, *SD* = 2.57). The most commonly requested length of treatment was eight weeks and over 50% of participants who requested shortened treatment reported that a treatment under ten weeks would be most feasible. Other suggested improvements to the program were to include a specific focus on self-regulation, and to add more resources for the grandparent caregivers.

Telehealth Survey. Due to the barriers mentioned above, comments from one participant, and a discussion with researchers in the field, the clinician began adding questions regarding telehealth adaptations to the interview protocol on the 13th interview. The three

participants interviewed described an interest in telehealth adaptations of PCIT including self-directed online trainings, downloadable worksheets, and training videos. Participants noted that this would reduce barriers, because they could complete the program at home at their convenience. The researcher then contacted all previous participants that had provided an email address to be contacted for further research. Participants were asked to complete an online survey regarding their attitudes toward a telehealth adaptation of PCIT. Four more participants responded. Overall 86% (n=6) of participants surveyed indicated that they would be interested in completing an online training adaptation of PCIT. Only one participant surveyed noted that they she did not have a computer at home. The participants who indicated interest in an online adaptation also reported that they would like to serve as pilot participants to test the feasibility of an adapted program.

Discussion

Summary. The purpose of this stage of the dissertation was to gather information from custodial grandparents to better understand their experience parenting their grandchildren, challenges they face, their use and experience of parenting resources, barriers regarding accessing parenting resources, and opinions of PCIT. Potential consumers were utilized in the program design/development stage, per recommendations by leading researchers that this method should be used when tailoring an intervention for a particular group, in order to improve fit and ecological validity (Sanders & Kirby, 2012; Kirby & Sanders, 2012). Ultimately, the author sought to utilize data from this stage to adapt PCIT to the custodial grandparent population.

Results indicate that custodial grandmothers experienced positives when caring for their grandchildren, specifically feeling the love, affection, and laughter that these children brought

them, while also feeling comforted that their grandchildren were safe, and that they were able to protect and guide them. This is similar to findings in the literature, particularly that custodial grandparents report positive aspects of companionship with their grandchildren (Kropf & Burnette, 2003), describe the experience as rewarding (Giarruso, Silverstein, & Feng, 2000), and report that caring for their grandchildren helps to improve their grandchildren's wellbeing (Edwards & Daire, 2006). While most enjoyed raising their grandchildren, they experienced challenges parenting their grandchildren related to managing behavior, addressing traumas, transitioning to significant changes in their own lifestyles, and navigating resources and social services available to them. These difficulties are consistent with those reported in the literature including difficulties enforcing discipline (e.g., Gerard, Landry-Meyer, & Roe, 2006; Robinson & Wilks, 2006) changing family roles (Dolbin-MacNab, 2006), and at times, lack of access to resources or satisfaction with available resources (Carr, Gray & Hayslip, 2012). Almost all participants (93.33%) reported difficulties managing behavior. They presented with symptom-based (i.e., difficulty with defiant/disruptive and/or hyperactive/inattentive behaviors) and discipline-based concerns (e.g., difficulties with discipline, the need to maintain constant attention and vigilance of grandchild's problem behaviors, the need to correct "parenting mistakes" made by the child's biological parent). However, when combined with the data acquired about use of parenting resources, it was clear that while many grandparents liked accessing parenting resources, such as support groups, to not feel alone and share information with each other, most felt that these resources lacked specific instruction on discipline, behavior management, and symptom-based concerns. In contrast, PCIT specific services can address these concerns, as demonstrated in Table 5.

Regarding knowledge and use of parenting strategies, custodial grandparents in this study were aware of various parenting strategies, generally finding the concepts of praise, reinforcement/reward systems, and limitations/loss of privileges systems as most effective. Participants had mixed views of time-out protocols, with about half of participants reporting that time-out was effective for them, and the other half reporting that time-out was ineffective, or that they had difficulties implementing it due to the severity of their grandchild's tantrums. No grandparent was vehemently against any evidence-based parenting strategies. Similar to findings in the literature (Dolbin-MacNab, 2006; Hayslip & Kaminski, 2005; Kirby & Sanders, 2012), grandparents were interested in learning new strategies.

Regarding their view of PCIT, contrary to expected findings, the majority of grandparents (93%, n=14) viewed the PCIT approach favorably and did not have major adaptation concerns. Most significant concerns reported were length of treatment, with most grandparents preferring a shortened treatment course. Participants favored the two-stage time-out instruction, instruction in commands, special-time, and coaching features. 87% (n=13) of participants reported that they would attend a PCIT program adapted for custodial grandparents. However, all the participants interviewed noted barriers to accessing parenting resources, with primary concerns regarding time constraints, availability/access to services, access to childcare, and cost. Additionally, some grandparents noted concerns regarding transportation and stigma.

Limitations. This study is limited by its small sample size, and sample of only custodial grandmothers, which cannot fully be generalized to all custodial grandparents. However, it is important to note that other examples of tailoring evidence-based parenting programs to grandparent populations (e.g., Kirby & Sanders, 2014ab) started with small n (e.g., n = 14) published consumer input studies (see Kirby & Sanders, 2012). Additionally, a nationally

representative census study of co-resident grandparents (Simmons & Dye, 2003) found that grandparents who are responsible for the primary caregiving of their grandchildren are predominantly female, and younger than age 60, which is generally characteristic of this current sample. Additionally, co-resident grandparents who reside with their grandchildren, and not with the biological parents, termed "skipped-generation households" were found to be slightly more common in the South and MidWest, which may be why the sample included more participants from the South (Simmons & Dye, 2003). Racial make-up of grandparents in skipped generational households varied based on if the household included a single grandparent (55.5% Caucasian, 39.3% African American) or both grandparents (78% Caucasian; Simmons & Dye, 2003). While broad assertions cannot be made because this small sample is small, and not fully representative, the sample does include components of representative samples of grandparents raising grandchildren.

Implications for Intervention Design/Development. Thus, synthesizing these findings, custodial grandparents with children with behavior problems would likely benefit from a PCIT program, and are amenable to the approaches of PCIT, but they experience several barriers to accessing parenting resources, and none had previously heard of PCIT. While PCIT has been labeled as a cost effective, it is estimated that it costs approximately $1000- $1200 per client (Aos, Lieb, Mayfield, Miller, & Pennucci, 2004; Goldfine, Wagner, Branstetter, & McNeil, 2008). Thus, due to this cost, and the extensive training clinicians must receive to become certified trainers, PCIT is not always accessible to all communities. Given the barriers mentioned, and participants interested in technological adaptations, it appears that the content of PCIT may not need to be greatly altered for custodial grandparents; rather the format that this information is received needs to be adapted to best meet their needs. Based on data from this

stage of the dissertation, and consultation with researchers in the field, the author sought to develop an online-based web version of PCIT, tailored to custodial grandparents. Development of this intervention is included in the next chapter.

Chapter 3: Stage 2: Development of Online Intervention

Background and Introduction

Recent US census reports indicate that computer ownership and internet usage has steadily increased in the United States. Depending on the year, recent reports have estimated that between 78-83% of all US households own a computer, and 74-77% have an internet subscription in their home (File & Ryan, 2014; Ryan & Lewis, 2017). These estimates are even higher in adults age 46-64 (approximately 90% have a computer in household, approximately 80% have an internet subscription; Ryan & Lewis, 2017), the typical age of custodial grandparents with preschool-aged children. While senior citizens, age 65 or older demonstrate lower rates, the majority still own a computer and utilize the internet (70% computer usage, 63% internet access; Ryan & Lewis, 2017). Similarly, while educational attainment affects utilization rates, there has been an increase in the rate of internet utilization by less educated adults. Although reports describing 2013 data (File & Ryan, 2014) indicated that only 43% of those who had less than a high school degree had an internet subscription, an updated 2015 report by Pew Research Center (Perrin & Dugan, 2015) indicates that this number rose to 66% in 2015. Similar estimates of 2015 census data indicate that approximately 62% of households of those with less than a high school diploma have a computer, and approximately 48% have an internet subscription (Ryan & Lewis, 2017). Overall, there have been large increases in computer ownership and utilization over the past fifteen years, with the majority of US citizens owning computers and accessing the internet regardless of age, educational attainment, income, or other

demographic variables. Furthermore, significant research has disproven the claim that internet-based therapy programs are best suited for families of high education or income. Several studies have shown extensive internet usage as well as high interest and acceptance of online programs by low-income and diverse families (e.g., Love et al., 2013; Radey & Randolph, 2009).

Telehealth Adaptations Can Address Treatment Barriers. With this rise in technology, many mental health professionals recognize a unique opportunity to address research-practice barriers that lead to reduced implementation of evidence-based treatment (EBT) in community settings and subsequent barriers to access, availability, and acceptability of mental health treatments. The research-practice gap, a disconnect between scientific research and clinical practice, is demonstrated in the lack of access and availability of EBTs in community settings, lack of research on the effectiveness of these studies in typical community practice, and overall barriers to effective EBT implementation in community settings ranging from individual micro-level (i.e., child/family factors) to systemic macro-level concerns (e.g., federal policies). (See Southam-Gerow, Rodriguez, Chorpita & Daleiden (2012); Southam-Gerow Arnold, Tully & Cox (2014); and Kazdin (2008) for extensive reviews of science-practice gap issues).

Unfortunately, research-practice gap barriers commonly affect children with disruptive behavior. Wang and colleagues (2005) report that less than 7% of children with Oppositional Defiance Disorder (ODD) receive treatment during the initial year of onset while most families do not receive services until four years after initial onset of ODD. Similarly, Pavuluri, Luk, & McGee (1996) report that 80% of pre-school aged children with disruptive behavior never receive any formal treatment. This is a significant concern as without appropriate intervention, disruptive behavior in early childhood has been shown to persist throughout childhood and adolescence to adulthood, showing high diagnostic stability (e.g., Loeber et al., 2000; Neary &

Eyberg, 2002). Furthermore, early onset is associated with increased severity and the development of conduct problems and other psychopathology in adolescence and adulthood (Lavigne et al., 2001; Loeber et al., 2000; Steiner & Remsing, 2007).

Although many empirically supported treatments exist to treat disruptive behavior in early childhood, significant barriers reduce the likelihood that these services are accessed. These barriers include, but are not limited to, systemic/organizational level constraints (e.g., lack of mental health professionals trained in evidence-based treatments, lack of resources, dissemination and fidelity concerns, financial constraints), as well as accessibility (e.g., cost, transportation barriers), and acceptability concerns (e.g., stigma) (Comer et al., 2014; Owens et al., 2002; Southam-Gerow, Arnold, Tully & Cox, 2014). However, internet and telehealth-based adaptations may directly address many of these gaps. For example, telehealth adaptations address financial and organizational constraints as they are estimated to be reduce cost by at least one-third, (Khanna, Ashenbrand & Kendall, 2007; McCrone et al., 2004) are standardized, and are not dependent on therapist availability or training (Enebrink, Hogstrom, Forster, & Ghaderi, 2012). Similarly, internet-based adaptations can transcend geographic barriers, improving availability of mental health services. Furthermore, as parents can complete online parent-training programs in the convenience of their home, at any time of the day, these online adaptations address issues of accessibility (e.g., transportation, space, childcare, time), and acceptability due to reduced stigma concerns (Comer et al., 2014; Feil et al., 2008).

Empirical Support for Online Parent-Training Adaptations. Recent examination of online treatments in the adult literature show that online treatments perform equally as well as therapist-delivered treatments, particularly for anxiety disorders (see Cuijpers et al., 2009 meta-analysis). Since the end of the 20th century, researchers have been examining telehealth

adaptations to parent-training. For example, early work demonstrated that parents could learn valuable parent-training tools through self-paced CD-ROMS (Gordon & Stanar, 2003; Kacir & Gordon, 1999). Similarly, parent-training work in other domains (e.g., autism) has demonstrated success with online training protocols and web-based coaching systems (e.g., Vismara, McCormick, Young, Nadhan, & Monluz, 2013). Most recently, the most empirically supported parent-training interventions (Parent Management Training- Oregon Model, Triple-P Parenting Program, PCIT, Incredible Years) have begun testing telehealth adaptations.

Online Parent Management Training. Enebrink, Hogstrom, Forster, & Ghaderi (2012) conducted a randomized control trial evaluating an online version of parent-management-training. The program, which was administered through an online website, was shortened to seven 1.5 hour sessions. Treatment components included text, illustrations, modeling videos, downloadable handouts, and weekly quizzes to ensure content understanding. Research assistants administered the sessions weekly by sending participants a link to the materials. Additionally, they provided minimal assistance to participants (e.g., answered client's questions through brief weekly phone-calls). Enebrink and colleagues used clinical cutoffs and RCIs to determine clinically significant change. Children showed reductions in behavior problems as measured by the ECBI, comparable to therapist-based parent-training programs. Similarly, parents showed improvements in the use of positive parenting strategies (Enebrink et al., 2012).

Online Triple P Positive Parenting Program. Sanders, Baker, and Turner (2012) conducted a randomized control trial evaluating an eight-module online adaptation of Triple-P for parents of children age two to nine. Notably, this program provided no therapist or research-assistant support and was solely an online intervention. The program included modeling videos, interactive exercises, downloadable worksheets, and a printable workbook. After the

intervention, parents reported improved confidence, improved positive parenting practices, high satisfaction regarding the online intervention, and reduced child behavior problems, in comparison to the waitlist control (Sanders, Baker, & Turner, 2012). Notably, a separate study (Sanders, Dittman, Farruggia, & Keown, 2014) demonstrated that Triple P Online worked equally as well as Triple-P using a self-help workbook.

Online Incredible Years Training. Taylor and colleagues (2008) demonstrated preliminary support for technological adaptation of Incredible Years. The program included online videos, and other technology (video vignettes, pictures, sound files) that were downloaded to a hard drive of a loaned computer. The overall program included modeling videos and content quizzes. However, participants were also given all the supplemental paper-based materials (e.g., handouts, workbooks) traditionally received in the Incredible Years Program and had several in-home coaching sessions with a therapist. While this program is not a self-sufficient intervention without therapist involvement, it demonstrates preliminary support for the use of Incredible Years in an online framework. Participants indicated high satisfaction with the program (Taylor et al., 2008). This program was not tested in an RCT.

Online Parent Child Interaction Therapy. Comer and colleagues (2015) published a review article on rationale and considerations for PCIT delivered through the internet. They report that PCIT may be ideally adapted for internet VTC (videoteleconferencing format) delivery, as it involves very little face-to-face therapist client interaction as most interactions are done through bug-in-the-ear coaching with therapists in separate rooms. Thus, they sought to adapt PCIT to an online framework with little to no changes in the intervention, to address some concerns that Comer and others have about the broad dissemination of PCIT to community settings, mainly that it has many structural requirements (e.g., bug-in-the ear devices, one-way

mirrors), and training requirements (coaching, coding) which make it difficult to directly disseminate into community settings for easy adoption (Comer et al., 2015; Comer & Barlow, 2014). This internet-based I-PCIT program allows clinicians, that already have the appropriate supplies and training, to directly access clients in the community through live web-coaching using VTC formats. Comer and colleagues (2017) recently published results of a RCT that evaluated I-PCIT against traditional in-clinic PCIT. Notably, they found that 70% of the group assigned to IPCIT demonstrated a response to the treatment, with 55% maintaining this response at six-month follow-up. Using CGI improvement ratings, they found that 50% of treatment completers in the I-PCIT group, and 17.6% of the treatment completers in the PCIT group were classified as "excellent responders." Additionally, parents in the I-PCIT group reported less treatment barriers (Comer et al., 2017).

However, this direct transitioning to online adaptation, with no changes in technology or length, has considerable hardware and equipment considerations (i.e., sophisticated web-cams), large costs (estimated at least $300 in technology costs per family) (Comer et al., 2015) and remains relatively burdensome to clients. Additionally, the RCT involved in-person assessments at pre and post, requiring the participant to still live near the service clinic (Comer et al., 2017). Thus, it is still necessary to investigate more cost-efficient and feasible telehealth adaptations of disseminating PCIT training through online methods in order to further reduce the barriers to treatment (i.e., accessible and affordable).

One such intervention is Pocket PCIT, an interactive iBook accessible on iPads and iPhones (Jent, Weinsten, Simpson, Gisbert & Simmons, 2014). This iBook includes readings on PCIT, interactive games, and videos modeling CDI skills, among other interactive tools. However, Pocket PCIT is only available on some platforms (i.e., iPad, iPhone), only covers the

Child Directed Interaction phase of PCIT, has not been studied in research applications, and is currently only used as a take-home supplement for families currently in traditional PCIT treatment. Nevertheless, Pocket PCIT demonstrates initial feasibility for PCIT didactics to be transformed to an interactive web-based framework.

Aims of Stage 2: Intervention Development

As noted in Chapter 2, findings from interviews with custodial grandparents suggest that custodial grandparents with grandchildren with behavior problems would likely benefit from PCIT, and are amenable to PCIT approaches, but experience several barriers to accessing parenting resources, including PCIT programs. Barriers included time constraints of traditional therapy, access and availability of evidence-based parenting treatments, lack of childcare, transportation difficulties, and stigma. Based on these identified barriers, participants acceptability of an online-based program, and the above empirical support for internet-based adaptations, the author sought to develop an online-based adaptation of PCIT for custodial grandparents that would address known barriers, while providing custodial grandparents with PCIT strategies in a cost-effective, flexible, and efficient manner. While it is not expected that this program is a substitute for a standard comprehensive PCIT treatment, it serves as an initial program for those who have limited access to evidence-based parent-training interventions. This is consistent with Sanders and colleagues call for "minimally sufficient interventions" for grandparents raising grandchildren (Kirby 2015; Sanders, Kirby, Tellegan, & Day, 2014), which are "aimed at achieving a meaningful clinical outcome in the most cost-effective and time-efficient manner" (Sanders, Kirby, Tellegan, & Day, 2014, pp.339**).**

The purpose of the subsequent stages of this dissertation was to design (Stage 2) and test (Stage 3) the feasibility of a service-delivery adaptation of PCIT for custodial grandparents. As

mentioned, this intervention sought to shorten the course of PCIT and provide a free non-therapist-assisted online-intervention which taught the core components of PCIT through narrated text, modeling videos, vignettes, interactive exercises, printable handouts and content quizzes. The intervention sought to maintain fidelity to core components of PCIT (i.e., instruction of CDI and PDI) while flexibly adapting how content was delivered to address barriers related to access, acceptability, and availability of parent-training services, and to reduce burden on clients by shortening treatment, and eliminating direct coaching due to technological and cost concerns (i.e., access to high-quality webcams).

While therapist-initiated coaching is removed in this adaptation, it is likely that the intervention will still result in clinically significant outcomes. In a meta-analysis including over 70 studies of evidence-based parenting programs (EBPPs) for children under seven, Kaminski, Valle, Filene, and Boyle (2008) examined components of EBPPs that led to the largest effect sizes on measures of child disruptive behavior and parenting skills. After controlling for a number of factors and using the most rigorous analyses, two components (i.e., teaching emotional communication, in-session practicing) emerged as the best predictors of changes in parenting behaviors while two components (i.e., improving positive parent child interaction, teaching time-out and consistent responding in discipline) significantly predicted changes in child externalizing behaviors. As CDI didactics and special time activities directly target emotional communication and positive parent-child interactions, while PDI didactics teach consistent responding and a specific time-out protocol, the proposed adapted online intervention includes three of the four most essential components to parent-training. Notably, Kaminski and colleagues (2008) reported that modeling, homework, and role playing were not predictive of program outcomes. Thus, it is likely that the strong CDI and PDI didactic training covering three

essential components will maintain effects. Additionally, results from Berkovits, O'Brien, Carter, and Eyberg (2010) provide empirical support for abbreviated versions of PCIT, as well as self-help versions that exclude coaching.

Intervention Development

To begin developing this adapted online intervention, the researcher contacted the authors of the two published PCIT manuals, Dr. Sheila Eyberg, Dr. Cheryl McNeil, and Dr. Hembree-Kigin. Drs. McNeil and Hembree-Kigin published the most recent PCIT manual (McNeil & Hembree-Kigin, 2010). The researcher notified the authors of her dissertation project to adapt PCIT to custodial grandparents and requested approval to utilize and/or adapt handouts from their manuals. The researcher received a response from Drs. McNeil & Hembree-Kigin, authorizing her to use the manual handouts for her study. Thus, the researcher subsequently used the most recent PCIT manual (McNeil & Hembree-Kigin, 2010) as a basis to adapt the intervention, and utilized handouts from this manual. The researcher also received approval from Dr. Jason Jent to use videos from published and unpublished versions of his iBook application (Pocket PCIT; Jent, Weinsten, Simpson, Gisbert, & Simmons, 2014) in this study.

The researcher examined data from the first stage of the study, as well as other online-based parent-training interventions and applications and ultimately included the following components in each module: narrated text, modeling videos, downloadable worksheets, content quizzes (to assess understanding of CDI and PDI components), and weekly homework assignments. This format is modeled off of prior telehealth adaptations of PCIT (Pocket PCIT; Jent, Weinsten, Simpson, Gisbert & Simmons, 2014) and other online parent-training interventions (e.g., Enebrink et al., 2012; Sanders, Baker, & Turner, 2012). Module content was based on the PCIT manuals (Eyberg, 1999; McNeil & Hembree-Kigin, 2010) with one additional

module on emotion regulation and structured reinforcement programs. The addition of this module was based on feedback from Stage 1 (i.e., grandparents had noted additions of emotion regulation strategies would be helpful), preliminary support for adding these techniques to standard PCIT (Gordon & Cooper, 2016), and the appendices of Eyberg's PCIT manual (Eyberg, 1999) which suggest the addition of a specific regulation technique (i.e., The Turtle Technique) as well as tips on how to use sticker charts.

Module Development. Consistent with prior online adaptations of evidence-based parent-training interventions, and the opinions of Stage 1 participants who requested a shortened intervention, the researcher created an online intervention with eight modules of 40 minutes or less. Modules were created in the following manner. First, the researcher consulted the PCIT manuals, and summarized content to be discussed into an online presentation (PowerPoint format). The researcher then chose videos to support each module. When available, videos from Pocket PCIT (Jent, Weinsten, Simpson, Gisbert & Simmons, 2014) were utilized. When there were no available videos for the material, the researcher created modeling videos with the assistance of another graduate student clinician. The number of videos varied based on the module and how many skills needed to be modeled/demonstrated. The number of videos in each module is explained in Table 6. Across all modules the average number of videos was six, but they ranged from one to eleven videos per module.

After the video presentation was created, iSpring (http://www.ispringsolutions.com/) software was utilized to make the presentation interactive, auto-responsive, and independently web-based. An individual script was created for each module, so that each module could be individually narrated by the researcher. Subsequently, interactive material was added, the majority of material was coded to auto play/auto-respond, and interactive five-question quizzes

were created for each module. The researcher did not automate the entire presentation (i.e., participants did have to click a next slide after each slide and sometimes were required to click videos). This was to reinforce attention to material, and to allow each participant to spend as much time as needed on each module, and return to slides if they needed a refresher.

After the modules were created, companion handouts were created for each module. Each module included a handout with homework description and tracking information. Most modules included other handouts as well. The number of handouts in each module is described in Table 6. Number of handouts varied per module (M = 4.13; SD = 2.23, range = 1-7). Some handouts were directly replicated (with permission) from McNeil & Hembree-Kigin (2010), with only minor wording changes (i.e., changing parent to grandparent, child to grandchild). Other minor adaptations including changing wording to reflect lower reading levels. Other handouts were independently created by the author.

Ultimately, the following modules were created:

Module 1: Psychoeducation. Consistent with the initial session of traditional PCIT, the first training module provided psychoeducation on PCIT and disruptive behavior. Additional psychoeducational information about grandparents raising grandchildren was also added to this module, to create the message that "you are not alone." This was added based on feedback from Stage 1 that an important benefit of accessing parenting resources was learning more about the plight of grandparents raising grandchildren and that others were experiencing similar stressors and difficulties.

Module 2: CDI Training. The second module consisted of all core CDI Training (i.e., didactics on special-time, PRIDE skills, CDI Do and Don't Skills, etc.)

Module 3: CDI Training 2. As coaching was not included, this module included several more video examples of CDI and review of materials, as well as a section on common problems with CDI and how to handle them. Additionally, more attention was paid to the CDI Don't Skills and use of selective attention.

Module 4*: *Reinforcement Systems, Emotion Regulation Tools. An introduction to PCIT approved reinforcement systems (i.e., sticker-charts) and emotion regulation techniques (e.g., Turtle Technique) was included in this module.

Module 5: PDI Training. The fifth module consisted of the first half of PDI instruction (i.e., instruction in appropriate commands, BE DIRECT skills). Notably, homework during this module included assigned reading of several time-out handouts in preparation for Module 6.

Module 6*: *PDI Training 2. The sixth module consisted of the second half of PDI instruction (i.e., instruction on the time-out sequence, compliance training). Additional empirical research on the effectiveness of time-out was also included. Additionally, information about utilizing time-out for those who have experienced trauma/neglect was added to the PDI modules, per feedback from Stage 1.

Module 7: PDI Training 3. The seventh training module include several more example of PDI procedures, included a section on common problems with PDI, and included videos of actual PCIT clients discussing their difficulties with time-out implementation and how they resolved them.

Module 8: Recap. This final training module provided a recap of skills learned, instruction on house rules, and discussed generalization of skills (i.e., PCIT in public places) and maintenance.

Notably, when available, additional custodial-grandparent specific information, informed by Stage 1 of this study, was added to multiple modules in a separate section called "grandparents corner". For example, specific information about the power of praise, selective ignoring when a child has experienced trauma or neglect, and use of rewards were included in modules 2, 3, and 4, respectively.

Module Quiz. Five-question quizzes were created for each intervention module (except for Module 1, which was mainly an introduction). These quizzes used multiple formats (i.e., free response, matching, multiple choice) and mediums (e.g., written text, videos, audio recordings) to assess participants comprehension of material. Module quizzes were tested as described below.

Module Testing. Each module was tested for comprehension, readability, esthetics, etc. First, Microsoft Word was used to examine the Flesch-Kincaid Grade Level readability statistic for each presentation, presentation script, and handout. This statistic examines average sentence length and average number of syllables per word to create a grade level rating based on US school grade levels. The researcher sought for all material to be in the high school or below reading level. Readability statistics for each handout, script, and presentation are presented in Table 7. Mean readability across all materials was in the seventh-grade level (M = 7.57, SD = 1.67, range: 3.8-12). The one intervention material that had a 12th grade Flesch-Kincaid Grade Level is an anomaly. This was the "Toys for Special Time" handout. This was directly replicated from PCIT materials and it is likely that the high score was artificially elevated due to the proper name of toys.

After readability was tested, and any necessary modifications were made, each module was independently tested by two reviewers. One reviewer was a licensed mental-health

professional with experience in PCIT and other parent-training programs. The second reviewer was an advanced undergraduate researcher without experience in PCIT. Their varying experience was meant to review different areas. The reviewer with PCIT experience was chosen both to review comprehension, but also as a quality check that material was presented in appropriate manner. The reviewer without PCIT experience was meant to emulate the experience of a participant, with no prior experience in PCIT. Each reviewer tested the program for comprehension, ease of access, and utility. They each provided feedback to the researcher. Additionally, each participant completed the end of module quiz. If a reviewer scored below the passing criteria on a module (80%), the quiz question was reviewed to determine if changes needed to be made. If both reviewers scored below the passing criteria, the question(s) were modified based on reviewer feedback. Once the module was finalized, it was subsequently tested again by the researcher and a volunteer, for accessibility across platforms (i.e., different internet browsers) and computers.

The final product consists of eight modules, seven of which included interactive module quizzes. The first module did not include a quiz, as it was mainly for an introduction and psychoeducation. The length of the presentations ranged from 19-40 minutes, depending on the module. A summary of module specifics including approximate length of presentation, number of slides, number of handouts, number of videos, and quiz information is included in Table 6. Length of presentation is approximated, as some slides include point and click options which may slightly alter presentation length.

Aims of Stage 3: Pilot Study

After the intervention was developed, the third stage of this dissertation was to examine this internet-based adaptation of PCIT with a small pilot of custodial grandparents of children age two to eight with disruptive behavior. Given that the primary role of a pilot study is to assess feasibility (Leon, Davis, & Kraemer, 2011), the primary purpose of this study was to examine initial feasibility and satisfaction of this online intervention, with a secondary purpose of evaluating whether the intervention caused clinically significant reductions in child behavior, parenting practices, and parenting stress. Feasibility was examined through a number of qualitative and quantitative measures assessing treatment adherence, accessibility, homework completion, module comprehension, and attitudes toward the intervention. While the main purpose of a pilot study is not to test hypotheses due to limited sample size and other factors (Leon, Davis & Kraemer, 2011), preliminary outcomes related to treatment efficacy/ change across time were examined through calculations of reliable and clinically significant change. Specifically, statistically and clinically significant pre to post-intervention reductions in child behavior (as measured by the ECBI, CBCL, or SDQ), ineffective discipline (as measured by the PS), and parenting stress (as measured by the PSI-4-SF) were examined.

Chapter 4: Methods of Stage 3 Online Intervention Pilot Study

Participants

Participants included six custodial grandmothers. To be eligible, participants had to meet the following eligibility criteria: (1) provide the majority of care for their grandchild(ren) (i.e., 25 or more hours a week) and classify themselves as the primary caregiver; (2) currently raise a grandchild between the age of two and eight; and (3) have concerns about behavioral difficulties of their grandchild(ren). Additionally, grandparents had to demonstrate elevated scores in

validated measures of parenting stress (i.e., scores of 85th percentile or higher on the Parenting Stress Index- Short Form (PSI-4-SF), Abidin,1995, 2012), or grandchildren had to demonstrate borderline or clinically significant behavioral difficulties on a measure of child disruptive behavior (i.e., *t* scores ≥ 65 on the Child Behavior Checklist (CBCL), Achenbach & Rescorla, 2001; OR *t* scores ≥ 60 on the *Problems* OR *Intensity* subscales of the Eyberg Child Behavior Inventory (ECBI), Eyberg & Pincus, 1999). Exclusionary criteria included that a grandchild must not have a severe mental illness (i.e., Schizophrenia), severe chronic medical illness (e.g., severely disabled, cancer, cerebral palsy) be hearing or vision impaired, or currently be enrolled in treatment focused on parent-child interactions or discipline/behavior management (i.e., "no weekly or bi-weekly individual or family therapy which targets parent-child interactions and behavior management of your grandchild.")

Recruitment was conducted continuously over a four-month period. First, participants from the Stage 1 study who had indicated interest in participating in future studies, or specifically had reported interest in completing the online study, were contacted. After recruiting from the Stage 1 population, recruitment efforts were made across 35 states through emailed recruitment messages, emailed/mailed flyers, and phone-calls to organizations listed on the AARP GrandFacts in each state that had been verified during the Stage 1 study.

It was proposed that four to nine custodial grandparents would participate in this pilot study. Thirteen prospective participants completed initial phone screening. Four were screened out due to lack of fit, severe diagnoses, or current treatment that conflicted with the study. One prospective participant discontinued before completing eligibility questionnaires. Eligibility of eight participants was confirmed via eligibility questionnaires and they were consented to complete the study. Notably, one grandparent requested that she complete the study for two of

her grandchildren, who were both within the age group of the study. This participant agreed to fill out all forms twice, and independently for each grandchild, including individualized homework completion and individualized ratings of child behavior. This participant was then identified as two separate participants (i.e., two separate data points), for the purpose of the study. Thus 8 participants (9 data points) were initially consented for the pilot. The participants were of diverse races (Caucasian, Latino, Native American, African American) and diverse socioeconomic statuses, were recruited from diverse areas (FL, VA, CA, WA, NC, IL), and included grandchildren of diverse ages (2-8). However, two participants did not begin the study after consenting, meaning that they did not begin Module 1, or respond to any contact attempts by the researcher after the first module was sent to them.

Demographic characteristics of the resulting study sample (n=6) are included in Table 8. For demographic purposes only, participant data for Participant 1/ Participant 2 is combined, as this is the demographic data of the one grandmother who participated for two grandchildren. However, for all other purposes, the data is listed as two participants, including rating of different children when rating behavior, and ratings of different homework practice. Although custodial grandmothers and grandfathers were recruited, the final sample included only custodial grandmothers (i.e., 100% female) who ranged in age from 49 to 61 years (M = 54.67 yrs; SD = 4.23). The sample was primarily Caucasian (66.7% Caucasian, 16.7% African American, 16.7% Latino). Three grandmothers (50%) identified as married, while three identified as divorced. Five participants (83.3%) identified as employed, while one participant reported that she was retired and receiving benefits. Participants education level varied, ranging from high school diploma to a master's level degree. Approximately two thirds of participants had obtained an associated degree or higher. Participants annual income also varied widely, ranging from approximately

20,000 to over 70,000. Fifty percent (n = 3) of participants were from southeastern states, and the other fifty percent were from western states. Lastly, 66.7% (n = 4) reported having more than one grandchild under their custodial care. The length that grandparents had been primary caregivers of their grandchildren greatly varied, ranging from less than one year to eight years (Mean length of caregiving (in months) = 40.67; *SD* = 30.92). Approximately 86% of participants had raised their grandchild as a primary caregiver for two years or more. In regard to child demographics, the "target children" (i.e. children intervention would be focusing on) ranged in age from four to eight years (Mean age in years= 5.71; *SD* = 1.50).

Measures

During eligibility screening, initial screening questions (see Appendix D) were administered to gauge whether the grandparent was an appropriate candidate for the study. Additionally, demographic questions included age of grandparent(s), and of grandchild(ren), gender, ethnicity, education level, and socioeconomic status (Appendix E).

Child Oppositional Behaviors. Participants completed the Eyberg Child Behavior Inventory (ECBI), Child Behavior Checklist (CBCL) and Strengths and Difficulties Questionnaire (SDQ) as measures of child behavior difficulties. Specific information about the ECBI and CBCL, including descriptions and psychometrics, were presented in the Methods section of the Stage 1 study (Chapter 2) and are not repeated below. See Chapter 2 for further information.

Eyberg Child Behavior Inventory (ECBI, Eyberg & Pincus,1999) The ECBI is a 36-item measure of parent-reported disruptive behavior. The ECBI was administered at pre-intervention, post-intervention, and one-month follow-up. Additionally, this measure was administered at the

beginning of each intervention week (week 2-8, to rate the prior week) in order to assess behavioral problems weekly. The ECBI is commonly administered weekly in PCIT clinical research.

Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001). The SDQ is a well-validated 25-item measure (e.g., Bourdon, Goodman, Rae, Simpson, & Koretz, 2005; Warnick, Bracken, & Kasl, 2008) of child behavior that is often used in parent-training studies. It consists of five subscales: Emotional Problems, Conduct Problems, Hyperactivity, Peer Problems, and Prosocial Behaviors. Additionally, it has been validated with custodial grandmothers (Palmieri & Smith, 2007; total problems scale $\alpha = .88$). The total scores and conduct problems subscales were examined for this study. The SDQ was administered at pre-intervention, post-intervention, and one-month follow-up time points.

Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). The Oppositional Defiant Disorder subscale of the preschool or school age (depending on child age) version of the *Child Behavior Checklist* was used as inclusionary measure. This measure was administered at pre-intervention, post-intervention, and one-month follow-up periods to examine post-intervention changes in oppositional behaviors.

Parenting Behaviors. Participants also completed the parenting scale and parenting stress index, as measures of dysfunctional discipline methods and overall parenting stress. Both measures were previously described in Chapter 2.

The Parenting Scale (PS, Arnold, O'Leary, Wolff, & Ackler, 1993). The PS is a 30-item questionnaire that measures three dysfunctional discipline styles: laxness (i.e., permissive parenting, awareness of misbehavior, but avoidance of discipline), over-reactivity (i.e.,

authoritarian, punitive, harsh discipline), and verbosity (i.e., discipline with overly-long verbal explanations). The PS is frequently used to assess parenting practices and evaluate the effects of parenting treatment programs (Pritchett et al., 2011; De Graaf et al. 2008). This measure was administered at pre-intervention, post-intervention, and one-month follow-up periods to examine post-intervention changes in dysfunctional discipline styles.

Parenting Stress Index, Fourth Edition, Short Form (PSI-4-SF; Abidin,1995, 2012) The PSI-4-SF is a 36-item questionnaire which provides a measure of parenting stress and includes a total stress score and three subscales: parent distress, parent-child dysfunctional interaction, and "difficult child". The short-form and long form of the parenting stress index has been used in several grandparent samples (e.g., Leder, Grinstead & Torres, 2007; Harrison, Richman, & Vittimberga, 2000; Ross & Aday, 2006) and demonstrates acceptable internal consistency (e.g., total score α ranged from .87-.95; Leder Grinstead & Torres, 2007; Ross & Aday, 2006). The PSI was administered at pre-intervention, post-intervention, and one-month follow-up periods to examine post-intervention changes in parenting stress variables.

Intervention Feasibility. Intervention feasibility was examined through a number of measures assessing treatment adherence, accessibility, homework completion, module comprehension, and attitudes toward the intervention (i.e., satisfaction).

Weekly Satisfaction Form (Appendix F). Participants completed a six-item weekly satisfaction questionnaire on weeks 2-9 to provide individual satisfaction ratings of the prior week's module. This questionnaire was completed before opening the next module. Participants were asked to rate the usefulness of material presented in the prior week's module, specifically evaluating content, demonstration of skills, homework practice, and handouts using a 7-point Likert scale (1= extremely useless, 7= extremely useful). This measure was modeled after a

freely available Incredible Years treatment satisfaction measure. Additionally, two final free-response questions were added to assess usage and accessibility: 1) “Please describe how you watched last week’s module (i.e., in one sitting, over three days, etc.” and 2) “Please note if you had any difficult accessing last week’s module (i.e., technological difficulties).”

Weekly Homework Completion Logs. PCIT tracking logs for CDI and PDI homework practice were utilized weekly to track homework completion. Screen shots of example Survey Monkey homework tracking logs from several modules are included in Appendix G. Participants were emailed blank tracking logs to use to track homework during the week, and then entered data from the week prior during completion of weekly measures, before beginning the next module. Participants tracked how many days they completed CDI special time, and for the days that special time was completed, they logged what toys were used, and any questions or concerns during special time practice. Once PDI procedures were taught, participants logged command practice, and how often their grandchildren were sent to time-out or back-up time-out. Additionally, after reinforcement and emotion regulation strategies were taught, participants also logged their use and experience with these strategies. At the end of each homework completion log, participants were given instructions (see Appendix G) to check a box if they would like to schedule a “check in” with the researcher for assistance in understanding or implementing the material in the prior module.

Weekly Comprehension Quizzes. At the end of each weekly online intervention module, participants completed a five-question quiz that assessed participants comprehension of the material. Participants were given automatic feedback on their quiz responses immediately after answering each question. Additionally, the researcher emailed participants to clarify or remind them of components, if they made errors on quizzes. Participants scores of 80% or above (no

more than one wrong answer) were deemed as passing. If a participant failed a quiz two or more times in a row, the researcher contacted them to review material and answer any questions over the phone.

The Therapy Attitudes Inventory (TAI, Eyberg & Johnson, 1974; Eyberg, 1993) is a 10-item measure that is widely used in PCIT research (e.g., Brestan et al., 1999; Lyon & Budd,2010) as a treatment satisfaction measure. Questions within the TAI assess satisfaction with techniques learned in treatment, intervention-related changes in the parent-child relationship, intervention-related changes in child behavior, and opinion on treatment methods. Items can be examined singularly, and a total overall composite can be calculated. Participants rate each item on a 1 to 5 scale with higher ratings indicating greater satisfaction with the intervention. The highest possible total score is 50. Prior studies have used items of the TAI to calculate composites. For example, Ros, Graziano, & Hart (2017) calculated a composite of questions 1, 2, and 4, to determine a "skill use composite". Following this example, a behavior change composite was calculated by combining responses from questions 5 ("major behavior problems that my child presented at home before this program"), 6 ("my child's compliance to commands or requests" and 7 ("progress my child made in behavior"). The measure demonstrates good to excellent internal consistency (α=.88- .91; Brestan, Jacobs, Rayfield, & Eyberg, 1999; Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993). The TAI was administered at post-intervention and follow-up periods to assess participant satisfaction with the intervention.

Post Treatment Satisfaction Form. Participants completed a post-treatment satisfaction form at the post-intervention timepoint to assess their satisfaction with the online intervention, and several other feasibility variables. A freely available treatment satisfaction form used in the

Incredible Years program was modified by the researcher to include PCIT-specific components, additional qualitative questions, and questions about level of instruction, and level of comprehension of parenting techniques. The first section of this form assessed usefulness of teaching formats (i.e., content, video vignettes, at home practice, handouts) on a 7-pt Likert scale of usefulness (1= extremely useless, 7= extremely useful). Subsequent sections asked participants to rate eight main intervention strategies across several domains: quality of instruction (7 point scale, 1= very poor, 7 = excellent); participant comprehension of parenting techniques (7 point-scale, 1= very poor, 7= excellent); and perceived usefulness (7 point scale; 1= extremely useless, 7= extremely useful) of parenting techniques affecting child behavior (defined as improving positive interactions and decreasing inappropriate behaviors). The specific intervention techniques evaluated included: 1) praise; 2) other special time techniques (reflection, imitation, description, enthusiasm); 3) special time, 4) commands; 5) time-out; 6) multi-stage time-out; 7) age appropriate emotion regulation strategies; 8) reinforcement strategies. Additional feasibility questions required participants to rate the time-commitment (1= not at all feasible, 10= extremely feasible) and accessibility of the intervention (1= very poor, 7= excellent), while two confidence questions assessed changes in parental confidence post-intervention. Finally, five free-response questions assessed whether participants would recommend the program to a friend, what the perceived benefits of the intervention were, any suggested improvements, and how the intervention addressed barriers to feasibility and accessibility. To view this measure, see Appendix H.

Follow-Up Tracking Form (Appendix I). At follow-up, participants were asked to complete items which rated their current confidence in managing their child's behaviors, how often they used intervention strategies and how often they practiced CDI strategies. Additionally,

participants were asked to complete free-response items describing utilization of PDI techniques, usage of emotion-regulation and reinforcement strategies, and utilization of praise and positive reinforcement techniques.

Procedure

The current study was a single-subject pre-post (A-B) design. It included pre-intervention, post-intervention, and one-month follow-up time-points. Additionally, some measures were administered weekly during the intervention. Based on the feasibility and pilot nature of the study, and concerns about burdens to potential participants, a multiple baseline approach was not utilized. While there are weaknesses with this study design, single case designs (including AB designs) are often recommended as the first step when piloting interventions, or when the cost and resources for an RCT are unavailable (Kazdin, 2011; Byiers, Reichle, & Symons, 2012). Single subject designs can provide evidence for initial viability of an intervention, before a larger RCT study (Byiers, Reichle, & Symons, 2012).

The study was approved by the university's IRB (see Appendix J). Participants who expressed interest in the study called or emailed the researcher. The researcher then briefly spoke to the prospective participant to assess initial eligibility (i.e., currently raised a grandchild between 2-8 years of age, primary caregiver, concerned about grandchild's behavior problems). When speaking with the researcher, the grandparents were asked to identify their target grandchild (i.e., the grandchild between 2-8 who they would be providing behavior reports of and targeting invention skills with). Participants were then invited to complete eligibility questionnaires over the phone (approximately fifteen minutes) or though Survey Monkey. Two participants elected to complete initial measures by phone, all others completed measures via SurveyMonkey.com. Before completing measures by phone, a verbal consent script briefly

discussing the study was read and participants gave their verbal consent to begin the eligibility screen. Similarly, before beginning the online screening measure, prospective participants read an eligibility consent form and indicated consent by continuing with the screen.

If a participant was deemed eligible, they were contacted by the researcher who emailed them a consent form and then reviewed the detailed study consent, and received each participants verbal consent to proceed with the study. (Verbal consent was witnessed by a research assistant). Participants were then emailed a copy of the signed consent. After consenting for the study, a detailed participant schedule was created with the participant. Participants were encouraged to complete the study modules in eight consecutive weeks, but if participants had a planned vacation or activity, they were allowed one "break week". This was discussed and planned before the participant began the study.

Participants were then scheduled to begin the intervention. (All participants began the intervention within two to five days of being consented). During week 1, participants completed the rest of the pre-intervention questionnaires before beginning the first module. Participants received weekly emails every Sunday at 2PM ET/ 1PM CT/ 11 AM PT. Participants had a full week to complete their modules, and were asked to finish modules by 1PM ET/ 12PMCT/10AM PT the following week. After the first week, module emails included: 1) a link to complete homework tracking forms, child behavior ratings, and module satisfaction/accessibility ratings for the past week; 2) a password-protected link to the new module materials; 3) PDF and .DOC copies of module-specific handouts; 4) homework handouts and tracking forms for the next week. All participants were emailed a mid-week reminder to complete their modules. If participants had not completed their modules by Saturday, an additional reminder was sent. A final reminder was sent Sunday morning, if participants had not completed their modules. Once a

participant completed a module, they received a thank you email which included reminders about opportunities for scheduling an individualized check-in with the researcher, reminders to complete homework, and when the next module would be available.

After completing weeks 2-8, participants were sent post-intervention questionnaires at week 9, and one-month follow-up questionnaires at week 13. Like the other modules, participants were given one week to complete questionnaires, and had to complete them by 1PM ET/12PMCT/10AM PT the following Sunday.

Data Analysis

Feasibility. The overall feasibility of the intervention was examined by assessing treatment adherence, accessibility, and satisfaction. *Treatment Adherence* factors were examined based on percentage of completed modules, amount of homework completion, and responses on the Follow-Up Tracking Form. *Treatment Accessibility* was assessed based on responses to questions on the Post-Treatment Satisfaction Form and weekly tracking forms which examined ratings of accessibility (e.g., time commitment, reduction of barriers, ease of access, technological difficulties). *Treatment Satisfaction* was examined through total scores and individual responses on the Therapy Attitudes Inventory (TAI) as well as items in the Post-Treatment Satisfaction Form. Mean scores and overall opinions were explored.

Efficacy and Change across Time. Due to the small sample size, analytic techniques for single case designs studies were used. Reliable Change Indices (RCI; Jacobson & Truax, 1991) were calculated to evaluate improvement in child behavior (ECBI, SDQ), parenting stress (PSI), and dysfunctional parenting styles (PS). The RCI determines treatment gains at an individual level. Specifically, it assesses whether post-treatment change was significant, over and above measurement error. The RCI is calculated by dividing the difference (from pre- to post-test) in

the participants scores by the standard error of the difference of the test ($RCI = \frac{x_2 - x_1}{S_{diff}}$). RCI scores of 1.96 or greater indicate a statistically significant change. To calculate standard error of the difference, the RCI requires reliability (test-retest or Cronbach's alpha are commonly used) and standard deviations. Following recommendations (Bauer, Lambert & Nielsen, 2004; Martinovich, Saunders, & Howard, 1996; Tingey, Lambert, Burlingame, & Hansen, 1996) that internal consistency reliability estimates are better for calculating reliable change rates in clinical samples, Cronbach's alpha and standard deviations were obtained from the literature (e.g., published norms). While test-retest reliabilities are often used in these calculations and are considered more stringent, several researchers in the field (e.g., Bauer, Lambert & Nielsen, 2004; Martinovich, Saunders, & Howard, 1996; Tingey, Lambert, Burlingame, & Hansen, 1996) report that in clinical samples test-retest reliabilities are deflated by individual change and they recommend using a measure of internal consistency to calculate reliable change in clinical samples. When available, standard deviations and reliability estimates from a grandparent sample were also used, and both RCI reference scores were reported. RCIs were calculated individually, and with group means.

While RCIs identify statistically significant reliable changes in scores, clinically significant change was also evaluated. Clinically significant change can be examined in a number of manners, including when a participant moves from being in the "problem" range, to falling two standard deviations from the mean of the "problem" population or when a participant moves from a standard clinical cutoff, to a score below the cutoff, in a functional normal population score (Bauer, Lambert, & Nielsen, 2004; Jacobson & Traux, 1991). Thus, for measures with established cutoff scores, clinically significant change was evaluated by a change

from above to below the clinical cutoff. Meaningful change, defined as a change that is both clinically significant and reliable (per RCI calculations) was also examined.

In addition to examining statistical, clinical, and meaningful change, non-parametric Wilcoxon Signed Rank Tests were utilized to compare pre and post intervention scores on a group level.

Chapter 5: Results of Online Intervention Pilot

Participant Individual Factors and Completion

Participant 1 was a 51-year-old Caucasian divorced grandmother who had been the primary caregiver of two grandchildren for the past two years. Her identified target grandchild was seven years of age. This grandchild attended speech and trauma-focused individual therapy services, but neither Participant 1 nor her grandchild attended therapy services related to behavior-management or parent-child interactions. Participant 1 completed the intervention for two grandchildren. Thus, she is also labeled as Participant 2. Participant 2's identified grandchild was six years of age. Participant 2's grandchild attended speech, OT, and trauma based individual therapy services, with no services related to behavior management or parent-child interactions. Participant 1/2 completed the eight weeks of the intervention over the course of nine weeks, with one planned week off, for a prior planned vacation. Participant 1/2 did not complete one-month follow-up data due to significant life events that led her to be unable to complete the final time-point.

Participant 3 was a 55-year-old African American divorced grandmother who had been the primary caregiver of three grandchildren for four years. Her identified target grandchild for this study was four years of age. Neither Participant 3 nor her target grandchild attended any therapy services. This participant completed the intervention consecutively, with no break weeks.

Participant 4 was a 49-year-old Caucasian divorced grandmother who had been the primary caregiver of three grandchildren since their birth. Her target grandchild was eight years of age. Participant 4 had prior experience in support groups and attended bi-weekly counseling services from a religious minister, but participated in no standard mental health services focused on parent-child interactions by a psychological therapist. This participant completed the intervention consecutively, with no break weeks.

Participant 5 was a 56-year-old Caucasian married grandmother who had been the primary caregiver of one grandchild for three years. Her target grandchild was five years of age. Notably, Participants 1-4 and 6-7 all had formal custody/guardianship or in-process custody arrangements of their grandchildren, with little (e.g., short supervised visits) or no involvement of their grandchildren's biological parents. In contrast, Participant 5's son (the biological parent) currently lived in the home with the participant, but Participant 5 confirmed that she maintained primary caregiving responsibilities for her grandchild. Participant 5 and her grandchild received no individual therapy services; however, Participant 5 attended a monthly support group. This participant completed the intervention consecutively, with no break weeks.

Participant 6 was a 56-year-old multiracial (Latino and Native American) married grandmother who had been the primary caregiver of one grandchild for the past three years. Her target grandchild was four years of age. Neither Participant 6 nor her grandchild received therapeutic services. Participant 6 completed the introduction module and three additional modules in a very inconsistent manner (i.e., not consecutively, with a multiple breaks longer than one week) due to multiple emergency situations. Ultimately, Participant 6 asked to terminate the study prematurely due to emergency situations. As she only completed four weeks of the study, in a manner not consistent with the other participants, her data is not included in this manuscript.

Participant 7 was a 61-year-old Caucasian married grandmother whose three grandchildren had been placed with her four months prior. Her target grandchild was six years of age. She attended no therapy or support services. Participant 7 completed only two weeks of the study due to emergency circumstances that resulted in her ending the study prematurely. As she only completed one intervention week after the initial introduction model, her data is not included in this manuscript.

Demographic data, adjusted to only include treatment completers (Participants 1-5), is included in Table 9. Notably, both Participant 6 and 7 ended the study prematurely due to significant health and emergency circumstances that resulted in their inability to complete the study at that time. Their early termination from the study was not due to feasibility/accessibility issues.

Intervention Feasibility, Accessibility, and Satisfaction

Treatment adherence. Except for the two participants that had to end participation in the study for extenuating circumstances, all participants (n=5, 100%) who completed the first module, finished the intervention (100% module completion). Additionally, all participants completed each module within the requested time limits. No participants requested a phone check-in with the researcher to provide assistance on implementation, or to address questions about the intervention.

Accessibility. Responses on the Post-Treatment Satisfaction Form and weekly tracking forms were utilized to examine ratings of accessibility (e.g., time commitment, reduction of barriers, ease of access). When asked to rate the time-commitment of the intervention on a 1-10 scale (1= not at all feasible; 10= extremely feasible) participants gave a favorable rating (*M*=7.40, *SD*= 1.52; range 5-9 on a 10-point scale). Additionally, most participants rated the

program's ease of access as superior or higher, (*M*=6.40, *SD*= 0.89; range 5-7 on a 7-point scale; above average to excellent). When asked (in free-response format), how the intervention reduced barriers to accessing traditional services (i.e., cost, transportation, childcare), participants noted that this program addressed barriers to time (e.g., "…it allowed me time to be able to participate"); feasibility/ease of access (e.g., "It helps that the modules could be done in more than one sitting"); childcare, and transportation. One participant spoke very highly, noting: "This program was perfect, for lifting the barriers of childcare needs transportation and, I like that I didn't have to write things down, I could just go through the material again if I feel I missed something. Many times I replayed slides because I needed the information to sink down or put together a plan in my head. 'Replay' is something that you can't do in traditional courses."

On the Weekly Tracking Form, participants were asked how they completed the intervention (e.g., watched the module in one sitting, two sittings, over the course of multiple days). This varied across participants. Three participants (Participants 3, 4, and 5) primarily completed the intervention in one sitting (62-88% of modules completed in one sitting). Participant 1/2 completed the majority of the intervention (62%) in two or more sittings. Individual and mean participant report of log-in usage can be seen in Table 10. Only one module, Module 8, was completed by all participants in one sitting. Opportunities to complete the modules in more than one sitting were meant to increase accessibility and flexibility in order to reduce any attrition concerns due to timing barriers.

Participants were also asked to report any technological difficulties with the intervention platform, access, or usage. They reported these difficulties on their weekly satisfaction forms, but were also asked to email the researcher if any urgent concerns arose. Participants reported no technological difficulties across 50% of the modules (Modules 1,4,7, and 8 specifically). Across

the intervention, no participant reported more than 2 technological difficulties. A total of five technological problems were reported, four of which were classified as mild. Participant 1/2 noted that one handout was not sent in both PDF and .DOC form (this was rectified immediately and did not affect other participants). Participant 3 noted one difficulty with buffering/loading content on one occasion but reported that on a second attempt it loaded appropriately. Participant 4 reported one glitch with a survey monkey questionnaire freezing. Participant 5 noted that one video across the intervention was harder to hear (i.e., volume was too low). Notably, one technological problem was classified as severe. Participant 1/2 reported not being able to load half of the content on Module 5. This was rectified immediately and a second version was sent to her (though testing did not result in any freezing across four tests on separate computers). It appeared that this participant's difficulty was likely due to internet cache issues (i.e., the participant had reported that her internet connectivity had been fluctuating in and out).

Quiz grades. Participants 1/2 and 3 had 100% pass rates, meaning that they obtained a passing score of 40/50 or 50/50 (one or no questions wrong) on all module quizzes. Participant 4 had a passing rate of 57.14% while Participant 5 had a passing rate of 71.43%. Participant 4 was the only participant to consecutively fail two modules, resulting in contact by the researcher to check in on comprehension. Participant 4 was able to demonstrate an understanding of the material, and noted a general difficulty with test-taking. Additionally, the quizzes did not let the participant go back to change answers, which may make them more difficult for participants who have trouble with test-taking.

Homework completion. Using the homework tracking forms, average number of days of homework completion per module were calculated. Mean homework completion per module is included in Table 11. Additionally, individual homework completion, per participant is included

in Table 12. Mean homework completion per module ranged from 5.4-6.4 days. Participant 3 reported practicing homework 7 days/week throughout the intervention. Participant four and five also had high homework means, completing homework for a minimum of 6 days/week. Participant 1 and 2 completed homework less frequently, ranging from 3-6 days a week.

On the One Month Follow Up Tracking Form, all participants who completed this timepoint (n = 3; Participants 3, 4, 5) noted that they practiced Special Time 5-7 days a week, and used any previously learned intervention strategies 5-7 days a week. Additionally, when asked whether they still review any of the handouts or modules at one-month follow-up, all participants who completed this time-point reported still using and referring back to study materials. Participant individual responses to qualitative questions on the Follow-Up Tracking Form are located on the bottom of Table 13.

Satisfaction. When asked whether they would recommend this program to another custodial grandparent, 100% of participants reported that they would recommend the program. When asked to report benefits of the intervention, participants discussed that the program provided alternatives to negative parenting behaviors (i.e., yelling), assisted in encouraging parental consistency and accountability, assisted in managing difficult and defiant behaviors, and increased positive parent-child interactions. One participant also noted the format as a benefit, discussing the ability to complete the program at home, and review slides when needing a "refresher." When asked about any suggested improvements to the program, two participants reported that they had no suggestions. One grandparent suggested to improve the weekly measures by adding more text boxes to identify significant circumstances or triggers that occurred each week to affect the grandchild's behavior. One grandparent (denoted as participant 1 and 2) noted that she felt she needed more personal training. While she spoke warmly and

positively about the program, and rated it highly, it appeared that she needed more intensive training to make the improvements that she wanted to see. For more detailed information, individual responses to the five open-ended consumer satisfaction questions of the Post Treatment Satisfaction Form, which addressed topics such as barriers, program benefits, and improvements, are included in Table 13.

On the Post-Treatment Satisfaction Form, participants were asked to rate the eight main intervention strategies across several domains: quality of instruction, comprehension, and perceived usefulness in affecting their grandchild's behavior. Quality of instruction ratings ranged from 4 (average) to 7 (excellent) with the highest level of instruction scores given to special time techniques (*M*= 6.20, *SD*= 0.45; range 6-7) and reinforcement strategies (*M*= 6.20, *SD*= 0.84; range 5-7). Participants reported superior to excellent comprehension of praise and special time skills (*M*= 6.20, *SD*= 0.45; range 6-7). The top three most useful strategies reported were reinforcement strategies (*M*= 6.60, *SD*= 0.55; range 6-7) praise (*M*= 6.20, *SD*= 0.45; range 6-7), and special time techniques (*M*= 6.20, *SD*= 0.45; range 6-7). See Table 14 for mean post-treatment ratings of quality of instruction, comprehension, and perceived usefulness of intervention strategies.

Participants also rated the overall usefulness of various teaching formats of the intervention on a 7-point scale of usefulness. Responses ranged from somewhat useful to extremely useful, with highest ratings given to intervention content and handouts. Mean post-treatment usefulness ratings (by teaching format) are included in Table 15.

Information about participants satisfaction with the intervention was also gained by examining participants' scores on the Therapy Attitudes Inventory (TAI). Participants rate each item on a 1 to 5 scale with higher ratings indicating greater satisfaction with the intervention.

The total item average for the sample was 4.26 (*SD* = 0.50) indicating high ratings of satisfaction with the intervention. The composite score average for questions five through seven, which discuss improvements in child behavior was 4.33 (*SD* = 0.41), indicating high ratings of improvement. Participants with follow up data demonstrated maintenance or increases in TAI ratings. See Table 16 for individual and mean sample scores on the TAI.

Finally, participants reported improvements in parental confidence at post and follow-up periods. See Figure 1 ratings of parental confidence. All participants demonstrated increases in confidence from pre to post-intervention. For the three participants (Participants 3, 4, 5) with follow-up periods, two participants maintained increases in parental confidence at follow-up while one participant (Participant 5) reported the same level of confidence at pre-intervention, though this was the highest score reported at this timepoint, and an overall high score of confidence (confidence=8 on a 1-10 scale).

Efficacy and Change Across Time

Overall group level descriptive statistics of pre and post scores across all measures are included in Table 17.

Changes in Child Behavior. Changes in child behavior were measured by examining ECBI and SDQ scores. Scores are presented descriptively (graphs) and are evaluated for statistically significant change (i.e., RCI, reliable improvement) and clinically significant change (based on clinical cutoffs). As a reminder, only participants 3, 4, and 5 have follow-up data.

ECBI.

Descriptive Data. ECBI scores at pre-intervention, post-intervention, and follow-up time points are presented in Figure 2 and 3. Individual weekly ECBI scores are presented in Figure 4.

Based on graphs of participants scores, it can be observed that all participants experienced an increase (variable in magnitude) in intensity scores at Week 3. Three participants experienced a 20+ point drop in intensity of child behavior scores from Week 6-7, which corresponds to when time-out was first implemented. An additional drop in intensity scores was observed from week four to five (after reinforcement and regulation systems were introduced) for four of the five participants (ranging from 13 to 51 points). Group mean level scores at pre and post can be observed in Table 17.

RCI. RCIs for the ECBI Intensity and ECBI Problem subscales are included in Table 18. On the Intensity subscale, four participants (80%; Participant 1, 2, 4, 5) reported statistically significant reductions in grandparent-reported child behavior intensity scores from pre-intervention to post-intervention. Participant 4 and 5, who also had one-month follow-up data, maintained this reliable improvement at follow-up. Three participants (60%; Participant 1, 4, 5) demonstrated statistically significant decreases in parent-reported problem behaviors post-intervention. Additionally, Participant 3, who did not demonstrate significant reductions at post, demonstrated significant improvement at follow-up. Overall, all participants (100%) reported a significant pre to post improvement (i.e., reduction) in ECBI Intensity *or* Problem scales, with three participants (60%, Participant 1,4, and 5) exhibiting reliable change (i.e., significant improvements) across both scales. Additionally, reliable change emerged among scores averaged across participants from pre to post in both scales.

Clinical Change. On the ECBI problems scale, four participants (Participant 1, 3, 4, and 5) reported clinically elevated problem scores (i.e., raw score ≥ 15, $t \geq 60$) before the online intervention. Participant 1, 4, and 5 reported non-clinical problem scores at post, with Participant 3 demonstrating a reduction to a non-clinical problem score at follow-up. Ultimately, all

participants who reported clinically significant elevations in grandchild problem behaviors at pre-intervention (n = 4, 80% of total sample), reported non-clinical elevations at post and/or follow-up. On the ECBI intensity scale, Participant 5 was the only participant who reported clinically significant elevations (raw score ≥ 131, $t \geq 60$) at pre-intervention. Notably, she reported a significant drop to non-clinical elevations (t = 47-48) at post and follow-up.

While the ECBI includes norms that were used to describe the clinical and non-clinical classification above, the ECBI has not been normed with custodial grandparents. Several clinical studies with grandparent samples, have demonstrated slightly lower ECBI intensity scores. For example, a clinical sample of caregiving grandparents completing an RCT for Triple-P had a mean ECBI score of 122.11 (Kirby & Sanders, 2014b). This is very similar to the current sample's mean of 122.20. While not all scores in in the intensity domain were above the clinical cutoff at pre-intervention, they are elevated in terms of general population norms (mean ECBI Intensity score for this study's age range is approximately 99, Colvin et al., 1999). Thus, for descriptive purposes, changes in intensity were also examined by changes in pre-treatment standard deviation. Standard deviations are often used when determining clinically significant changes (Jacobson & Truax, 1991). Notably, Participants 1, 2, 4, and 5 all demonstrated individual decreases by more than 1.5 SD from their pre-treatment intensity score, with Participant 1, 4, and 5 demonstrated decreases in more than 2SD from their pre-treatment score.

SDQ.

Descriptive Data. SDQ scores from the main intervention time-points are graphed in Figure 5 and 6. Participant 2 is not included, as due to participant error (i.e., checking wrong box for age), the participant completed the 2-4 year old version, rather than the 4-17 year old version. As the target grandchild was six, versions differ in three conduct problem questions that have

been softened and/or changed, and the clinical cutoffs are slightly different in this version, it could not be interpreted. All subsequent participants (Participant 1, 3, 4, 5) demonstrated elevated scores in the conduct problems subscale before the intervention and demonstrated average scores at post intervention. Those who had elevations in total scores, also demonstrated decreases post-intervention.

RCI. RCIs for the SDQ are included in Table 19. Two participants (Participant 4 and 5) demonstrated significant reductions in SDQ total scores. One participant (participant 4) maintained this reduction at follow-up. Notably, Participant 5 demonstrated a non-significant increase in SDQ total score at follow-up. From further examination of the data, this elevation was due to increases in hyperactive behaviors, rather than conduct problems. One participant (Participant 4) demonstrated a significant reduction in SDQ conduct problems. This participant maintained this improvement at follow-up. Reliable change emerged among scores averaged across participants from pre to post in the total problems scale, but not the conduct problems scale.

Clinically Significant Change. Using the four-band (i.e., close to average, slightly raised, high, very high) SDQ characterization (Goodman & Goodman, 2009), for participants who completed the 4-17 version of the SDQ, three participants (Participant 1, 4, and 5) reported "high" or "very high" elevations in their grandchild's conduct problems before the intervention. Similarly, using the provisional banding for the 2-4-year-old version ("Scoring the Strengths & Difficulties Questionnaire for 2-4 year olds", 2015), Participant 3 reported slightly raised conduct problems at pre-intervention. All participants with elevated scores at pre-intervention, reported non-clinical "close to average" scores in grandchild conduct problems at post-intervention. These reductions were maintained at follow-up, for those who had follow-up data.

Similarly, when examining total scores, participant 4 and 5 demonstrated clinically significant elevations at pre-intervention and non-clinical "close to average" elevations at post-intervention. As mentioned, Participant 5 demonstrated "slightly raised" elevations at follow up, though examination of these scores indicated increases in hyperactivity, rather than conduct problems.

CBCL.

Descriptive Data. CBCL scores (using t-scores) from the three main intervention time-points are graphed in Figure 7. All participants showed reductions in scores from pre to post.

Clinically Significant Change. Two participants (Participant 4 and 5) showed significant elevations in oppositional behaviors before the intervention. They both demonstrated non-clinical elevations (i.e., $t \leq 65$) at post and follow-up time-points. RCIs were not calculated as the CBCL scores and norms are based on evaluating behavior over the past six months. To approximate clinical change, the directions were changed at post (i.e., asked to rate current behavior over the past week) and one-month follow up (i.e., asked to rate behavior over the past month).

Changes in Parenting Variables.

Parenting Stress Index- Short Form.

Descriptive Data. PSI scores (using percentiles) for the main intervention time-points are included in Figures 8-11. Overall, Participants 1, 2, 4, and 5 demonstrated reduction in parenting stress variables. Participant 3 demonstrated very low parenting stress in the beginning of treatment (below 60th percentile) and this stress slightly increased (from 58th to 64th percentile) at post-treatment. However, her scores remained non-clinical throughout the intervention.

RCI. RCI scores for the PSI-4-SF are located in Table 20. Three grandparents (Participants 2, 4, and 5) reported reliable improvements in parenting stress, per the total score RCI on the PSI-SF. Participants 4 and 5, who had follow-up data, maintained these reductions at follow-up. Participants 2,4, and 5 also achieved significant RCIs (i.e., significant decreases) in the difficult child scale from pre to post, which indicates reliable reductions in their own perceptions of how difficult their grandchild was to take care of. Participant 2 reported significant pre to post improvements in parental distress, while Participant 4 and 5 reported significant pre to post improvements in parent-child dysfunctional interactions. When examining mean change across participants, reliable change emerged among scores averaged across participants from pre to post in the total stress and difficult child scales.

Clinically Significant Change. PSI-SF-4 total and subscale scores of 85th percentile and higher are deemed clinically elevated. One participant (Participant 2) reported clinically elevated total parenting stress before the intervention (86th percentile), and a significant reduction in this parenting stress at post-intervention (66th percentile). Notably, two other participants (Participant 4 and 5) had borderline clinical scores of 84th percentile before the intervention, and each also showed reductions in parenting stress (66 and 64th percentiles, respectively) post-intervention. Three participants (Participant 2, 4, and 5) reported clinically significant elevations in parent-child dysfunctional interactions at pre-intervention and non-clinical elevations (ranging from 66-76th percentile) at post intervention. Two participants (Participants 1 and 2) reported clinically significant elevations in parental distress at pre-intervention, and non-clinical elevations at post-intervention. Participant 5 reported clinically significant (94th percentile) pre-intervention scores in the difficult child domain and reported non-clinical scores at post-intervention (62nd percentile). Notably, while four of the five participants reported difficult child subscale scores

between 76th-94th percentile before the intervention, post-intervention scores in the difficult child subscale were much lower (52-62nd percentile). Overall, all participants (n=4, Participants 1, 2, 4, and 5) who reported elevations in at least one subscale of the PSI at pre-intervention demonstrated clinically significant decreases in parenting stress at post-intervention, with all subscales below high or clinical elevations.

Parenting Scale.

Descriptive Statistics. PS scores from the three main intervention time-points are graphed in Figures 12-15. All participants demonstrated reductions in total scores from pre to post. At pre, the averaged sample scores were elevated across all PS scales. However, there was some variability in individual elevations in individual data.

RCI. RCI scores for the PSS are included in Table 21. Participant 1 demonstrated reliable improvement in over-reactivity. Participant 2 and 5 demonstrated reliable improvement in verbosity. No participants demonstrated an improvement in laxness. Participant 1 and 5 demonstrated reliable improvements in dysfunctional parenting styles as measured by the PS total score from pre to post. This was maintained by Participant 5 at follow up. When examining mean change across participants, no reliable changes emerged among scores averaged across participants in any subscales.

Clinical Change. Participants 1, 2, and 4 were clinically elevated in laxness at the beginning of the study. Participant 1 no longer demonstrated clinically significant scores (as measured by clinical cutoffs) in laxness from pre to post. These same participants also demonstrated clinically elevated PS total scores at pre, and while their scores decreased, they were still at or above the clinical cutoff after the intervention. Participants 1 and 2 were clinically

elevated in overactivity at pre-intervention. While their scores decreased, they did not reduce past the clinical cutoff. Participants 1 through 4 demonstrated elevations in verbosity at pre-intervention and Participants 2 and 3 demonstrated non-clinical elevations at post intervention.

Overall Individual Improvement

Table 22 denotes overall individual improvement across participants. Clinical, reliable, and meaningful change are described. Meaningful change is determined as change that is both clinically significant (i.e., reduction from clinically elevated to non-clinical scores per established clinical cutoffs) and reliable (i.e., determined through RCI calculations as a significant decrease greater than measurement error). All participants were elevated on at least two measures at pre-intervention and demonstrated clinically significant reductions in the same two or more measures at post-intervention (i.e., at post or follow-up time points). Four participants (80%, Participants 1, 2, 4, 5) demonstrated meaningful change on at least one measure. Participant 4 and 5 demonstrated the most change across measures, demonstrating meaningful change across three measures, as well as clinically significant change in CBCL ODD symptoms. Participant 2 showed more significant improvement in parenting measures, rather than child behavior measures. Participant 3 did demonstrate clinical reductions in some measures, but overall her pre-intervention elevations were less extreme then other participants, and as her change scores were small, they resulted in non-significant RCI scores.

Group Level Change

Finally, Wilcoxon signed-rank tests indicated that the intervention elicited group level significant change in child behavior problems from pre to post as demonstrated by significantly lower ECBI intensity ($Z = -2.03$, $p = 0.04$) and problem ($Z = -2.02$, $p = 0.04$) post scores. Wilcoxon

signed-rank tests also indicated group level significant change in dysfunctional parenting styles as demonstrated by significant lower PS total scores (Z = -2.02, p = 0.04) and significantly lower PS overreactivity scores (Z = -2.02, p = 0.04) at post. However, it did not elicit a group level significant pre to post changes in SDQ total (Z = -1.84, p = 0.06), SDQ conduct (Z = -1.84, p = 0.06), PSI parental distress (Z = -1.89, p = 0.06), parent child interactions (Z = -1.77, p = 0.07), difficult child behaviors (Z = -1.75, p = 0.08), total score (Z = -1.76, p = 0.08), PS laxness (Z = -1.83, p = 0.07) or PS verbosity (Z = -1.75, p = 0.08)

Chapter 6: Discussion

Summary of Pilot Study

The third and final stage of this study sought to examine the implementation of a brief, online-based adaptation of PCIT for custodial grandparents. This adaptation, which focused on how intervention content was delivered, sought to address known barriers to accessing parenting treatments, while providing PCIT strategies in a cost-effective, flexible and efficient manner. To the author's knowledge, this is the first attempt to teach brief modular-based PCIT interventions online, without a direct coaching component. Because the primary role of pilot studies is to assess feasibility (Leon, Davis, & Kramer, 2011), the primary aim of the final stage of this dissertation was to examine initial feasibility and satisfaction of the online intervention. Secondarily, the author sought to examine if there was preliminary evidence that the intervention resulted in reductions in child disruptive behavior, dysfunctional parenting practices, and parenting stress.

Nine participants were found eligible to participate in the intervention, with seven participants completing the first module after being consented. Two participants had to end the study prematurely due to adverse life-events, not related to study variables or study burden. This

resulted in a final sample of five participants. Besides those two participants, all five participants who completed the first module finished the intervention, completing all modules within the time-limits of the study. Examination of qualitative short-answer questions, as well as quantitative survey responses, indicated that participants rated the feasibility, ease of access, and time-commitment of the program favorably. All participants reported that the program was feasible in-terms of time-commitment and ease of access, with four out of five participants giving ease of access ratings of superior or higher.

In terms of examining the teaching format of the intervention, participants reported favorable quality of instruction ratings, and noted that the intervention handouts and content were the most useful components of the intervention. Participants also reported that intervention strategies were useful in managing their grandchild's behaviors. They reported that the most useful strategies were learning reinforcement strategies, praise, and special time (i.e. CDI) techniques. Participants noted that the program addressed barriers to time, childcare, and transportation. Additionally, one participant noted that the program format helped ensure comprehension, due to "replay" features.

In terms of satisfaction, 100% of participants reported that they would recommend the program to another custodial grandparent. Participants also reported high satisfaction on the Therapy Attitudes Inventory and Post-Treatment Satisfaction Form. Participants reported that the program provided alternatives to negative parenting behaviors (i.e., yelling), assisted in encouraging parental consistency and accountability, assisted in managing difficult and defiant behaviors, and increased positive parent-child interactions. Minor improvements to the program were suggested, including adding a diary element to explain any changes or triggers for weekly behavior problems. Participant 1/2 suggested needing a larger focus on her individual training to

stay emotionally regulated, suggesting that for some participants, this online program combined with more individualized traditional therapy services might be warranted.

In terms of feasibility of utilizing an online intervention with this population, participants reported minimal (i.e., 5 reported cases in total throughout the 8-week intervention) technological difficulties during the intervention, most of which were classified as mild and likely due to internet-based buffering issues. No participants requested a phone check-in to address questions with study concepts. Additionally, participants reported high overall homework practice and three of the five participants obtained passing scores on every comprehension quiz. Participant satisfaction with the online intervention, reports of ease of access, reduced time-commitment, quiz comprehension, and homework completion provide preliminary support for the primary aim of the study, demonstrating that it is feasible to deliver PCIT in an online intervention framework to this population.

In examining the second aim of the pilot study, results indicate that the intervention was associated with changes to child behavior problems, parenting stress, and dysfunctional parenting practices. Due to the flexible eligibility criteria, participants did not have to report elevated child behavior problems on all measures, but rather had to exhibit elevated child behavior problems on either subscale of the ECBI or CBCL ODD scale, or elevated scores on the PSI-4-SF. From pre to post, all participants demonstrated reductions in scores on the ODD subscale of the CBCL and reductions in the intensity and/or problem scale of the ECBI. The two participants with elevated CBCL scores at pre-intervention demonstrated non-clinical elevations post-intervention. The four participants who had elevated ECBI problems scores pre-intervention, demonstrated nonclinical problem scores at post and/or follow-up. The participant who reported elevated ECBI intensity scores at pre-intervention, demonstrated non-clinical

elevations post-intervention. All four participants who demonstrated elevated scores on the conduct problems scale of the SDQ at pre-intervention, demonstrated non-clinical elevations at post-intervention. In regard to parenting stress, the four participants who demonstrated elevated scores in one or more subscales of the PSI at pre-intervention, showed decreases to non-clinical elevations at post-intervention. Overall, on the ECBI, SDQ, CBCL, and PSI, all participants who demonstrated clinical elevated scores at pre-intervention showed reductions to non-clinical elevations at post-intervention. The majority of these improvements in child behavior and parenting stress were also deemed statistically significant improvements per RCI calculations. The only measure that resulted in maintenance of clinically significant elevations at post was the Parenting Scale, a measure of dysfunctional parenting styles. While clinical reductions were not seen in all subscales of this measure, some reductions were demonstrated. It is possible that the brevity of this intervention was not able to make a significant impact on overall parenting style, but did teach grandparents strategies to use and targeted parenting stress and child behavior difficulties.

When looking at individual data, the participants that demonstrated the most improvements are Participant 4 and 5. Participant 3 demonstrated the least improvement. Notably, while Participant 3 demonstrated some clinically significant elevations at pre-intervention, the majority of her scores were subclinical, or only a few points above clinically significant elevations. While some of Participants 3's scores decreased, they did not show dramatic decreases, likely due to the lower baseline scores to begin with. This could be caused by a floor effect, where minimal changes are seen across treatment, due to low pre-intervention scores.

As a group, RCI mean data indicated statistically significant pre to post improvements in ECBI intensity and problem scales, SDQ total scores, and PSI total and difficult child subscales. Additionally, Wilcoxon signed-rank tests similarly indicated the reductions in ECBI scores, and also demonstrate group level decreases in PS total and over-reactivity scores. Overall, the intervention showed promising effects on grandparent and child behavior on individual and group levels.

Consistent with the literature on other parent-training modalities, such as PMT (Enebrink et al., 2012) and Triple P (Sanders, Baker & Turner, 2012), results from this dissertation support the notion that PCIT strategies can be taught through an online intervention. Additionally, the results of th study suggests that therapist support may not be needed in online interventions, echoing the results of Sanders, Baker, and Turner's (2012) Triple-P online intervention without therapist involvement. Most notably, this study provides preliminary evidence that online PCIT can be distributed in a cost-effective and shortened manner, that may not require direct coaching to cause changes in child and caregiver behavior. This provides further support for abbreviated versions of PCIT such as PCIT-AG or self-help versions of PCIT that exclude coaching (Berkovits, O'Brien, Carter, & Eyberg, 2010). Additionally, it suggests that PCIT treatment can transcend geographic and accessibility barriers without the significant costs associated with newly released I-PCIT (Comer et al., 2017). Overall, it appears that this intervention does meet criteria for a minimally sufficient intervention (Kirby 2015; Sanders, Kirby, Tellegan, & Day, 2014). Additionally, the promising findings of this pilot provide preliminary support for the use of targeted tailoring of interventions with consumer input, as recommended by leading researchers (Kirby & Sanders, 2012; Sanders & Kirby, 2012).

Pilot Study Limitations and Future Directions

There are several limitations to the current investigation. Most notably, the small-n design affects generalizability and external validity of study findings. As this study was a preliminary pilot, feasibility was prioritized over rigorous study design. Thus, a small-subject A-B design was utilized, without a multiple baseline, due to concerns over burden to study participants. Future studies will need more rigorous designs to better examine treatment efficacy. It is suggested that future studies incorporate a larger sample, multiple baseline designs, a waitlist control, and SMA analyses. Ultimately, testing this online intervention, by comparing it to a waitlist control condition and traditional in-clinic PCIT, would provide the most rigorous examination of this intervention.

There are also notable limitations regarding the study sample. For example, the study is limited by sample severity. Participants needed only to demonstrate elevations in one measure to meet eligibility, and full diagnostic interviews were not completed to confirm if children met criteria for a disruptive behavior disorder. Future studies could examine the intervention with more severe samples, or clients with more comorbidities, to determine whether the intervention will succeed with more diverse samples. If possible, interviews with trained mental health professionals could allow for stronger assessment, and the possibility of using Clinical Global Impression Scales (CGI; Guy, 1976) to better examine improvement across the intervention. Additionally, testing with more racially diverse samples is warranted, as the pilot sample was primarily Caucasian. Notably, while it is common for custodial grandparent research to include only grandmothers, and custodial grandfathers were recruited but did not participate in this study, future research should attempt to recruit more custodial grandfathers to examine if the intervention works equally well with grandfathers.

An additional weakness of the study design was that all reporting was grandparent-report information that often-times could not be verified by the researcher. To more stringently assess homework completion, or changes in child behavior, other-report information or taped assignments could be utilized. Future studies could incorporate other-report information, such as teacher report, to gather further information on changes to child behavior. Additionally, homework could be verified by activities that required participants to record some special time, for review by a therapist. While this would increase therapist involvement and burden to clients, it could better examine the accuracy to which participants report child behaviors and homework completion. Additionally, future studies should more closely examine individual factors that may affect week to week changes during the intervention. One participant suggested that the weekly logs include comment boxes to discuss any changes that occurred during this week. This would allow for further examination of individual differences, and to determine if other factors (i.e., starting school, having a visit with biological parent) contributed to changes in behavior.

Notably, the overall success of this study suggests that online PCIT interventions could be extended not only to custodial grandparents, but parents in general who want assistance in learning strategies to manage their child's behavior. While it is unlikely that this online intervention promotes better improvements in child and parent behavior than traditional PCIT, it could be an initial approach for families who are beginning to seek resources, those who need preventative services or do not meet diagnostic criteria for insurance-funded treatments, those who are on wait-lists for services, or those who do not have access to mental health services. Additionally, preliminary results of this pilot study raise the possibility that shortened courses of PCIT strategies can still result in improvements in child and caregiver behaviors.

Overall Conclusions

Taken together, results from the pilot study suggest that the adapted online intervention was generally feasible and acceptable to the population, and demonstrated some changes in child behavior, grandparent confidence, grandparent stress, and dysfunctional parenting behaviors. It is likely that the high satisfaction, favorability, and acceptability of the intervention was influenced by the consumer-oriented design of this study. This underscores the importance of involving the intended population when designing, adapting, or tailoring interventions for a particular consumer group. Findings of the current study provide further support for the importance of consumer engagement and involvement during intervention development (Kirby & Sanders, 2012; Kirby, 2015), as well as the importance of examining attitudinal, acceptability, and contextual factors that influence use and participation in mental health treatments (e.g., Kazdin, 2000; Lau, 2006).

Examination of overall study results highlight the importance of addressing barriers through flexible and creative adaptations, and the importance of being open to changes and new developments. Findings from Stage 1 support the research on positives of raising grandchildren (e.g., Kropf & Burnette, 2003), while also recognizing unique parenting struggles of custodial grandparents, as well as the notion that support group services are not often enough to adequately support this population. Reports of difficulties accessing parenting resources further substantiate research on barriers toward accessing parenting services including that custodial grandparents often lack resources to access help or become dissatisfied with resources that are available to them (Carr, Gray, & Hayslip, 2012), or do not obtain resources due to red-tape issues related to legal rights (Van Etten & Gautam, 2012). Notably, this study sought to adapt PCIT through participant-driven bottom-up research, and was open to significant changes to study methods to

improve intervention accessibility for the target consumer group. The original intent was to develop an adapted manual for PCIT with this population, but findings from the initial interviews suggested that an adapted treatment delivered in its standard form would likely not reach many custodial grandparents due to barriers to access and availability of services. Rather than rigidly maintaining the study design and developing a manual that might not reach its target population, a service delivery adaptation was created. Overall, it is important to be open to develop flexible and creative ways to intervene in this population. The author had not intended to adapt the treatment using internet technology, but learned from qualitative interviews that grandparents sought a more accessible way to learn parenting strategies and were amenable to technology-based approaches. Study findings shed light on the importance of flexible and creative interventions, while also maintaining fidelity to core intervention components, and core features of parent-training with strong research support. This supports Kendall and colleagues "flexibility with fidelity" framework (see Kendall, Gosh, Furr, & Sood, 2008) in which researchers maintain core components of the intervention while adapting structure, content, and/or delivery to allow for optimal results with the client in a community setting.

While this intervention only resulted in a small pilot study, it attempted to include consumer feedback throughout many stages. To support their *deployment-focused model of intervention development and testing*, Weisz, Chu, and Polo (2004) have highlighted the importance of early testing of interventions in the community setting, rather than following the traditional medical pharmaceutical model in which treatments are developed in rigorously controlled efficacy trials and only transferred to community settings at the last stage of testing. They discuss the significant differences that may often separate efficacy and clinical trials in the community, and the need to develop interventions that can transcend barriers in community

settings. While their model for testing interventions is focused on new intervention development, it is equally important to highlight the need for community involvement and early-stage testing in real-life community settings when adapting interventions as well. Ideally, the integration of more consumer-oriented research, and a regular focus on early testing in real-word community settings will assist in bridging science-practice gap issues, increasing accessibility of evidence-based interventions to the broader population, and improving the social and ecological validity of evidence-based parenting interventions.

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Table 1

Demographics of Stage 1 Sample

Demographic Variable	Total n (%)
Gender	
Male	0 (0%)
Female	15 (100%)
Current Marital Status	
Single	4 (26.7%)
Married	5 (33.30%)
Divorced	2 (13.30%)
Widow	4 (26.7%)
Race/Ethnicity	
White/Caucasian	11 (73.3%)
Black/African American	4 (26.7%)
Grandparent Education	
Some High School	1 (6.7%)
High School Diploma	7 (46.7%)
Associate's Degree	3 (20%)
Some College	2 (13.3%)
Bachelor's Degree	0 (0%)
Advanced/professional degree	2 (13.3%)
Current Employment Status	
Employed	8 (53.3%)
Unemployed	1 (6.7%)
Retired- receiving benefits	6 (40.0%)
Grandparent Income	
Under 20,000	2 (13.3%)
20-30,000	2 (13.3%)
30-40,000	3 (20.0%)
40-50,000	1 (6.7%)
50-60,000	2 (13.3%)
60-70,000	2 (13.3%)
Over 70,000	2 (13.3%)
Location	
South	11 (73.3%)
Northeast	3 (20.0%)

Midwest	0 (0%)
West	1 (6.7%)
# of Grandchildren Under Primary Custodial Care	
1	6 (40%)
2	5 (33.3%)
3	3 (20%)
4	1 (6.7%)
Grandparent Age	Mean = 57.80 Median = 55 Range = 48-73 SD= 6.97

Note. Two participants were great-grandmothers.

Table 2

Descriptive Statistics for Stage 1 Interviews

Variable	Mean	SD	Range
ECBI Intensity (raw score)	141.20	37.40	70-204
ECBI Problems (raw score)	20.20	7.23	4-34
CBCL– ODD (t-score)	65.93	9.72	50-80
Parenting Stress Index– Total (percentile)	74.60	22.53	32-99
Parenting Stress Index- Parental Distress (percentile)	73.00	24.91	20-99
Parenting Stress Index- Dysfunctional Parent-Child Interaction (percentile)	64.27	30.05	10-98
Parenting Stress Index- Difficult Child (percentile)	76.60	19.84	34-99
Parenting Task Checklist Setting Self Efficacy	80.13	8.09	66-93
Parenting Task Checklist Behavior Self Efficacy	79.80	13.94	53-100
Parenting Scale– Laxness	2.53	0.69	1.73-4.55
Parenting Scale – Overreactivity	2.27	0.85	1.00-4.60
Parenting Scale – Verbosity	3.90	1.25	1.86-5.57

Note. ECBI: Scores of 131 (intensity) and 15 (problems) or higher are considered clinically significant. CBCL: T scores of 65 or higher are borderline or clinically significant. PSI: Scores above the 85th percentile are considered high. Ranges are large as eligibility criteria was broad and one participant was conditionally eligible.

Table 3

Correlations

	Age	Education	# Grand-children	PD	PCDI	DC	Total	Setting	Behavioral	ECBI Int.	ECBI Prob.	Laxness	Overreactivity	Verbosity
Age	1													
Education	-.077	1												
# Grandchildren	-.226	.520*	1											
PSI Parental Distress	-.574*	-.278	.093	1										
PSI CDI	-.414	-.295	.241	.696**	1									
PSI Difficult Child	.113	.119	.315	.018	.586*	1								
Total Stress	-.363	-.157	.406	.743**	.947**	.645*	1							
PTC Setting	.493	.090	-.381	-.696**	-.731**	-.306	-.688**	1						
PTC Behavioral	.405	.150	-.262	-.584*	-.754**	-.436	-.725**	.910**	1					
ECBI Intensity	-.432	.181	.096	.450	.612*	.360	.512	-.378	-.319	1				
ECBI Problems	-.484	.218	.279	.389	.617*	.345	.502	-.384	-.344	.907**	1			
PS Laxness	-.332	.433	.641*	.105	.162	.165	.325	-.090	.032	.365	.388	1		
PS Overreactivity	-.459	-.341	-.046	.542*	.284	.064	.466	-.353	-.388	.093	.124	.042	1	
PS Verbosity	-.382	.199	.650**	.110	.012	-.110	.170	-.181	-.041	.009	.187	.569*	.238	1

* $p < .05$. ** $p < .01$

Table 4

Challenges of Parenting Grandchildren

Theme/Sub-theme	N	%
Challenges Managing Behavior - Difficulties with defiant/disruptive behavior - Difficulties managing hyperactivity/inattentive behavior - Difficulties with discipline - Need to maintain constant attention and vigilance of grandchild's problem behaviors - Need for grandmother's energy/patience - Correcting "parenting mistakes" of biological parents (i.e., "retroactive parenting")	14	93.33
Addressing Traumas - Addressing child's emotional trauma - Addressing biological traumas to child - Traumatic effects to grandparent	7	45.67
Changes in Lifestyle - Loss of independence/ freedom - Difficulty juggling personal and parental responsibilities - Difficulty managing time - Strained relationships	8	53.33
Difficulties Navigating Resources - Difficulties navigating legal/custodial issues (i.e., "red tape") - Difficulties accessing support/services - Difficulties working with systems (i.e. DCFS)	8	53.33
Loss of Grandmother Role	7	45.67

Table 5

How PCIT Can Be Utilized to Address Reported Parenting Challenges

Challenge	How PCIT addresses this challenge
Difficulty controlling behavior, including defiance and hyperactivity inattention.	• Evidence-based parenting programs, such as PCIT, are recommended as the first line approach for young children with oppositional or defiant behaviors (Eyberg, Nelson & Boggs, 2008). • The PDI phase of PCIT directly addresses defiance and behavior management (McNeil & Hembree-Kigin,2010) • Repeated studies of PCIT have found that it results in significant reductions in child behavior problems (Gallagher,2003) and that treatment benefits are maintained for several years (Eyberg et al., 2001; Hood & Eyberg, 2003) • PCIT CDI phase, including behavioral description skills, can help model and improve attention (McNeil & Hembree-Kigin, 2010; Urquiza, Zebell, Timmer, McGrath, &Whitten, 2010). • PCIT can be effective for children with ADHD (Wagner & McNeil, 2008)
Need to constantly monitor grandchild's behavior	• CDI skills promote positive attention-seeking behaviors (McNeil & Hembree-Kigin, 2010) and teach parents how to regulate their attention, which helps reduce disruptive behaviors and the need for constant monitoring/vigilance.
Correcting discipline and attachment mistakes of biological parent	• PCIT CDI components can help improve attachment and parent child interactions to prepare children for changes in discipline (McNeil & Hembree-Kigin, 2010).
Addressing trauma	• PCIT is rated as a trauma-informed treatment (Pearl et al., 2012). • PCIT has been used with children in foster-care (e.g., McNeil et al, 2005), as well as children who have been victims of abuse (Timmer, Ware, Urqiza, and Zebell, 2010).
Loss of grandmother role	• The loss of grandmother role is associated with strict attention to discipline, without the positives of affection/attention. The CDI stage of PCIT is focused on relationship building and positive attention skills (McNeil & Hembree-Kigin, 2010) which will help nurture positive grandparent-child interactions before consistent discipline procedures are put in place.

Table 6

Intervention Development: Module Specifics

Module	Length of Presentation (approximate total length with additional point and click videos/features)	# of Slides	# of Handouts	# of Videos	Quiz (Y/N)
1	19:11:02	19	1	1	N
2	32:24.48 (35:00:00)	26	5	9	Y
3	22:27.84 (31:19.82)	26	5	11	Y
4	26:00:00 (28:00:00)	25	7	2	Y
5	40:59:92	38	5	3	Y
6	38:06:27 (40:50:00)	36	6	10	Y
7	25:31:86 (27:30:27)	25	1	6	Y
8	29:02:35 (33:20:00)	33	3	5	Y

Table 7
Module Development: Readability Statistics

Item	**Flesch-Kincaid Grade Level Test**	**Mean (SD)**	**Range**
Presentation			
Module 1	10.2		
Module 2	7.9		
Module 3	7.9		
Module 4	8.6		
Module 5	7.7		
Module 6	8.0		
Module 7	8.2		
Module 8	8.7		
Overall		*8.4 (0.81)*	*7.7-10.2*
Handouts			
Module 1: Homework	6.2		
Module 2/3: Do Skills	8.5		
Module 2/3: Don't Skills	5.3		
Module 2/3: Toys for Special Time	12.0		
Module 2/3: Ignoring	7.9		
Module 2: Homework	3.8		
Module 3: Homework	4.3		
Module 4: Emotion Regulation	7.9		
Module 4: Sticker Charts	6.4		
Module 4: Homework	6.7		
Module 5: Commands	4.1		
Module 5/6: Time Out Diagram	5.2		

Module 5/6: Preparing Time-Out Room (Alternative Time Out)	8.7		
Module 6: Teaching Time-Out	6.6		
Module 6: FAQ about Time-Out	8.8		
Module 6: Homework	6.4		
Module 7: Homework	7.5		
Module 8: Setting Up House Rules	7.4		
Module 8: Handling Future Behavior Problems	9.2		
Module 8: Homework	7.7		
Overall		*7.03 (1.98)*	*3.8-12.0*
Script			
Module 1	9.0		
Module 2	7.0		
Module 3	7.2		
Module 4	8.4		
Module 5	8.4		
Module 6	8.3		
Module 7	7.5		
Module 8	9.0		
Overall		*8.1 (0.78)*	*7.0-9.0*

Table 8

Demographics of Stage 3 Sample

Demographic Variable	Total n (%)
Gender	
Male	0 (0%)
Female	6 (100.0%)
Current Marital Status	
Married	3 (50.0%)
Divorced	3 (50.0%)
Race/Ethnicity	
White/Caucasian	4 (66.7%)
Black/African American	1 (16.7%)
Other	1 (16.7%)
Grandparent Education	
High School Diploma	1 (16.7%)
Associate's Degree	3 (50.00%)
Some College	1 (16.7%)
Bachelor's Degree	0 (0%)
Master's Degree	1 (16.7%)
Current Employment Status	
Employed	5 (83.3%)
Unemployed	0 (0%)
Retired- receiving benefits	1 (16.7%)
Grandparent Income	
Under 20,000	0 (0%)
20-30,000	2 (33.3%)
30-40,000	0 (0%)
40-50,000	0 (0%)
50-60,000	0 (0%)
60-70,000	1 (16.7%)
Over 70,000	3 (50.00%)
Location	
South	3 (50.00%)
Northeast	0 (0%)
Midwest	0 (0%)
West	3 (50.00%)

# of Grandchildren Under Primary Custodial Care	
1	2 (33.3%)
2	1 (16.7%)
3	3 (50.00%)
Grandparent Age	Mean = 54.67 Median = 55.50 Range = 49-61 SD= 4.23

Table 9

Demographics of Stage 3 "Treatment Completers" Sample

Demographic Variable	Total n (%)
Gender	
Male	0 (0%)
Female	4 (100.0%)
Current Marital Status	
Married	1 (25.0%)
Divorced	3 (75.0%)
Race/Ethnicity	
White/Caucasian	3 (75.0%)
Black/African American	1 (25.0%)
Other	0 (0%)
Grandparent Education	
High School Diploma	1 (25.0%)
Associate's Degree	2 (50.0%)
Some College	0 (0%)
Bachelor's Degree	0 (0%)
Master's Degree	1 (25.0%)
Current Employment Status	
Employed	4 (100.0%)
Unemployed	0 (0%)
Retired- receiving benefits	0 (0%)
Grandparent Income	
Under 20,000	0 (0%)
20-30,000	2 (50.00%)
30-40,000	0 (0%)
40-50,000	0 (0%)
50-60,000	0 (0%)
60-70,000	1 (25.0%)
Over 70,000	1 (25.0%)
Location	
South	3 (75.0%)
Northeast	0 (0%)
Midwest	1 (25.0%)
West	0 (0%)

# of Grandchildren Under Primary Custodial Care	
1	1 (25.0%)
2	1 (25.0%)
3	2 (50.00%)
Grandparent Age	Mean = 52.75 Median = 53.00 Range = 49-56 SD = 3.304

Table 10

Participant Log-In Usage

Participant	Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8	*Participant Mean*
Participant 1	2	2	1	2	2	2	1	1	*1.625*
Participant 2	2	2	1	2	3	2	1	1	*1.75*
Participant 3	1	1	3	1	1	2	2	1	*1.5*
Participant 4	1	3	1	1	1	1	1	1	*1.25*
Participant 5	1	3	1	3	1	1	1	1	*1.5*
Module Mean	*1.4*	*2.2*	*1.4*	*1.8*	*1.6*	*1.6*	*1.2*	*1*	

Note. Participant log-in usage was coded as 1 (one sitting), 2 (two sittings), 3 (multiple sittings).

Table 11

Module Specifics

Module		Satisfaction Composite *M* (*SD*)	Days of Homework Completion *M* (*SD*)
Module 1: Psychoeducation	Psychoeducation on PCIT, stressors of custodial grandparents, and disruptive behavior	4.97 (2.24)	5.8 (1.30)
Module 2: CDI Training Part 1	Core CDI training components (PRIDE skills, special time toys, etc.)	6.5 (0.47)	5.8 (1.64)
Module 3: CDI Training Part 2	More video examples of PRIDE skills, more attention to selective ignoring, troubleshooting common CDI problems	6.00 (0.77)	6 (1.00)
Module 4: Reinforcement Systems and Emotion Regulation Tools	Instruction on using sticker-chart reinforcement systems and emotion regulation strategies (e.g., Tucker the Turtle, deep breathing)	6.60 (0.29)	6 (1.00)
Module 5: PDI Training: Part 1	Instruction on use of commands	6.60 (0.38)	6.2 (0.84)
Module 6: PDI Training: Part 2	Instruction on time-out sequence	6.05 (0.76)	6.2 (0.84)
Module 7: PDI Training: Part 3	More example of PDI, troubleshooting common problems with PDI	6.15 (0.70)	6.4 (0.55)
Module 8: Maintenance and Generalization	Instructions on how to use PCIT skills in public, maintenance	6.73 (0.25)	5.4 (2.19)

Note. Participants completed weekly module-satisfaction ratings, using a scale of 1 (extremely useless) to 7 (extremely useful) for the following components: content of information presented, demonstration of skills through module videos, practicing skills at home with their grandchild, module handouts. Satisfaction data from these four ratings was average to form a mean satisfaction composite for each participant. This data was then averaged across participants to form the overall mean module satisfaction composite. Individual weekly satisfaction composites (per participant) and individual participant homework completion can be seen on Table 12.

Table 12

Individual Participant Homework Completion (number of reported days/week)

Participant	Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8	Mean (SD)
Participant 1	4	4	5	5	6	5	6	3	4.75 (0.82)
Participant 2	5	4	5	5	6	6	6	3	5 (0.76)
Participant 3	7	7	7	7	7	7	7	7	7 (0.00)
Participant 4	7	7	6	6	5	6	6	7	6.25 (0.69)
Participant 5	6	7	7	7	7	7	7	7	6.88 (0.38)

Table 13

Qualitative Consumer Satisfaction, Open Ended Response from Post-Treatment and Follow-Up Satisfaction Forms

Your opinion - Would you recommend this program to another custodial grandparent? Why or why not?
1: Yes, There are plenty of techniques that are beneficial. Emotional regulation was new to me, but I found that the child, could be trained to use the technique when at school or out with friends.
2: Yes Absolutely
3: Yes. It helps to have less stress when coping with managing my grandchild's behavior.
4: yes it in a short period has helped and changed us both
5: Absolutely. I would love to try this with some of our grandparent raising grandchildren clients.
Your opinion - What do you see as the benefits of this program?
1: PRIDE techniques are useful and help to build a positive relationship with the child that lets them feel like they have a voice in the world.
2: Being able to do the program at home, after the kids go to bed. being able to review any slides for a great refresher
3: Alternatives to yelling and getting stressed out.
4: Bring us closer and I believe helping us both understand boundaries
5: More consistence in parenting as well as methods to manage difficult behaviors.
Your opinion - How could this program be improved upon?
1: I feel I need more personal training. Methods that can build patience with children and being able to get a hold of myself at times. I feel like I missed the mark, with this program. I feel like I failed this test.
2: A few more techniques for the Grandparent, to assist with Patience and understanding.
3: None noted.
4: None.
5: As we emailed earlier, I would like a couple more text boxes to identify triggers in children's behavior as well as a sometimes option for the yes or no questions.
Your opinion - We sought to create an intervention that reduced some of the barriers to accessing traditional services, such as time, cost, transportation, and childcare needs. Did this program reduce some of these barriers? Please comment on the feasibility/accessibility of the program.
1. This program was perfect, for lifting the barriers of childcare needs transportation and, I like that I didn't have to write things down, I could just go through the material again if I feel I missed something. Many times I replayed slides because I needed the information to sink down or put together a plan in my head. "Replay" is something that you cant do in traditional courses.
2. Participant provided incomplete response.
3. Yes. It helps that the modules could be done in more than one sitting.
4. Yes I had access and didn’t feel like it was a burden and I was able to do on my lunch time
5. I think it is a great idea and would work well for those struggling with those barriers.

Your opinion - Please include any other feedback you would like to provide for the researchers below.
1. I absolutely think that the program is very beneficial, not just for grandparents, but also for parents and foster parents. I feel that it was more me, that could not get my patience in check and the children did not improve as much as they could have, had I been better at my own emotional regulation.
2. More time for the emotional regulation training
3. Nice job staying in touch during the program.
4. You all did a excellent job and the material and videos was awesome
5. I would love to pilot this with our families.
Follow-Up: **Please describe whether you still utilize the PDI techniques of commands, time-out warnings, and time-out.**
3. Direct commands and time-out warnings seem to work best. Since starting Pre-K that has helped also. He has home work activities which give more things to focus on.
4. All
5. Yes, for direction and disciplinary issues.
Follow-Up: Please describe whether you currently use the strategies of sticker charts or emotion-regulation systems.
3. Yes sticker and reward system works well for him. We use turtle technique. I use ignore when it is appropriate.
4. Both.
5. We continue to use the sticker chart and emotion control.
Follow-Up: Please describe whether you still utilize the strategies of praise, positive attention, and/or "praising the opposite".
3. Yes tell him "I like how you..." Give him positive attention and ignore the things I can.
4. All
5. Yes. It changes the way you view the behavior. And makes you more aware of the positives.
Follow-Up: Please describe whether you have reviewed any of the handouts or modules you received since participating in the intervention.
3. Yes. I refer back to the Time-out technique to not forget the steps.
4. Yes. I refer back often.
5. Yes. Tucker the turtle.

Table 14

Post-Treatment Satisfaction with Intervention Strategies

Variables	Strategy Instruction *M* (*SD*)	Grandparent Comprehension	Usefulness in Affecting Grandchild's Behavior
Praise	6.00 (0.71)	6.20 (0.45)	6.40 (0.55)
Other Special Time Techniques	6.20 (0.45)	6.20 (0.45)	6.40 (0.55)
Special Time	6.20 (0.45)	6.20 (0.45)	6.40 (0.55)
Commands	6.00 (0.71)	5.80 (0.84)	6.00 (0.71)
Time-Out	5.80 (1.31)	5.60 (1.14)	5.80 (0.84)
Multi-Stage Time-Out	5.80 (1.31)	5.60 (1.14)	5.80 (0.84)
Emotion Regulation Strategies	6.00 (0.71)	6.00 (0.71)	5.80 (1.10)
Reinforcement Strategies	6.20 (0.84)	6.00 (0.71)	6.60 (0.55)

Note. Strategy instruction and grandparent comprehension of strategies were rated on 7-point scale ranging from 1= very poor to 7= excellent. Usefulness in affecting grandchild's behavior was also rated on a 7-point scale ranging from 1= extremely useless to 7= extremely useful.

Table 15

Overall Usefulness of Teaching Formats

Variables	*M* (*SD*)
Content of Information Presented	6.60 (0.55)
Demonstration of Skills Through Video Vignettes	5.80 (0.84)
Practicing Skills at Home	6.40 (0.55)
Weekly Handouts	6.80 (0.45)

Note. Usefulness scores were on a 7-point scale ranging from 1= extremely useless to 7= extremely useful.

Table 16

Post Treatment Scores on the Therapy Attitudes Inventory

Participant	TAI Total Score (Post)	TAI Total Score (Follow Up)	TAI Item Score Average (Post)	TAI Item Score Average (Follow-Up)	Behavior Improvement Composite Average (Post)	Behavior Improvement Composite Average (Post)
Participant 1	38	--	3.8	--	4.0	--
Participant 2	40	--	4.0	--	4.0	--
Participant 3	48	49	4.8	4.9	4.33	4.67
Participant 4	48	50	4.8	5.0	5.00	5.00
Participant 5	39	40	3.9	4.0	4.33	4.00
Sample Mean (SD)	*42.60 (4.98)*	*46.33 (5.51)*	*4.26 (0.50)*	*4.63 (0.55)*	*4.3 (0.41)*	*4.56 (0.51)*

Note. The TAI includes 10 items. Higher scores indicate higher satisfaction. Highest possible total score is 50.

Table 17

Descriptive Statistics for Stage 3

	Pre			Post		
Variable	Mean	SD	Range	Mean	SD	Range
ECBI Intensity (raw score)	122.20	15.22	101-142	82.80	16.13	67-109
ECBI Problems (raw score)	19.00	4.06	13-24	9.20	5.72	0-15
CBCL– ODD (t-score)	63.40	4.72	59-70	52.40	2.41	50-55
SDQ- Total Score (raw score)	15.75	6.40	9-23	7.50	1.73	5-9
SDQ- Conduct Score (raw score)	4.75	1.50	4-7	1.50	0.58	1-2
Parenting Stress Index– Total (percentile)	77.60	11.61	58-86	65.20	1.10	64-66
Parenting Stress Index- Parental Distress (percentile)	80.40	8.65	70-92	70.00	6.00	62-76
Parenting Stress Index- Dysfunctional Parent-Child Interaction (percentile)	76.00	19.70	42-90	65.20	9.23	54-76
Parenting Stress Index- Difficult Child (percentile)	74.40	20.37	40-94	55.60	4.10	52-62
Parenting Scale– Laxness	3.24	0.67	2-4	2.62	0.88	1-3
Parenting Scale – Overreactivity	3.12	1.22	2-5	2.40	0.95	1-3
Parenting Scale – Verbosity	3.86	0.54	3-5	3.11	0.88	2-4

Note: ECBI scores are regularly presented as raw scores. Scores of 131 (intensity) and 15 (problems) or higher are considered clinically significant. CBCL: T scores of 65 or higher are borderline or clinically significant. PSI: Scores above the 85th percentile are considered high.

Table 18

Scores and Reliable Change Indices for the ECBI from pre to post-treatment & pre to follow-up

	Intensity	Problems
1		
Pre	123	18
Post	67	11
Follow-Up	---	---
RCI/GP RCI (pre-post)	**-5.03*/-6.52***	**-2.43*/-2.03***
RCI/GP RCI (pre-follow-up)	---	**---**
2		
Pre	101	13
Post	75	12
Follow-Up	---	---
RCI/GP RCI	**-2.34*/-3.03***	**-0.35/-0.29**
RCI/GP RCI (pre-follow-up)	---	**---**
3		
Pre	116	19
Post	109	5
Follow-Up	110	11
RCI/GP RCI	**-0.63/-0.82**	**-1.39/-1.16**
RCI/GP RCI (pre-follow-up)	**-0.54/-0.70**	**-2.78*/-2.33***
4		
Pre	129	21
Post	77	0
Follow-Up	67	0
RCI/GP RCI	**-4.67*/-6.06***	**-7.29*/-6.10***
RCI/GP RCI (pre-follow-up)	**-5.57*/-7.22***	**-7.29*/-6.10***
5		
Pre	142	24
Post	86	8
Follow-Up	88	8
RCI/GP RCI	**-5.03*/-6.52***	**-5.55*/-4.65***
RCI/GP RCI (pre-follow-up)	**-4.85*/-6.29***	**-5.55*/-4.65***
MEAN		
Pre	122.2	19
Post	82.8	9.2
RCI/GP RCI	**-3.54*/-4.59***	**-3.40*/-2.85***

Note. *Significant improvement < -1.96
GP denotes "grandparent"
RCI calculated with reliability and SD from norm study (Colvin, Eyberg, & Adams, 1999)
GP RCI calculated with reliability and SD from grandparent sample (Kirby & Sanders 2014b).

Table 19

Scores and Reliable Change Indices for the SDQ from pre to post-treatment & pre to follow-up

	Total	Conduct Problems Subscale
1		
Pre	12	4
Post	8	1
Follow-Up	---	---
GP RCI (pre-post)	**-1.03**	**-1.76**
GP RCI (pre-follow-up)	---	**---**
2		
Pre	9	2
Post	--	---
Follow-Up	---	---
GP RCI	**---**	**---**
GP RCI (pre-follow-up)	---	**---**
3		
Pre	9	4
Post	5	2
Follow-Up	4	1
GP RCI	**-1.03**	**-1.17**
GP RCI (pre-follow-up)	**-1.29**	**-1.76**
4		
Pre	23	7
Post	8	2
Follow-Up	7	2
GP RCI	**-3.87***	**-2.93***
GP RCI (pre-follow-up)	**-4.12***	**-2.93***
5		
Pre	19	4
Post	9	2
Follow-Up	15	1
GP RCI	**-2.58***	**-1.17**
GP RCI (pre-follow-up)	**-1.03**	**-1.76**
MEAN		
Pre	15.75	4.75
Post	7.5	1.5
GP RCI	**-2.13***	**-1.90**

Note. * Significant improvement < -1.96

GP RCI calculated with reliability and SD from Smith & Palmieri (2007) custodial grandparent norms. As normed custodial grandparent data was available, no other norms were utilized.

Table 20

Raw Scores and Reliable Change Indices for the Parenting Stress Index (PSI-4-SF) from pre to post-treatment & pre to follow-up

	Total	Parental Distress	Dysfunctional Parent-Child Interaction	Difficult Child
1				
Pre	101	38	29	34
Post	85	34	24	27
Follow-Up	--	--	--	--
GP RCI (pre-post)	**-1.93**	**-0.80**	**-1.34**	**-1.41**
GP RCI (pre-follow-up)	--	--	--	--
2				
Pre	111	41	34	36
Post	86	31	29	26
Follow-Up	--	--	--	--
GP RCI	**-3.01***	**-2.00***	**-1.34**	**-2.01***
GP RCI (pre-follow-up)	--	--	--	--
3				
Pre	78	34	20	24
Post	84	34	23	27
Follow-Up	81	32	23	26
GP RCI	**0.72**	**0.00**	**0.81**	**0.60**
GP RCI (pre-follow-up)	**0.36**	**-0.40**	**0.81**	**0.40**
4				
Pre	108	35	36	37
Post	85	31	28	26
Follow-Up	89	30	29	30
GP RCI	**-2.77***	**-0.80**	**-2.15***	**-2.21***
GP RCI (pre-follow-up)	**-2.29***	**-1.00**	**-1.88**	**-1.41**
5				
Pre	108	32	34	42
Post	83	28	26	29
Follow-Up	85	25	28	32
GP RCI	**-3.01***	**-0.80**	**-2.15***	**-2.62***
GP RCI (pre-follow-up)	**-2.77***	**-1.40**	**-1.61**	**-2.01***
MEAN				
Pre	101.20	36.00	30.60	34.60
Post	84.60	31.60	26.00	27.00
GP RCI	**-2.00***	**-0.88**	**-1.24**	**-2.04***

Note. * Significant improvement < -1.96

SD of normed sample with similar demographics was unavailable so normed RCI was not calculated.

GP RCI calculated with reliability and SD from grandparent sample (Musil, Warner, Zauszniewski, Wykle, & Standing, 2009).

Table 21

Scores and Reliable Change Indices for the Parenting Scale from pre to post-treatment & pre to follow-up

	Total	Laxness	Overreactivity	Verbosity
1				
Pre	3.90	3.00	4.60	4.57
Post	3.17	2.45	3.20	3.86
Follow-Up	--	--	--	--
RCI/GP RCI (pre-post)	**-2.02*/--**	**-0.94/-0.95**	**-2.33*/-3.02***	**-0.83/-1.21**
RCI/GP RCI (pre-follow-up)	--	--	--	
2				
Pre	3.77	2.91	4.20	4.29
Post	3.17	2.91	3.40	3.00
Follow-Up	--	--	--	--
RCI/GP RCI	**1.52/--**	**0.00/-0.00**	**-1.33/-1.72**	**-1.50/-2.19***
RCI/GP RCI (pre-follow-up)	--	--		
3				
Pre	2.70	2.36	1.90	3.57
Post	2.40	2.18	1.70	3.14
Follow-Up	2.47	2.36	2.00	3.00
RCI/GP RCI	**-0.76/--**	**-0.31/-0.31**	**-0.33/-0.43**	**-0.50/-0.73**
RCI/GP RCI (pre-follow-up)	**-0.58/--**	**0.00/0.00**	**0.17/0.22**	**-0.66/0.97**
4				
Pre	3.47	3.73	2.80	3.57
Post	3.27	3.27	2.50	3.86
Follow-Up	3.17	3.09	3.40	3.43
RCI/GP RCI	**-0.51/--**	**-0.79/0.79**	**-0.50/-0.65**	**0.34/0.49**
RCI/GP RCI (pre-follow-up)	**-0.76/--**	**-1.10/-1.10**	**1.00/1.29**	**-0.16/-0.24**
5				
Pre	2.37	2.00	2.10	3.29
Post	1.18	1.18	1.20	1.71
Follow-Up	1.33	1.09	1.70	1.00
RCI/GP RCI	**-3.01*/--**	**-1.41/-1.41**	**-1.50/-1.94**	**-1.84/-2.69***
RCI/GP RCI (pre-follow-up)	**-2.63*/--**	**-1.56/-1.57**	**-0.67/-0.86**	**-2.66*/3.90***
MEAN				
Pre	3.24	2.80	3.12	3.86
Post	2.62	2.40	2.40	3.11
RCI/GP RCI	**-1.57/--**	**-0.69/-0.69**	**-1.20/-1.55**	**-0.87/-1.28**

Note. * Significant improvement < -1.96
RCI calculated with reliability and SD from norm study (Arnold, Oleary, Wolff, & Acker, 1993)
GP RCI calculated with reliability and SD from grandparent sample (Kirby & Sanders 2014b)..
As total scores were not utilized for that sample GP RCIs for total scores are not available.

Table 22

Reliable, Clinically Significant, and Meaningful Change

	ECBI			SDQ			PSI			PS			CBCL
	C	R	M	C	R	M	C	R	M	C	R	M	C
Participant 1													
Participant 2				--	--	--							
Participant 3													
Participant 4													
Participant 5													

Note: C= Clinically significant change (i.e., decrease from clinically significant elevation to non-clinical elevations per established clinical cutoffs) in at least one subscale of the measure. R= Reliable change (i.e., as determined by reliable change index calculations) in at least one subscale of this measure. M= Meaningful change (i.e., clinically significant and reliable change in the same subscale of the measure). SDQ data for participant 2 is unavailable due to participant entry error.

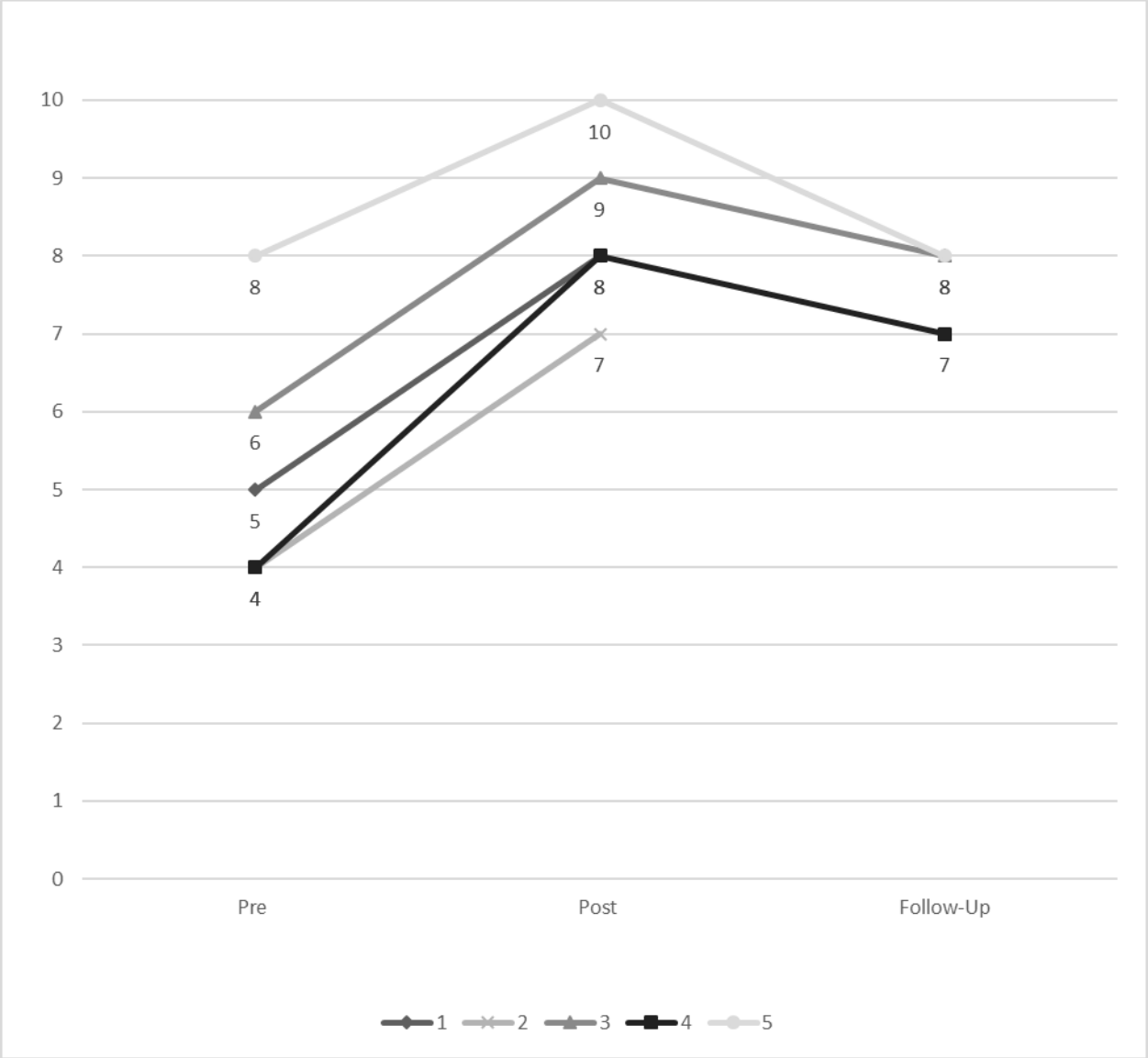

Figure 1. Changes in Parental Confidence Across Intervention Time Points

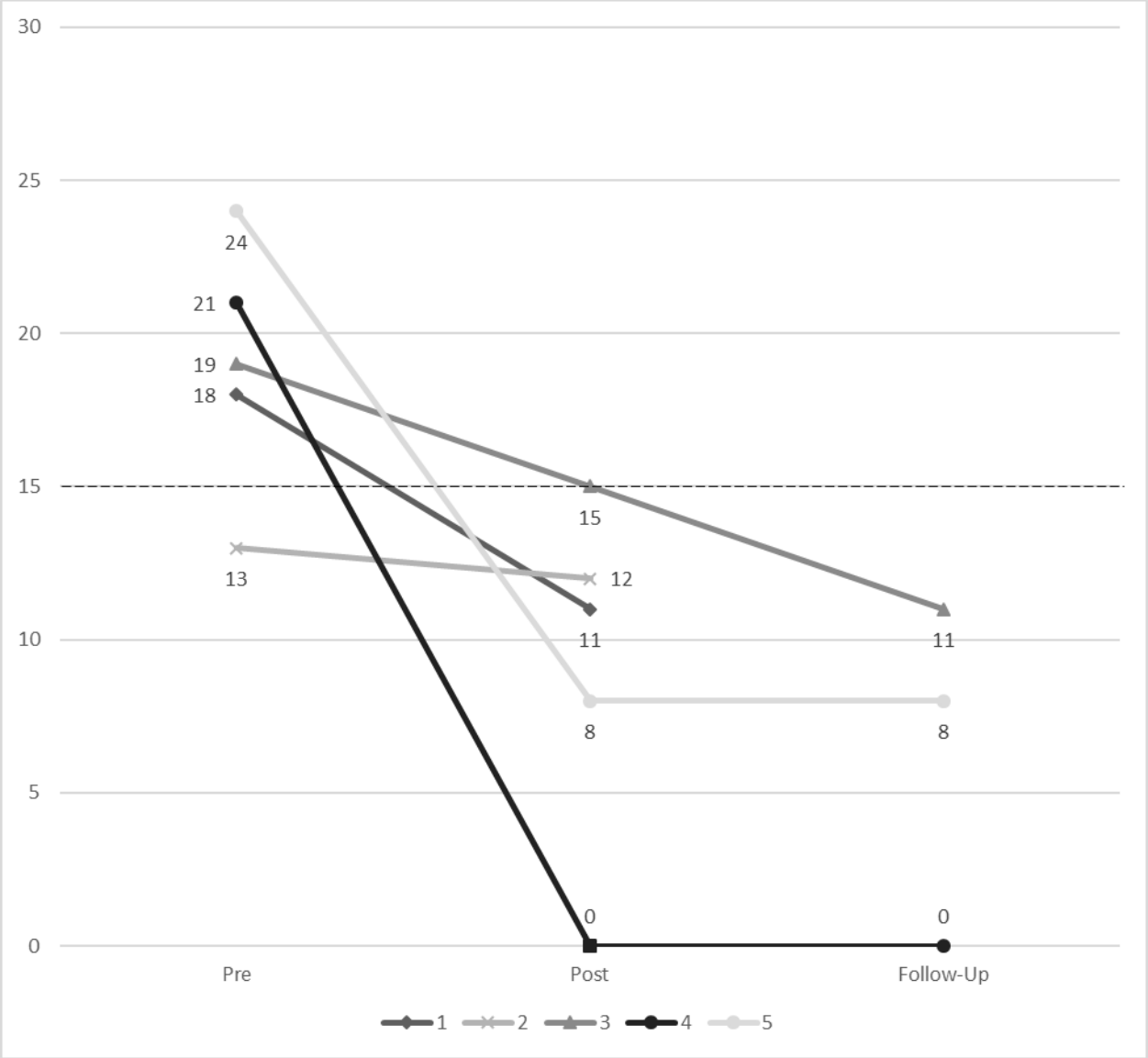

Figure 2. ECBI problem scale ratings at pre, post, and follow-up.

Note. Black dotted line denotes clinical cut-off.

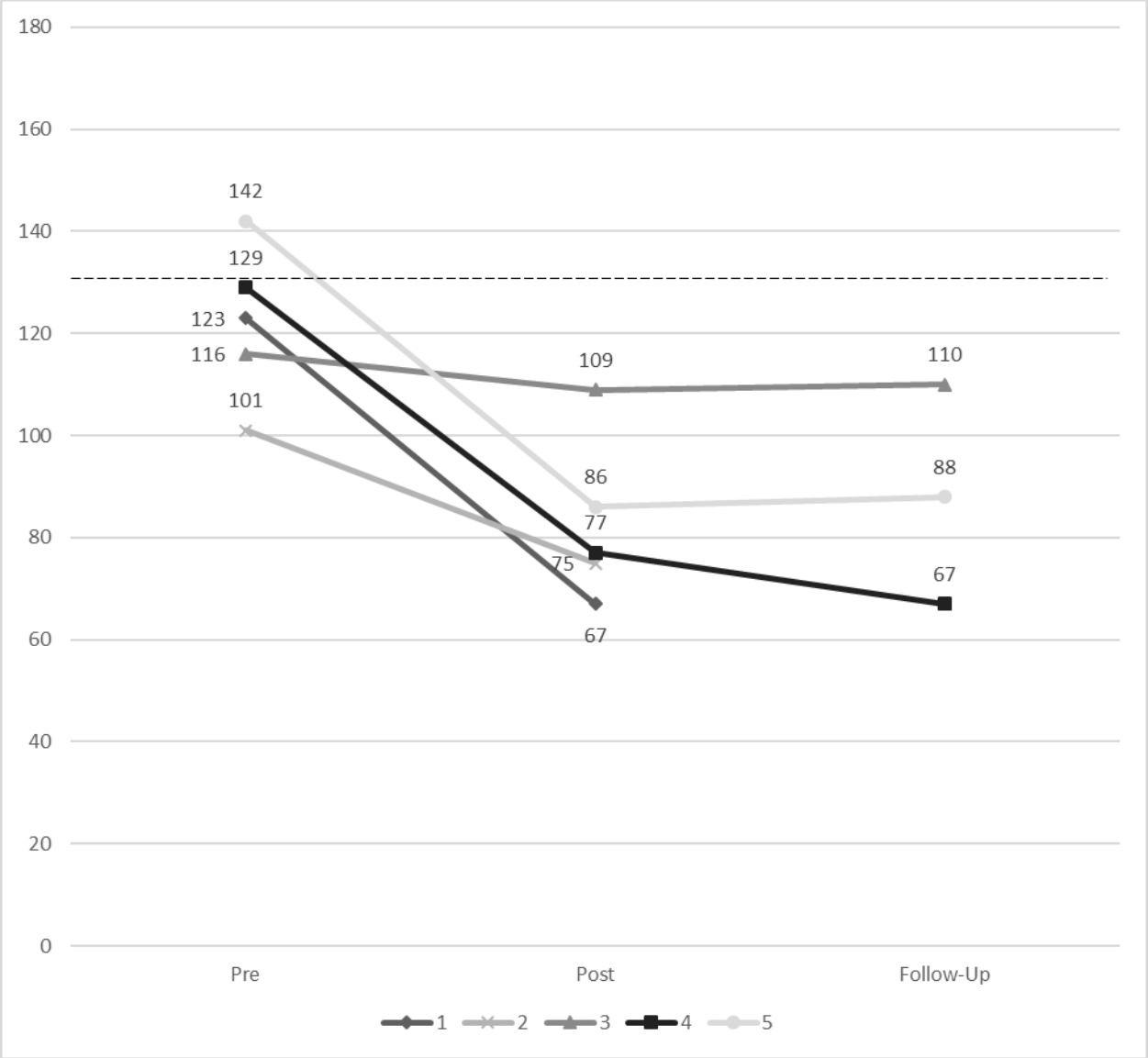

Figure 3. ECBI intensity scale ratings at pre, post, and follow-up

Note. Black dotted line denotes clinical cut-off.

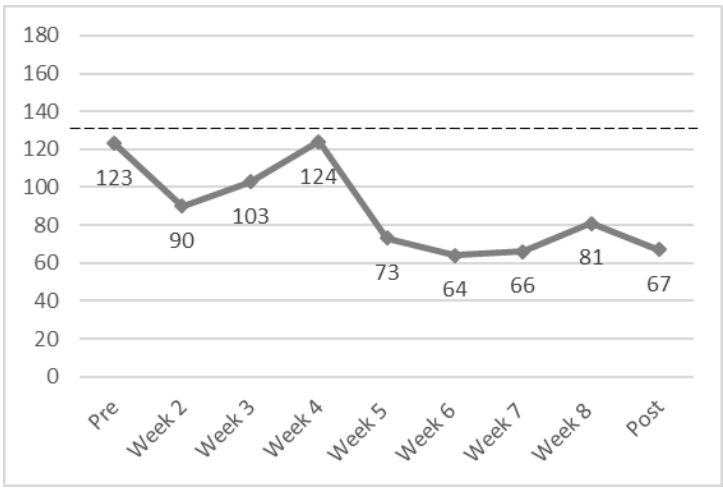

Figure 4a. Participant 1 ECBI intensity

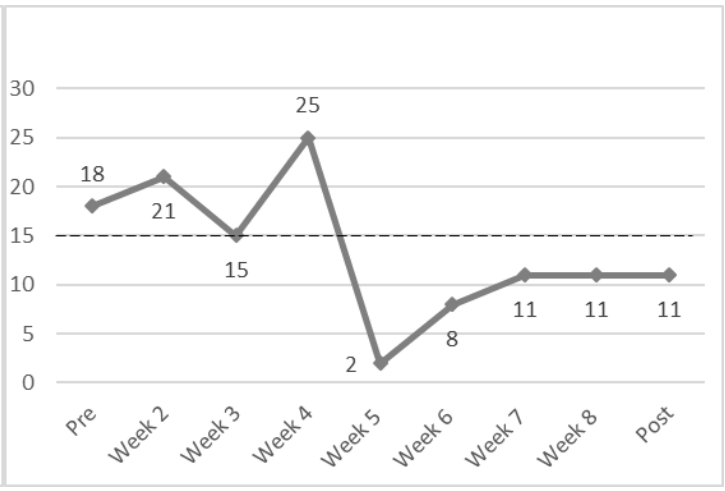

Figure 4b. Participant 1 ECBI problems

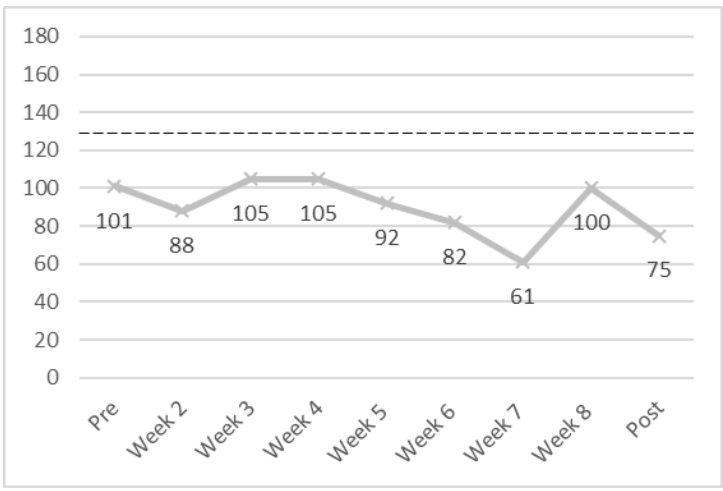

Figure 4c. Participant 2 ECBI intensity

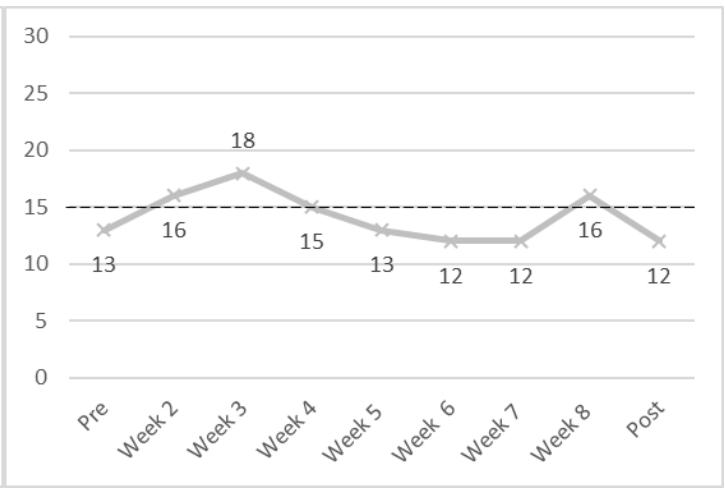

Figure 4d. Participant 2 ECBI problems

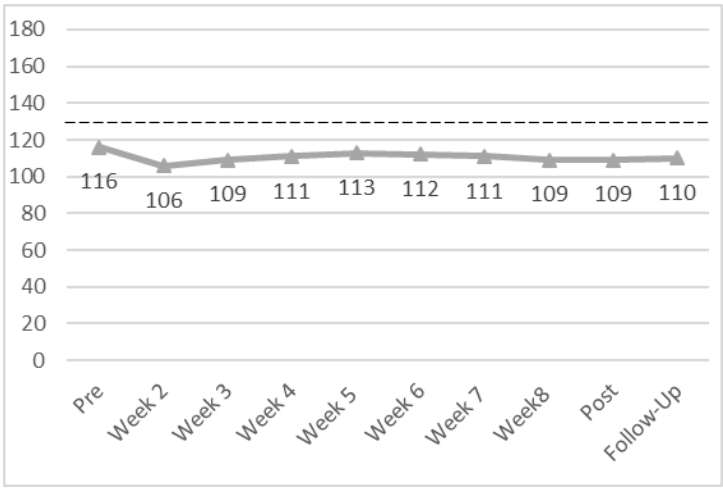

Figure 4e. Participant 3 ECBI intensity

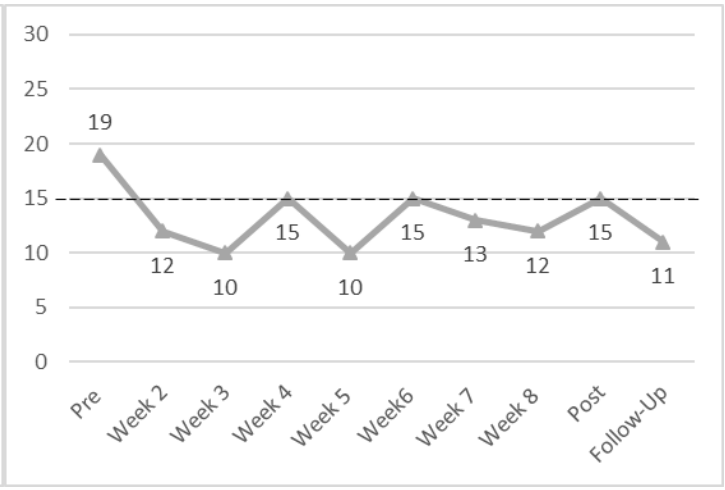

Figure 4f. Participant 3 ECBI problems

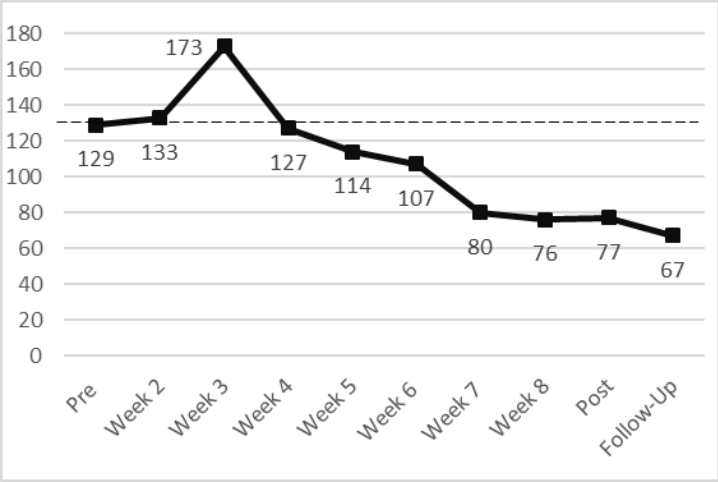

Figure 4g. Participant 4 ECBI intensity

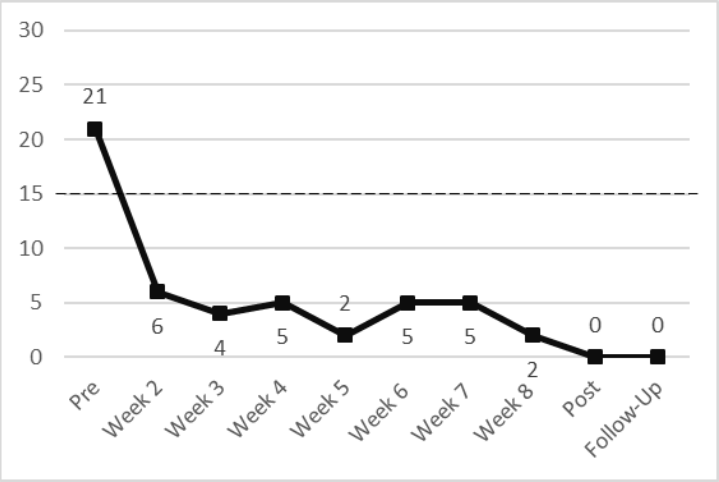

Figure 4h. Participant 4 ECBI problems

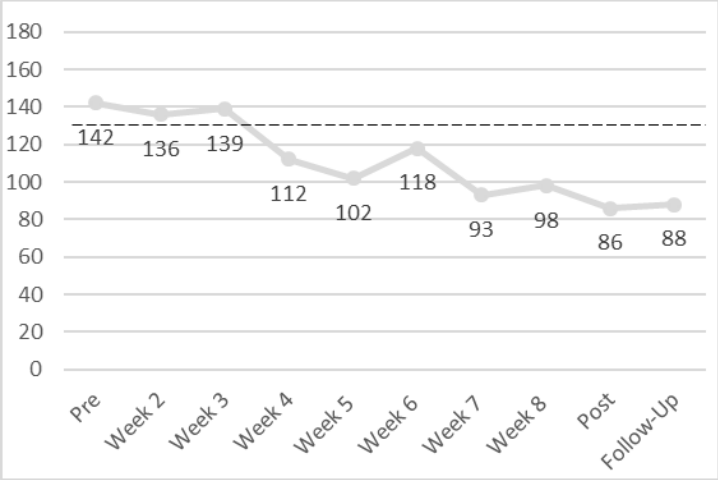

Figure 4i. Participant 5 ECBI intensity

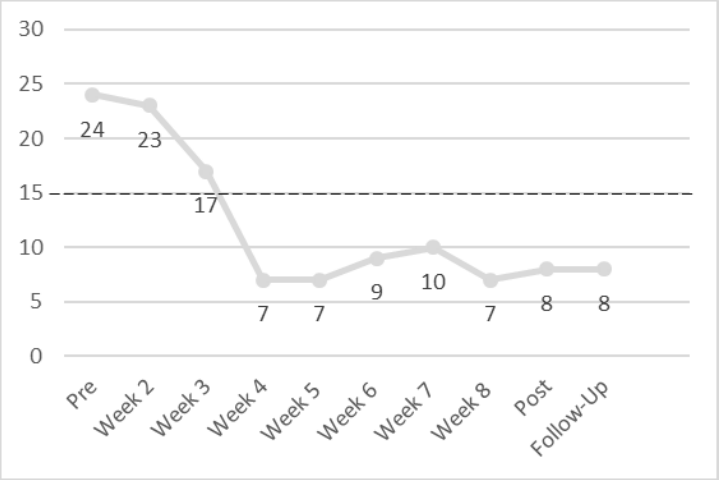

Figure 4j. Participant 5 ECBI problems

Figure 4. ECBI individual intensity and problems scale graphs for each participant.

Note. Black dotted line denotes clinical cut-off.

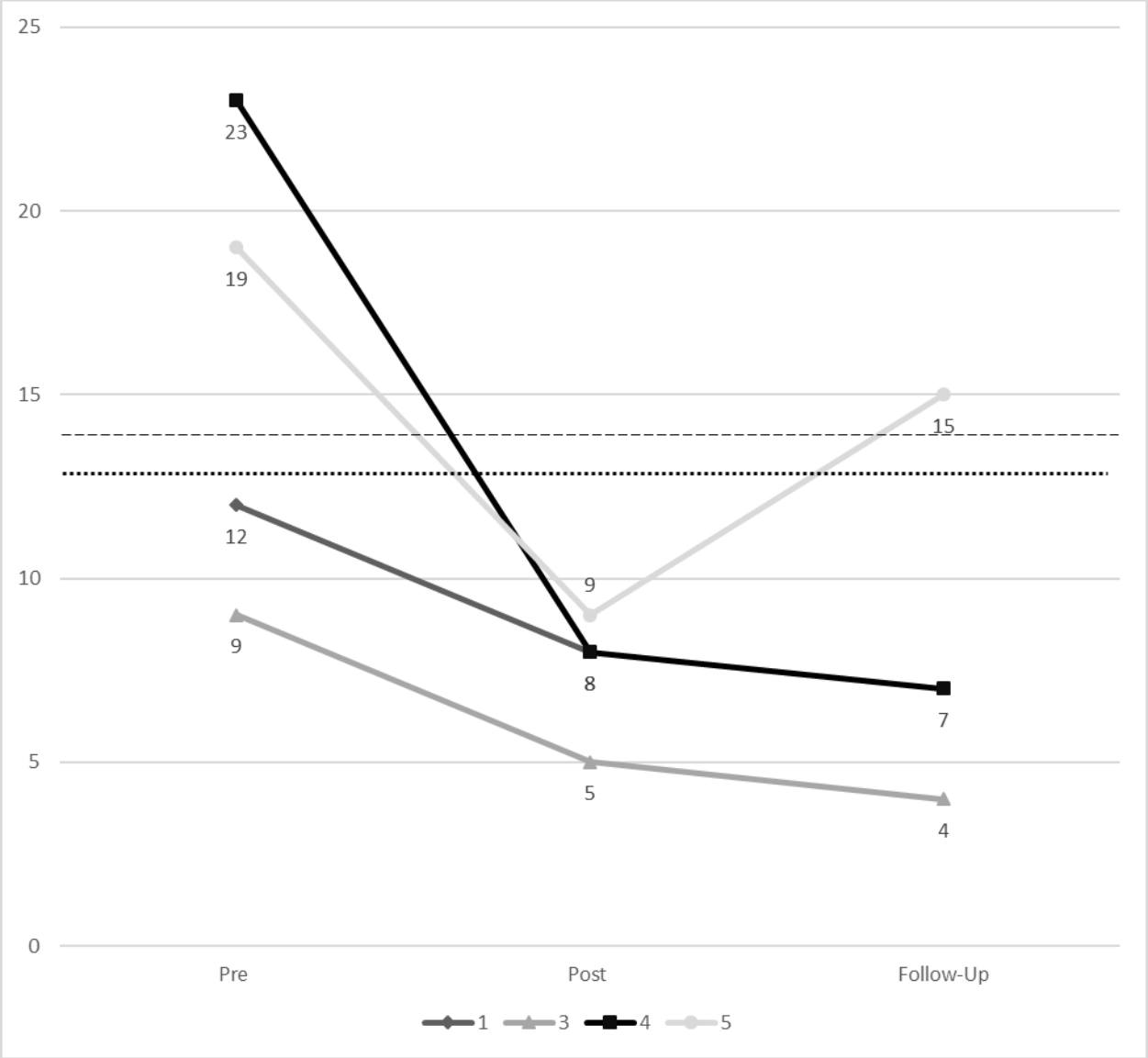

Figure 5. SDQ total scores at pre, post, and follow-up.

Note. Black dashed line denotes clinically elevated score on SDQ 4+.

Black dotted line denotes clinically elevated score on SDQ 2-4.

Qualitative descriptors (i.e., “slightly raised,” “high,” “very high”) listed in text.

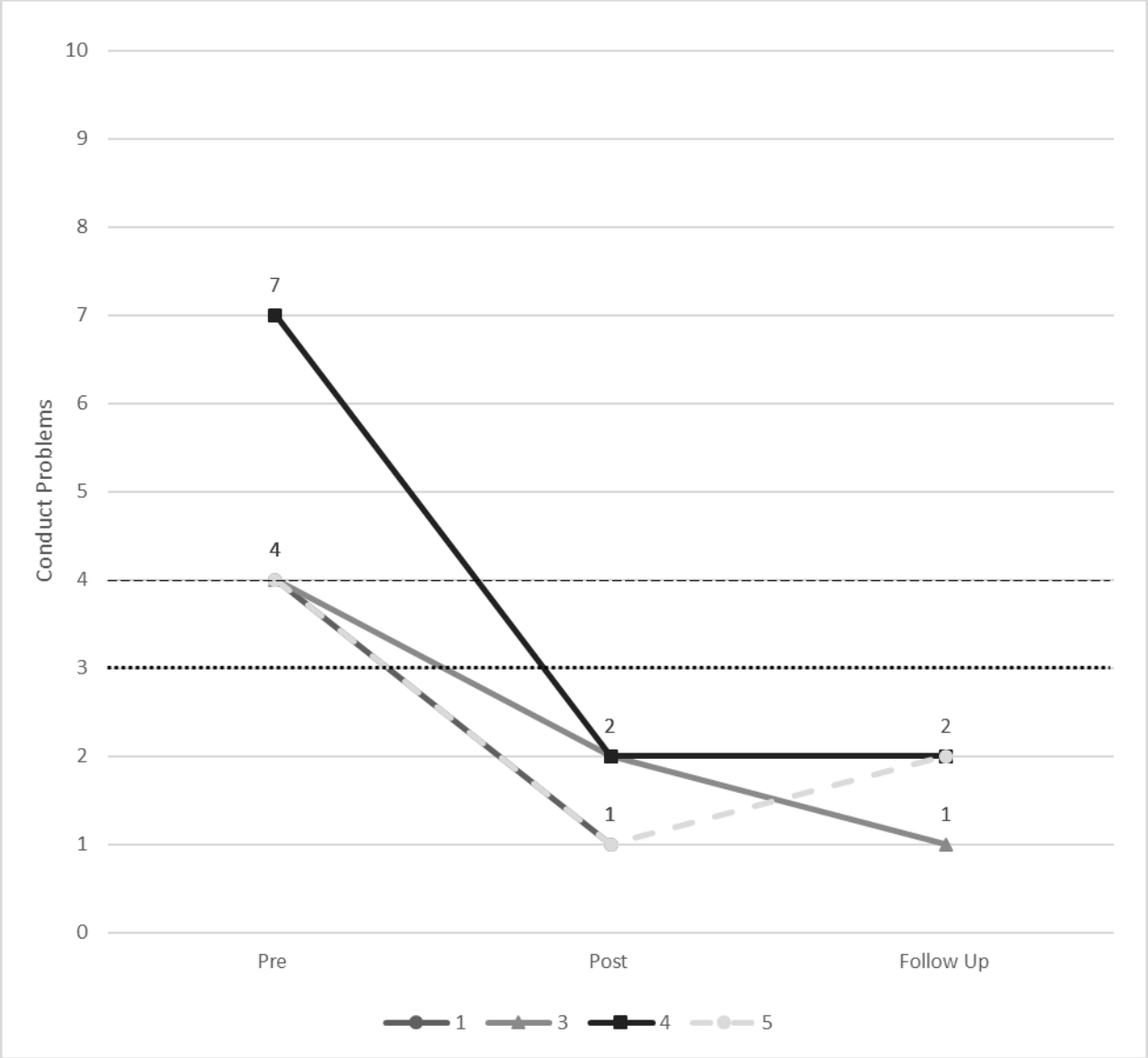

Figure 6. SDQ conduct scores at pre, post, and follow-up.

Note. Black dashed line denotes clinically elevated score on SDQ 4+.

Black dotted line denotes clinically elevated score on SDQ 2-4.

Qualitative descriptors (i.e., “slightly raised,” “high,” “very high”) listed in text.

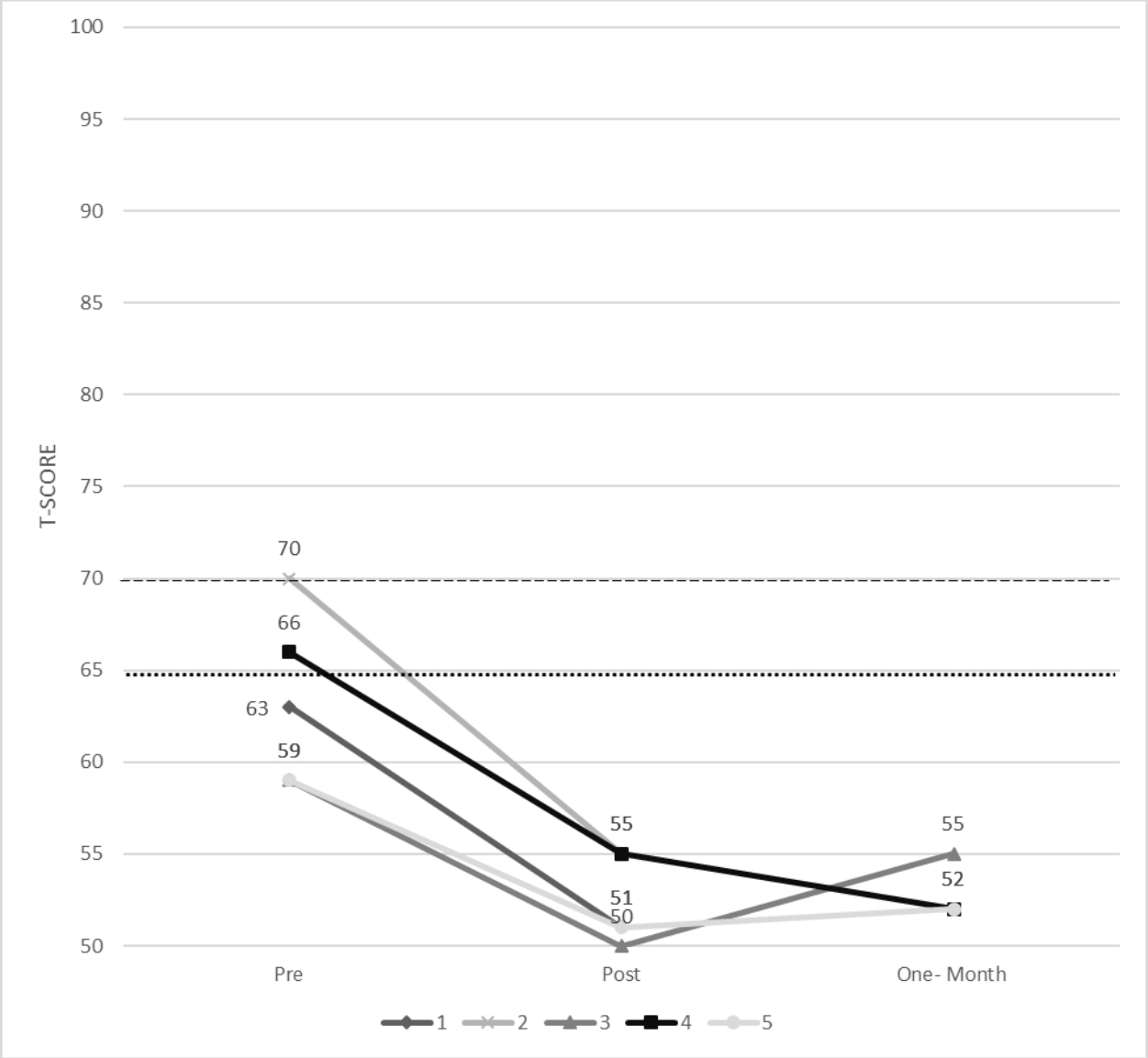

Figure 7. CBCL- Oppositional Behavior Problems (t-score) at pre, post, and follow-up.

Note. Black dashed line denotes clinically elevated t-score.

Black dotted line denotes borderline clinically elevated t-score.

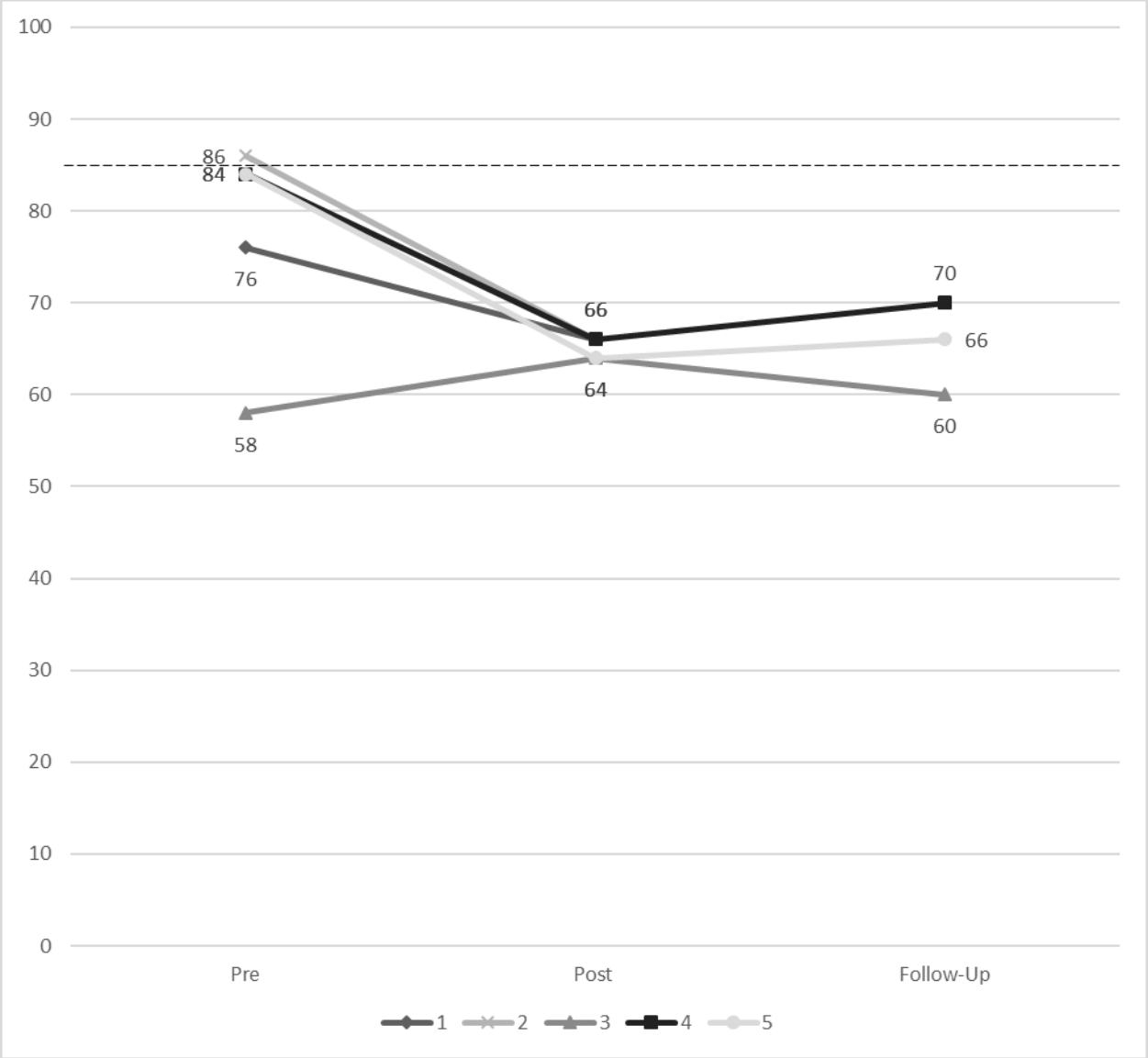

Figure 8. PSI total at pre, post, and follow-up.

Note. Black dotted line denotes clinically elevated percentile score.

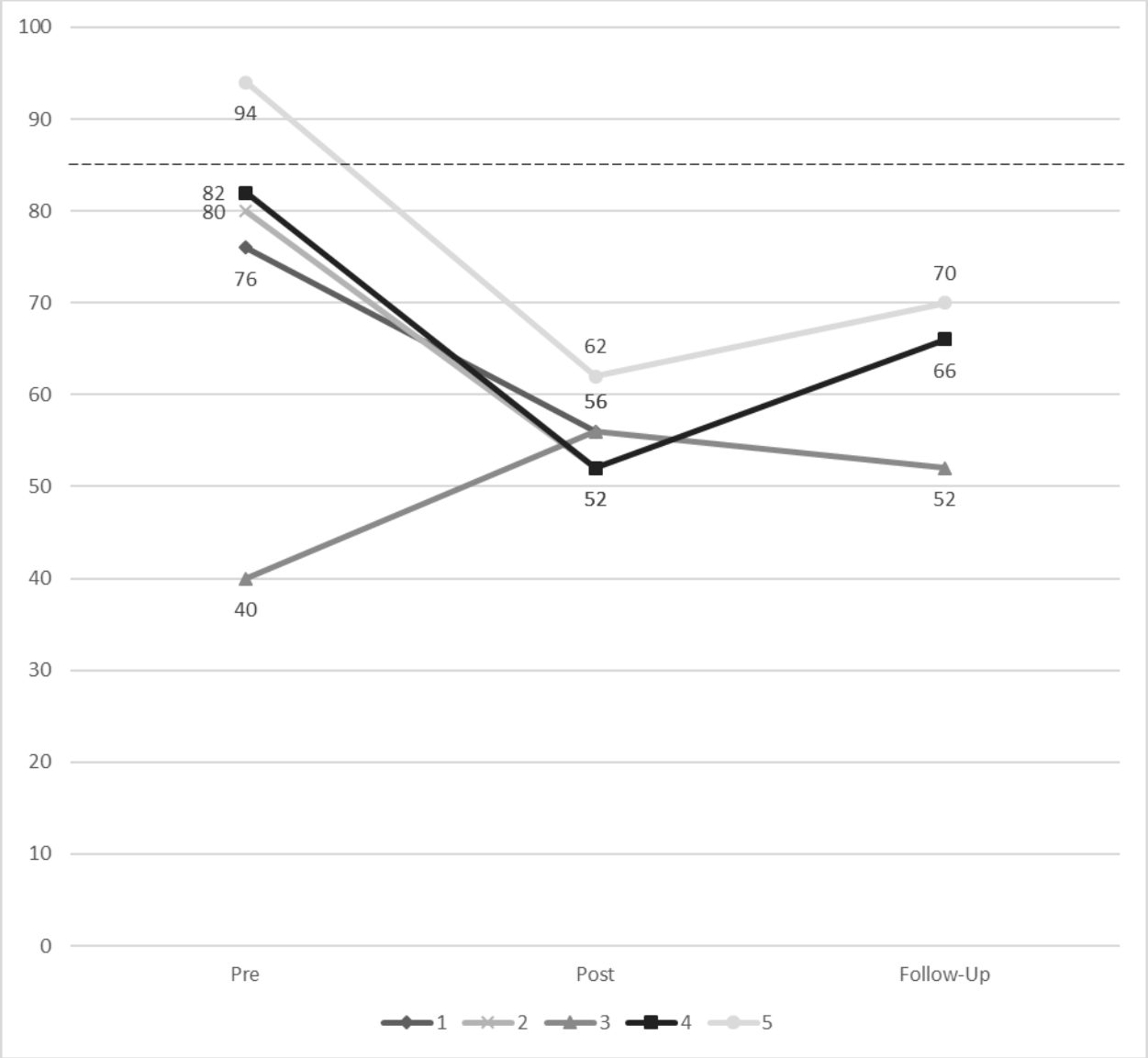

Figure 9. PSI Difficult Child scores at pre, post, and follow-up.

Note. Black dotted line denotes clinically elevated percentile score.

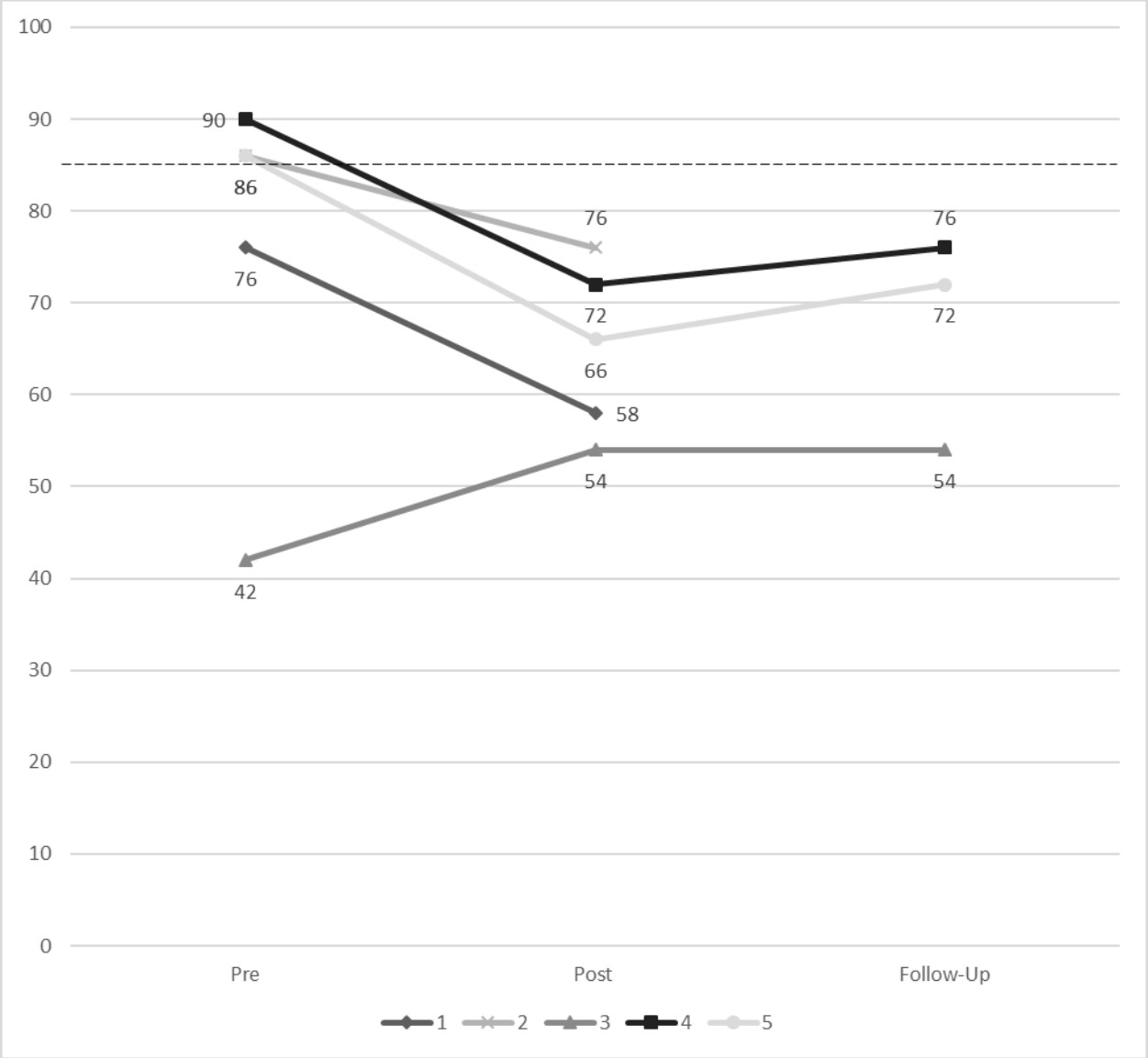

Figure 10. PSI Dysfunctional Parent-Child Interaction score at pre, post, and follow-up.

Note. Black dotted line denotes clinically elevated percentile score.

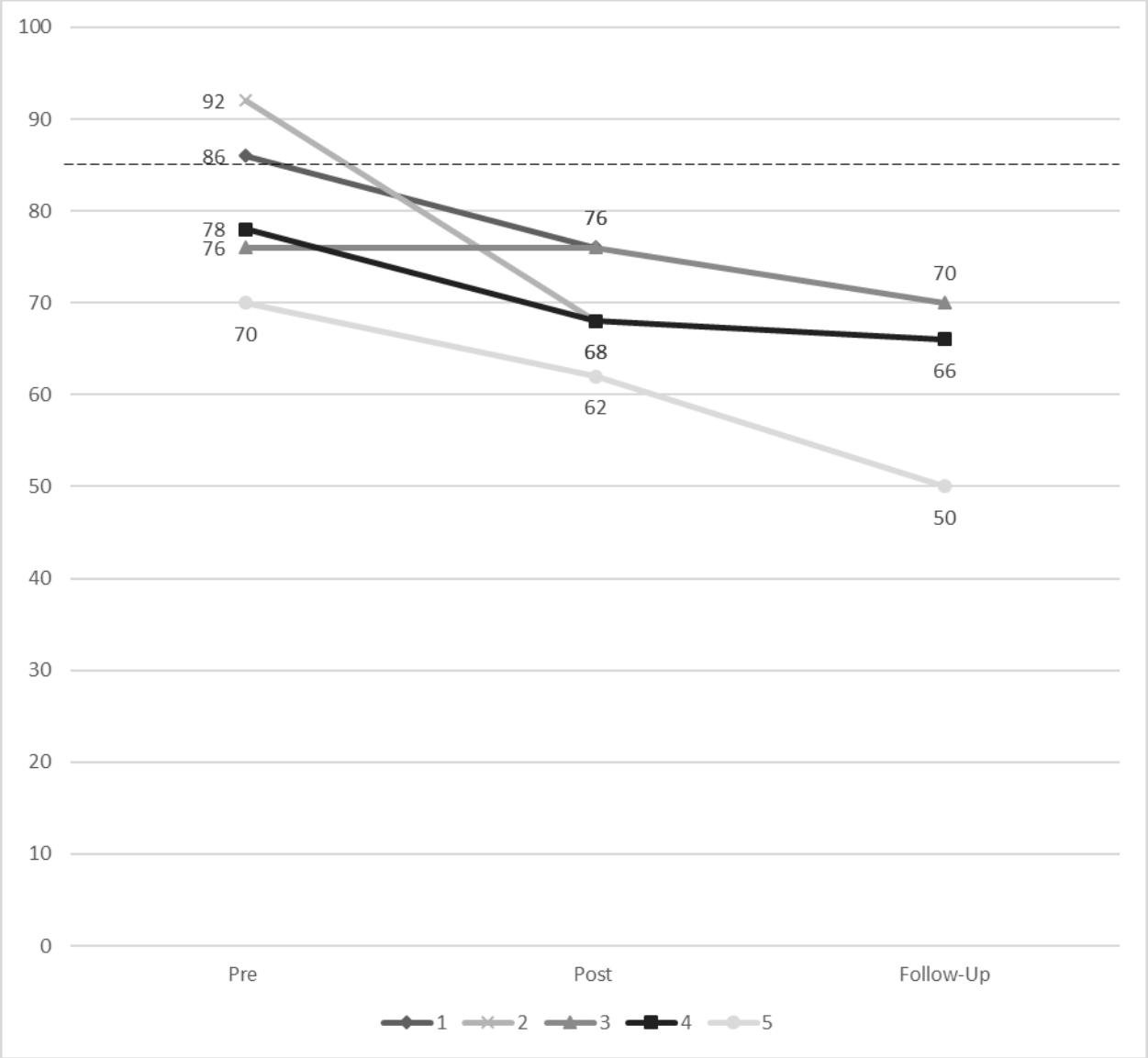

Figure 11. PSI Parental Distress score at pre, post, and follow-up.

Note. Black dotted line denotes clinically elevated percentile score.

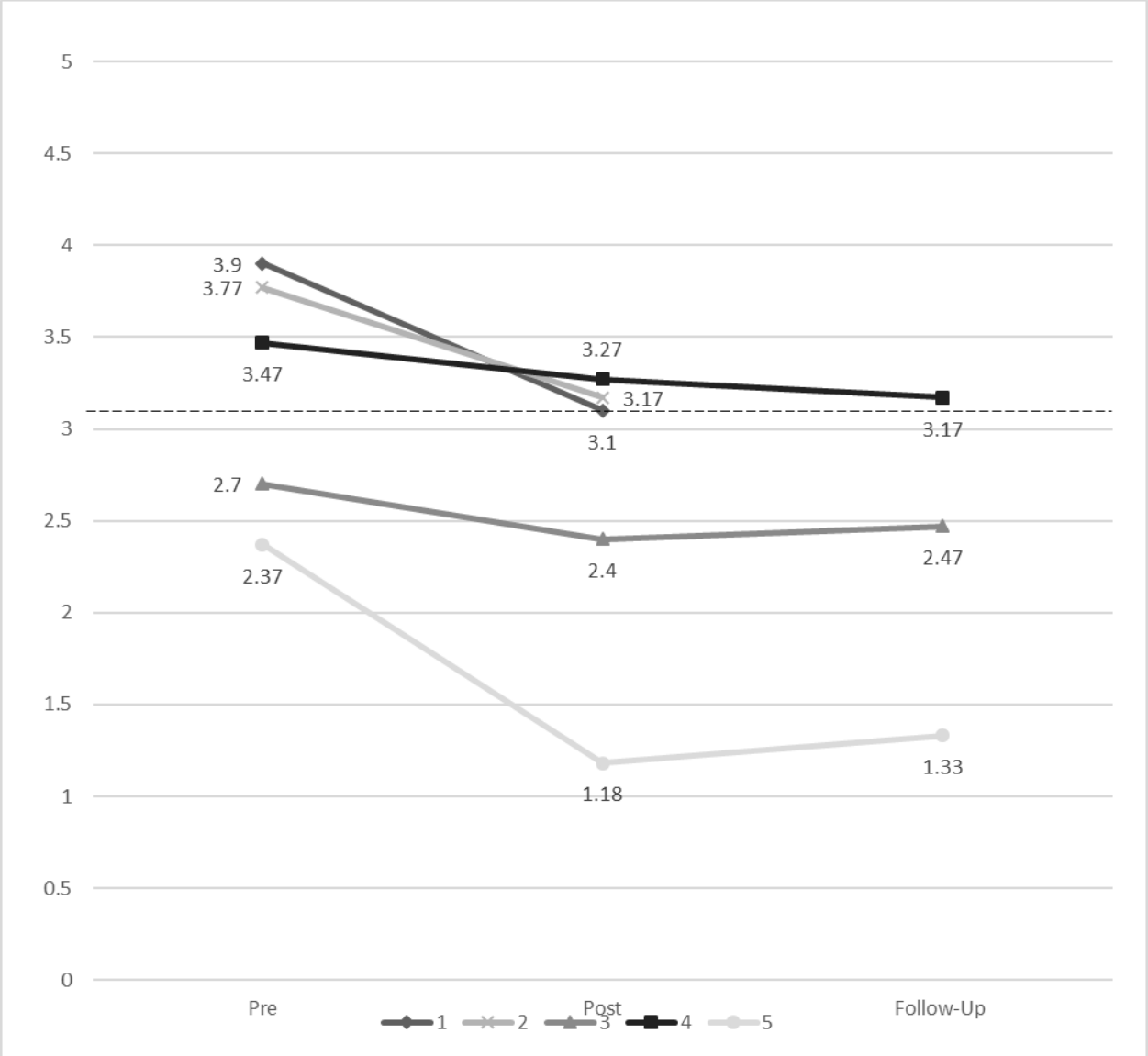

Figure 12. PS total scores at pre, post, and follow-up.

Note. Black dotted line denotes clinically elevated score.

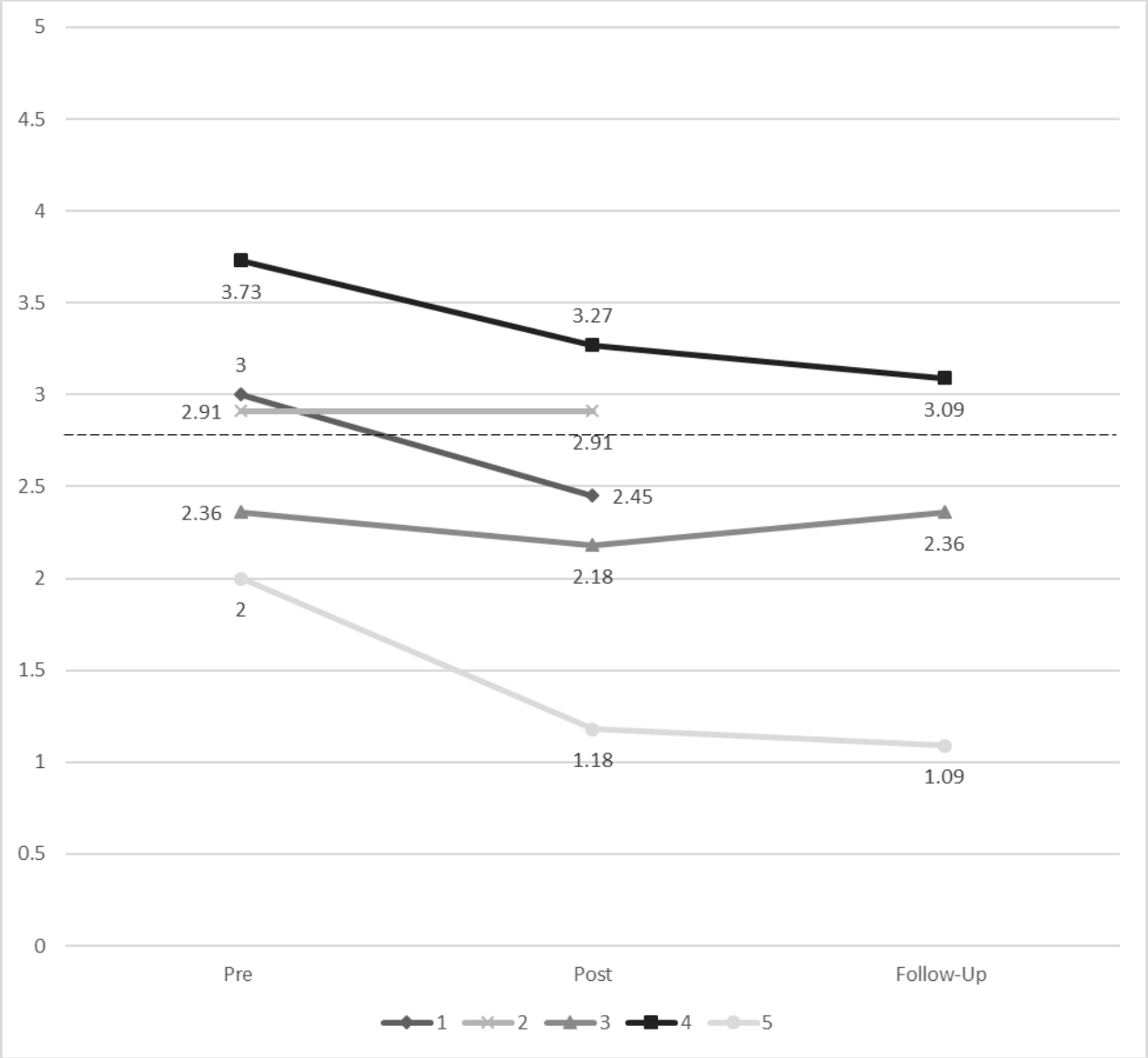

Figure 13. PS laxness at pre, post, and follow-up.

Note. Black dotted line denotes clinically elevated score.

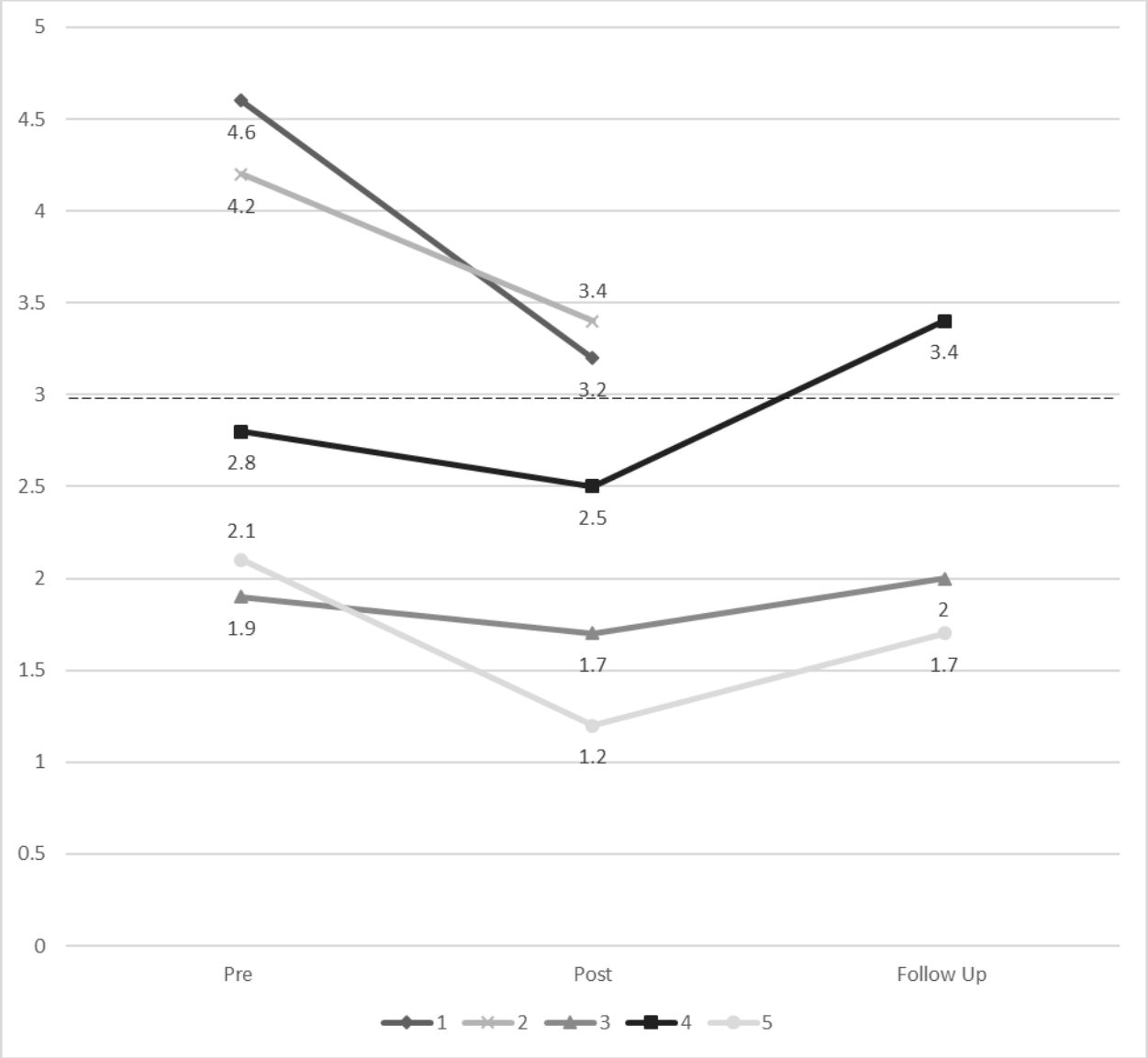

Figure 14. PS overactivity at pre, post, and follow-up.

Note. Black dotted line denotes clinically cutoff score.

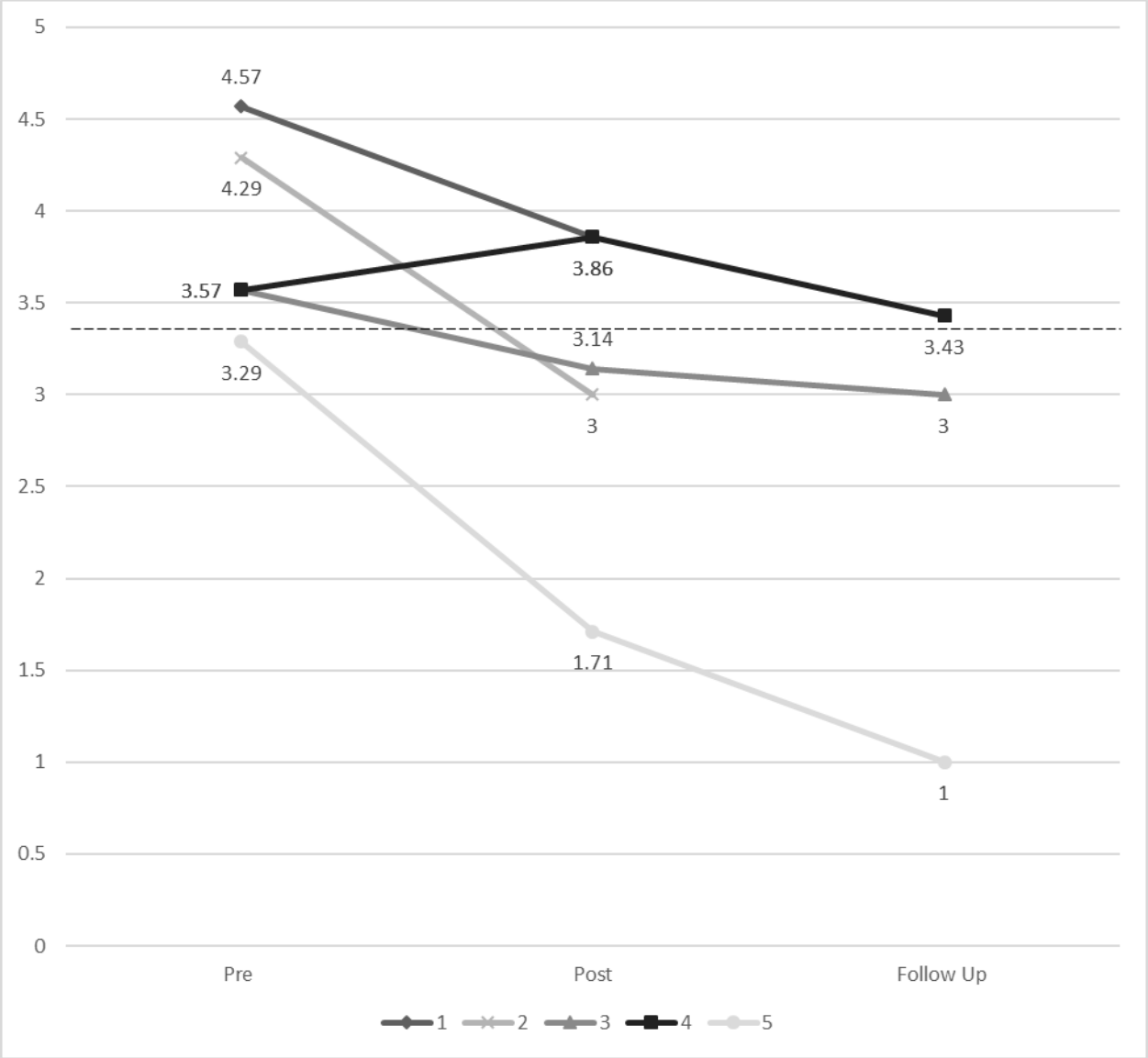

Figure 15. PS verbosity at pre, post, and follow-up.

Note. Black dotted line denotes clinically cutoff score.

Appendix A: Phone Screen Script and Eligibility Questions

Phone Screen Script

Title of Project: Adapting Parent Child Interaction Therapy to Custodial Grandparents: Stage 1 (Interviews)

Hello. My name is Haley Gordon Murphy and I am a graduate doctoral student at the Department of Psychology at Virginia Tech. Thank you for expressing interest in our custodial grandparent study. Before we begin, I want to go over information about this study so you can decide whether you are still interested in participating. If you are interested, I will conduct a brief (fifteen minute or less) phone screen, where I ask you questions to determine your eligibility. If at any time you are not eligible, I will notify you immediately and discontinue the screen. All information will be kept confidential and all data will be discarded if you are not eligible or do not choose to participate in the phone screen.

The goal of this study is to learn about how custodial grandparents parent, and your attitudes toward parenting, and therapy services that help parents and caregivers. If you are eligible for the study, we will schedule a separate time to complete a phone interview with you about these topics. The phone interview would last 60 to 90 minutes and you will be compensated for your time. During this interview we would like to ask you about your attitudes toward parenting, barriers you may face, your attitudes toward specific parenting strategies and your overall willingness to participate in parenting therapy services specifically adapted for custodial grandparents. Your participation will help us better understand the difficulties you may face when parenting your grandchild, and how a program may be adapted to meet your specific needs.

This study is a part of my doctoral dissertation. I will also be conducting the phone interview. I am supervised by Dr. Lee Cooper, the Director of Clinical Training at the Psychology Department of Virginia Tech. Results from this study will be used for publications and specifically to adapt an evidence-based parent training program for custodial grandparents.

If you participate in this phone screen, I will ask you some questions about your grandchild, their behavior, and your own parenting stress. This information will be kept confidential and the data will be discarded if you are not eligible or do not choose to participate in the full phone interview.

Do you give your verbal consent for me to begin this phone screen to see if you are eligible for our custodial grandparent study? The phone screen will take less then 15 minutes to complete. You will not

be compensated for this phone screen, but you will be compensated $15.00 for the longer interview. We will do a separate informed consent for the interview later.

Thank you, now I will first ask you a couple eligibility questions:

(1) Do you provide primary care for a grandchild between the ages of 2 and 8 years of age?

(2) Do you have concerns about your grandchild's behavior at home, in school, or in social settings?

(3) Does your grandchild have a diagnosis of *Schizophrenia* or a severe medical illness?

(4) Does your grandchild have a valid psychological diagnosis (i.e., ADHD, ODD, ASD)?

(5) If eligible, would you be willing to participate in a 60- 90 minute phone interview? You will be compensated for your time.

Okay, so far you appear eligible for our study and I am going to continue this eligibility screen. I am now going to ask you a few questions about your grandchild's behavior, as well as your own parenting stress. (The phone screener then completes the ECBI, PSI, and CBCL items. The phone screen will take less then 15 minutes in entirety).

Greetings!

Thank you for indicating interest in our Grandparent Study. The goal of this study is to learn about how custodial grandparents parent, and your attitudes toward parenting, and therapy services that help parents and caregivers. We would like to conduct an interview with you to ask you about specific parenting strategies and your overall willingness to participate in a therapy program specifically adapted for custodial grandparents. Your participation will help us better understand the difficulties you may face when parenting your grandchild, and how a program may be adapted to meet your specific needs.

In this packet you will find:

(1) **A consent form**. This will be orally reviewed with you before your interview and a copy of the signed document will be mailed to you after the interview. We are just sending this to you know so that you may have time to review it before the interview.
(2) **Handout 1**: Questionnaire Key. This will be used as a reference point for questionnaires that will be verbally completed during the interview. You do not need to review it beforehand.
(3) **Handout 2**. This is a handout about parenting strategies. We will be asking you about your thoughts on these parenting strategies during the interview.
(4) **Handout 3**. This is a handout about different components of evidence-based parenting practices. We will be going through this in detail during the interview. It is just for your reference now and the interviewer will explain each part in detail. We will be asking you about your thoughts about these different components, after we discuss them in detail.

If you have any questions, feel free to contact me at 540-231-8808 or hgordon2@vt.edu.

Sincerely,

Haley Gordon Murphy, M.S.

Clinical Psychology Doctoral Student, Virginia Tech

**** This is for your review, you do not need to sign and return it, we will be obtaining verbal assent and reviewing this consent form during the phone interview ****

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: Adapting Parent Child Interaction Therapy to Custodial Grandparents: Stage 1 (Interviews)

Investigator(s): Lee Cooper, Ph.D. ldcooper@vt.edu **(540)-231-6914**

Haley Gordon Murphy, M.S. hgordon2@vt.edu **(540)-231-8808**

I. Purpose of this Research Project and Identification of the Researchers

Hello. My name is Haley Gordon Murphy and I am a clinical doctoral student from the Department of Psychology at Virginia Tech. We spoke recently about a study on parenting as a custodial grandparent. Thank you for talking with me again! Before we begin, I want to go over information about this study so you can decide whether you are still interested in participating.

The goal of this study is to learn about how custodial grandparents parent, and your attitudes toward parenting, and therapy services that help parents and caregivers. Additionally, during this interview we would like to ask you about specific parenting strategies and your overall willingness to participate in parenting therapy services specifically adapted for custodial grandparents. Your participation will help us better understand the difficulties you may face when parenting your grandchild, and how a program may be adapted to meet your specific needs.

This study is a part of my doctoral dissertation and is supervised by Dr. Lee Cooper, the Director of Clinical Training at the Psychology Department of Virginia Tech.

II. Procedures

If you decide to be in this study, I will ask you some interview questions. You will answer the questions over the phone. You will give your permission to be in the study before we start any interview questions. We will mail you a signed copy of this document after you have finished the interview.

This interview should take about 60 to 90 minutes. We will be audio recording your answers to these interview questions. I will ask you some questions, and then I will complete a few questionnaires with you over the phone.

III. Risks

They are minimal risks for this study. While answering questions about parenting your grandchild, you may experience feelings of sadness, anger, or frustration. Please note that you do not have to answer any questions that make you feel uncomfortable and that you can request to stop the interview at any time. Additionally, if you would like to talk to seek therapeutic services, I can refer you to a trained professional. Note, any expenses accrued for seeking or receiving treatment will be the responsibility of the subject and not that of the research project, research team, or Virginia Tech.

IV. Benefits

No promise or guarantee of benefits can be made to encourage you to participate. However, this information will be utilized to adapt a parent-training program to meet the needs of custodial grandparents like yourself.

V. Extent of Anonymity and Confidentiality

Your participation in this study is confidential. After your interview, we will not keep identifying information like your name linked to your study data. Your interview and interview data will be assigned a code number and we will not be able to match your name to answers to the interview questions. However, we

will keep your name and contact information if you give consent to be contacted for future studies.

Please note, quotes from this interviews have the possibility of being used for research purposes (e.g., dissertation, publication, presentation). They will not be linked to your name or personal information in any way.

Trained members of the research team will transcribe your answers to the interview questions. When transcribing, we will remove your name and any other identifying information. The transcribed interview will be labeled with your code number.

All information for this study will be stored in a locked file cabinet in a locked office in a locked building, or on a password-encrypted file in a password-protected computer in a locked office. Only trained members of the research team will have access to this data.

When the study is over, the audio recordings will be deleted.

There are only two instances in which I would need to break your confidentiality. We will protect your confidentiality unless you discuss child or elder physical or sexual abuse. I am a mandatory reporter and am required to report suspected abuse to the appropriate authorities. Additionally, I am required to tell the appropriate authorities if you threaten to harm yourself or someone else.

The Virginia Tech (VT) Institutional Review Board (IRB) may view the study's data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. Compensation

To thank you for participating in this study, you will receive a $15.00 Wal-Mart gifcard in the mail. We will send you this within three days of you participating in the study. We will have you sign a form and initial a receipt saying that you received this certificate. We will ask you to return this receipt in a pre-stamped and addressed envelope.

VII. Freedom to Withdraw

It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to answer any questions that you choose or respond to what is being asked of you without penalty. You will still receive the $15.00 Wal-Mart gift-certificate if you elect to stop being in the study.

VIII. Questions or Concerns

Should you have any questions about this study, you may contact one of the research investigators whose contact information is included at the beginning of this document.

Should you have any questions or concerns about the study's conduct or your rights as a research subject, or need to report a research-related injury or event, you may contact the VT IRB Chair, Dr. David M. Moore at moored@vt.edu or (540) 231-4991.

IX. Subject's Responsibilities

To summarize, if you agree to participate in this study, you will be asked to spend 60 to 90 minutes answering interview questions with me. You can ask me questions at any time and stop the study if you feel uncomfortable.

X. Subject's Permission

Now I am going to read you some questions so that I know if you want to be in the study.

1. Have I gone over this form with you and do you understand what it means to be in this study?

   _____ YES _____ NO

2. Do you volunteer to participate in this study?

   _____ YES _____ NO

3. Do you have any questions about the study or your participation?

   _____ YES _____ NO

4. Are you ready to start the interview?

   _____ YES _____ NO

5. As a reminder, I will be audio recording the interview. May I begin to record the interview?

   _____ YES _____ NO

6. Another stage of this study, which will be conducted several months from now, invites grandparents to participate in a 1-hour focus group about adapting parent-training programs for custodial grandparents. You will be compensated monetarily for your participation and childcare will be provided. Would you like to be contacted about the future study? If so, please let me know that the best number to call you would be. Please note that you are under no obligation to participate in the focus group if you share this contact information and indicate your interest.

   _____ YES _____ NO _____ N/A based on location

   Phone Number _____

   _____ _____

   Grandparent Name (PRINT CLEARLY) Date

7. Would you like to be contacted about other future studies related to grandparent caregivers? Please note that you have no obligation to participate in other studies or share your contact information. If you share your information, you are under no obligation to participate, but you could be contacted about future studies.

   _____ YES _____ NO

   Phone Number _____

   _____ _____

   Grandparent Name (PRINT CLEARLY) Date

XI. Researcher Verification

If consent was obtained

I certify that I explained the study to this participant, answered his/her questions, and received verbal consent to proceed with data collection.

_____ YES _____ NO

*If consent was **NOT** obtained*

I certify that I explained the study to this participant, answered his/her questions, and politely ended the phone call when the participant declined participation in this study.

_____ YES _____ NO

_____ _____

Researcher's Signature Date

XI. Witness Verification

I certify that I witnessed the researcher listed above explain the study to this participant, answer his/her questions, and receive verbal consent to proceed with data collection.

_____ _____

Witness's Signature Date

I certify that I witnessed the researcher listed above explain the study to this participant, answer his/her questions, and politely ended the phone call when the participant declined participation in this study.

_____ _____

Witness's Signature Date

Interview Handout 1: Questionnaire Key

Towards the end of the phone screen, I will ask you to complete two questionnaires with me over the phone. The key is included in this handout.

For the **first questionnaire**, you will be asked about multiple situations, and then asked to tell me your answer across a spectrum. Here is an example:

SAMPLE ITEM:

At meal time…	1 2 3 4 5 6 7	
I let my child decide how much to eat.	0---0---●---0---0---0---0	I decide how much my child eats.

This grandmother sometimes lets her grandchild decide how much to eat, so she gave it a "3" which is closer to "I let my child decide how much to eat" than "I decide how much my child eats". Because she does not almost always do this, she did not give it a "1" or "2". There are no right answers for this questionnaire, we just want to see where you fall on the scale.

For the **second questionnaire**, I will ask you to rate your confidence from 0 (Certain I can't do it) to 100 (Certain I can do it). You will be asked what confident number best describes how confident you are that you can successfully deal with your grandchild if they engage in difficult behavior in each situation.

Here are two example items:

HOW CONFIDENT ARE YOU IN SUCCESSFULLY HANDLING YOUR GRANDCHILD'S DIFFICULT BEHAVIOR WHEN:

1. Waking and getting your grandchild out of bed
2. Visiting friends or relatives with your grandchild

Interview Handout 2: Parenting Strategies

This handout will be referenced during the interview. Please read it over before the interview, but we will also discuss it and reference it throughout the interview.

The following are some different parenting strategies that some parents may use. We will ask you to tell us your thoughts about these strategies. Some examples are provided to help you better understand the strategies.

(1) **Positive Verbal Reinforcement (Praise**)

- Definition: providing verbal praise to a child by labeling what they are doing correct, or what behaviors you like
- Two types:
    i. Unlabeled Praise: "Good job!" (Does not specify what the child did well)
    ii. Labeled Praise: "I like the way you are sitting so nicely!" "I like the way you are drawing in the lines."
- Example: *To show Jimmy that she likes when he sets the table, Jimmy's grandmother says "Thank you for setting the table, Jimmy! That was nice work. That is very helpful to grandma!"*
- Example 2: Some caregivers "praise the opposite". This occurs when you praise the behavior that you would like to happen. *Jimmy's grandmother does not like when he yells. Whenever she hears him talking in a quiet voice she says, "Jimmy I like when you use your inside voice!" or "Jimmy I love when we play quietly".*

(2) Positive Tangible Reinforcement (Rewards)

- Definition providing a child with a tangible reward (e.g., extra TV time, a cookie, allowance money) for goal behaviors
- Two types:
    i. Multi-step rewards: sticker or chore chart with goals toward a special prize
    ii. Immediate rewards: reward immediately provided after positive action is completed
- Example: *Jimmy's grandma wants Jimmy to learn to set the table. Jimmy gets a star on his chore chart each day he sets the table. When he gets four stars, he is allowed 30 minutes of extra TV time*.

(3) Limitation Systems

- Definition: enforcing limits and restricting privileges for misbehavior
- Example: *Jimmy's grandmother told Jimmy that he lost his TV privileges because he kicked his grandfather. Jimmy was not allowed to watch TV that day.*

(4) Time-Out

- Definition: requiring the child to sit on a chair for a designated amount of time as a consequence for misbehavior
- Example: *Jimmy kicked his grandfather. Jimmy's grandmother brings Jimmy to a chair in the corner of the room and tells Jimmy that he has to sit on the chair for 3 minutes. At the end of three minutes, Jimmy's grandmother lets Jimmy get up from the chair if he is calm and apologizes to his grandfather.*

(5) Spanking

- Definition: spanking a child on the bottom with an open palm
- Example: *Jimmy's grandmother puts Jimmy on his lap and spanks him on the bottom with an open palm because he kicked his grandfather*.

(6) Talking it Out

- Definition: talking about the problem, discussing why behavior is bad
- Example: *Jimmy's grandmother sat Jimmy down and talked about respect and why yelling at his grandfather was not respectful.*

(7) **Planned Ignoring**

- Definition: ignoring a mildly inappropriate behavior
- Example: *Jimmy likes to yell and whine. When Jimmy whines, his grandmother turns away and ignores this behavior. However, whenever he stops whining or yelling and talks in a normal voice, she says "Jimmy I like the way you are using your big-boy voice!"*

Interview Handout 3:
Common Elements of Evidence Based Parenting Programs (EBPPs)

This handout will be referenced during the interview. Please read it over before the interview, but we will also discuss it and reference it throughout the interview.

Common Elements of PCIT & other EBPPs	Description	Rationale
Relationship Building	Use of play and PRIDE skills (Praise, Reflection, Imitation, Description, and Be Enthusiastic) to repair the grandparent-child relationship	Often children with behavioral difficulties do not receive frequent praise, and those responsible for parenting these children feel overwhelmed and sometimes negative toward their children. Relationship building helps to improve this relationship before enforcing stricter discipline. Once the child becomes more calm and enjoys the play experience, it is easier to set limits.
Positive Verbal Reinforcement	Use of praise, learning how to give specific labeled praise rather than unlabeled praise. Use of "praising the opposite" strategies.	Praise improves the child's self esteem and also helps the child learn what behaviors to continue for positive reinforcement.
Behavioral Reward Strategies	Use of sticker chart systems to reward positive behavior or a reduction in negative behavior.	Young children often require tangible reinforcement and visual systems to make progress. This adds an immediate reward for good behavior. Making this chart together and calling attention to it daily can quickly improve positive behaviors and reduce negative behaviors. Also helps with generalization across settings.

Modeling/ Coaching	Therapist modeling or coaching (through the use of a “bug in the ear” device). Therapist coaches in relationship building skills (e.g., praise) and discipline skills (e.g., effective commands).	Modeling allows grandparents to learn strategies with ease.
Giving Commands	Didactics explaining rules for appropriate commands.	Commands are essential for limit setting but often not given in the most effective manner (i.e., single, direct, positively stated, developmentally appropriate).
Use of Warnings	Therapist teaches grandparents a discipline protocol including warnings, and time-out contingencies.	Teaches a system in which children get a chance to correct inappropriate behavior before punishment.
Time-Out	Therapist teaches empirically-supported time-out protocol.	Time out is an extremely effective discipline tool when used consistently in manners that have been empirically supported.
House Rules	Automatic time-out for breaking specific house-rules.	Quickly reduces aggression and provides a consistent consequence for inappropriate negative behavior (e.g., aggression).

Appendix C: Interview Questions

Note: This is not a verbatim script, and other questions may be asked, depending on flow of the interview.

Note 2: Questions 1A, 1B, and 3E were taken verbatim from Kirby & Sanders' (2012) study which utilized focus group methodology to gain consumer information for an adaptation for non-custodial grandparents. These will be extended to custodial grandparents following their model.

Thank you for agreeing to talk with me today. We are going to be discussing four topics today: (1) your experience parenting your grandchildren, (2), your opinion of various parenting strategies, (3) your experience or thoughts about parenting resources like support groups or parent-training programs, (4) your opinion about a specific program called Parent Child Interactive Therapy, which I will discuss in detail.

(1) Experience Parenting Your Grandchildren

a. What are the positives about providing care for your grandchildren?
b. What are the challenges and difficulties about providing care to your grandchildren?
c. What do you find easy and difficult with regard to parenting your grandchildren?

(2) Parenting Strategies

a. Take a few moments to look at the list of parenting strategies and their examples that I sent you. This was labeled Handout 2. Before we start, do you understand these strategies or have any questions about them?
b. What strategies do you find work and what strategies do you find don't work? How does your grandchild respond to these strategies?
c. Which strategies on the list do you find most acceptable or use currently? Why?
d. Are there parenting strategies on the list that are "popular" now, that you dislike? Why?
e. Are there strategies on the list that you are against using? Why?
f. Are there any additional strategies not on this list that you find are helpful with managing your grandchild's misbehavior?
g. How do these parenting strategies compare with parenting strategies you used when parenting your own children? What's the same? What's different? Do these strategies seem as effective as the strategies you used previously?

(3) Parenting Resources

a. Have you accessed parenting resources? Why or why not? Some examples of these are support groups, parent-training therapy groups, or parent-training classes.
    i. If you did access these services, did you find them helpful? Why or why not? Did you find that any of your parenting behaviors changed after your participation in these services?
    ii. If not, do you think they could be helpful to you? In what way?
b. What do you see as barriers to accessing these kind of services? For example, some barriers could be cost, transportation, childcare, or stigma.
c. What kind of parenting programs (e.g., class, individual therapy, family therapy, group therapy, support group) would you be interested in participating in?

(4) PCIT

a. [The interviewer will provide a brief overview of PCIT components (i.e., CDI, PDI, live coaching) and psychoeducation on the efficacy of PCIT. The interviewer will also direct the interviewee to Handout 3 which explains some of these components] What are your thoughts about the structure and makeup of PCIT? Specifically, what do you think about the two components (child directed interaction and parent directed interaction) ? What components of this treatment seem helpful to you? What components don't? What do you think of the live-coaching component? Do you have any concerns about it?
b. [The interviewer will provide a description of three modalities of parent-child interaction therapy (group, workshop, and individual]. What modality of adapted grandparent-specific PCIT would you prefer? What factors lead you to this preference? What do you like and don't like about each modality? <Next question will depend on what modality they choose> Do you like that it would take___ months to complete?
c. What suggestions would you have for an adaptation of PCIT for custodial grandparents?
d. Would you attend a PCIT program that was specifically adapted for custodial grandparents? Why or why not?

Appendix D: Initial Eligibility Screening Questions

(1) Do you provide primary care for a grandchild between the ages of 2 and 8 years of age?

(2) Do you have concerns about your grandchild's behavior at home, in school, or in social settings?

(3) Does your grandchild have a diagnosis of *Schizophrenia* or a severe medical illness?

(4) Does your grandchild have a valid psychological diagnosis (i.e., ADHD, ODD, ASD)?

Appendix E: Demographic Questionnaire

1. SCREENING ID: _____

2. Age: _____

3. Marital Status: _____

4. Gender:
   a. Male
   b. Female
   c. Transgender

3. Race/Ethnicity: (Check all that apply)
   a. African American
   b. Asian
   c. Caucasian/European American
   d. Latino/Hispanic
   e. Native American
   f. Other please specify: _____

4. Education Level
   a. Primary school
   b. Some high-school
   c. High-school diploma
   d. 2-year college or specialized program
   e. Associate's Degree
   f. Some college
   g. Bachelor's Degree
   h. Master's Degree
   i. Some graduate school
   j. Ph.D
   k. M.D.

5. Current income
   a. Under 5,000
   b. 5,000-10,000
   c. 10,000-20,000
   d. 20,000-30,000
   e. 30,000- 40,000
   f. 40,000-50,000
   g. 50,000-60,000
   h. 60,000-70,000
   i. Over 70,00

6. Employment status
   a. Employed
   b. Unemployed
   c. Retired (receiving benefits)

7. How long have you been taking primary care of your grandchild/grandchildren?

8. How many grandchildren are under your custodial care ? _____

9. Grandchild 1: Age _____; Gender _____; Race/Ethnicity: _____

10. Grandchild 2: Age _____; Gender _____; Race/Ethnicity: _____

11. Grandchild 3: Age _____; Gender _____; Race/Ethnicity: _____

12. If you are raising more than one grandchild, which grandchild between 2 to 8 years of age are you most concerned about disruptive behavior (e.g., yelling, tantrums, defiance). Please include the age, gender, and race of the "target grandchild" below. This is the grandchild we will ask you to complete other measures about.

Target Grandchild: Age _____; Gender _____; Race/Ethnicity: _____

13. Do you currently attend weekly or bi-weekly individual or family therapy which targets parent-child interactions and behavior management of your grandchild?

    _____ YES _____NO

14. Please specify which type of services you <u>currently</u> attend/receive:

    a) Grandparent support group or Kinship-Care Support Group
    b) Parent Training Class
    c) Individual Therapy
    d) Group Therapy
    e) Other (please specify) _____

15. Please describe the frequency of these services (e.g., "Grandparent support group once a month).
_____
_____
_____

16. Please describe the content of these services (e.g., "A leader has guest presentations on handling hyperactivity"
    _____
    _____
    _____

Appendix F: Weekly Satisfaction Questionnaire

1. The content of information presented last week was

Extremely useless		slightly useless	neutral	somewhat useful	useful	extremely useful

2. Demonstration of skills through the use of video vignettes last week was

Extremely useless		slightly useless	neutral	somewhat useful	useful	extremely useful

3. Practicing skills at home with my child last week was

Extremely useless		slightly useless	neutral	somewhat useful	useful	extremely useful

4. The handouts given last week were

Extremely useless		slightly useless	neutral	somewhat useful	useful	extremely useful

Additionally, please report on your usage/access of last week's module:

1. Please describe how you watched last week's module (i.e., in one sitting, over the course of three days,etc.)

2. Please note if you had any difficulty accessing last week's module (i.e., technological difficulties).

Appendix G: Homework Tracking Forms

**Note:* This is a screen shot example CDI homework tracking form for Weeks 2-8.

Custodial Grandparent Study: Week 2

Homework Tracking Forms

* 1. Please let us know how Special Time went LAST WEEK. Click 'Yes' or 'No' to tell us whether or not you practiced special time.

Please note that for last week, special time was only spending 5 minutes a day with your grandchild. We will teach you the special time skills during Module 2 and 3.

	Yes	No
Sunday	○	○
Monday	○	○
Tuesday	○	○
Wednesday	○	○
Thursday	○	○
Friday	○	○
Saturday	○	○

2. Please let us know what Special Time activity you completed. Examples can include: coloring, playing with blocks, etc.

Sunday

Monday

Tuesday

Wed.

Thursday

Friday

Saturday

3. Please note if you had any problems or questions during Special Time.

Sunday

Monday

Tuesday

Wed.

Thursday

Friday

Saturday

4. Please check this box if you would like to be contacted by the researcher regarding questions about last week's module. The researcher can provide help with understanding and implementing the material but cannot provide recommendations outside the discussed material. If you need referral information for outside therapy, the researcher will present you with this information. As noted in your consent form, you may complete up to 4 "check-ins" with the researcher. The researcher will contact you within 2 days of receiving this form.

- ○ Yes, I would like to be contacted.
- ○ No, I will save my check-in for another time.

Please enter a phone number if you wish to be contacted.

2 / 5 40%

**Note:* The next page includes screen shots of PDI questions on homework tracking form for Weeks 6-8.

* 4. Please log your compliance practice. Please note when you practiced commands, and when your grandchild went to time-out. If no time-outs occurred, enter 0.

	Did you give 2-4 commands a day and practice commands during clean-up?	How many times was your grandchild sent to time-out for disobeying a command?	How many times was your grandchild sent to the back-up time-out for leaving the time-out chair?
Sunday			
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			

5. If you used the back-up time out, what approach did you choose?

- [ ] Time-Out Room for 1 minute
- [ ] Time-Out Mat for 1 minute
- [ ] Removal of privilege

6. Please note if you had any questions or problems regarding PDI and the time-out sequence.

Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

Note: Additionally, questions regarding use of sticker chart reinforcement procedures and emotion regulation were added in Weeks 5-8. See examples from Week 6 below. This screen shot also shows examples of compliance checks (i.e., "Did you read the handouts on…"

* 4. We asked you to continue the sticker chart for this week. Did you implement the sticker chart this week?

If so, please describe how this went. How many times did your grandchild receive a daily reward? Did they receive a weekly reward? Did they like the sticker-chart? (If you just started implementing this, please note that. If you have not implemented this, please explain why).

* 5. Did you practice emotion regulation strategies with your grandchild?

If so, please describe how this went. What strategies did you try? Remember to try several strategies to see what works well with your grandchild. Encourage them to practice these strategies when they are calm first, so that they can then automatically use them when they are angry. Encourage practicing these strategies.

6. Did you read the three handouts on time-out (Time-Out Diagrams, Frequently Asked Questions about Time-Out, Preparing the Back-Up Time-Out)? These will be discussed in detail this week.

- Yes
- No

Appendix H: Post-Treatment Satisfaction Form

Post-Treatment Satisfaction Form

The following questionnaire is for program evaluation. It is important that you answer as honestly as possible. The information obtained will help us evaluate and improve the program.

I. Teaching Format

In this section we would like you rate how useful different teaching formats of the program were.

1. The content of information presented was

Extremely useless slightly neutral somewhat useful extremely useless useless useful useful

2. Demonstration of skills through the use of video vignettes was

Extremely useless slightly neutral somewhat useful extremely useless useless useful useful

3. Practicing skills at home with my child was

Extremely useless slightly neutral somewhat useful extremely useless useless useful useful

4. Weekly handouts were

Extremely useless slightly neutral somewhat useful extremely useless useless useful useful

II. Specific Parenting Techniques – Level of Instruction

In this section, we would like you to rate the instruction on the following techniques/strategies discussed in our online intervention

1. Praise

very poor below average above superior excellent poor average average

2. Other special time techniques (reflection, imitation, description, enthusiasm)

very poor below average above superior excellent poor average average

3. Special Time

very poor below average above superior excellent
poor average average

4. Commands

very poor below average above superior excellent
poor average average

5. Time-Out

very poor below average above superior excellent
poor average average

6. Multi-Stage Time-Out (time-out room and then time-out chair if needed)

very poor below average above superior excellent
poor average average

7. Age appropriate emotion regulation strategies

very poor below average above superior excellent
poor average average

8. Reinforcement strategies (i.e., sticker-charts)

very poor below average above superior excellent
poor average average

III. Parenting Techniques- Comprehension

In this section, we would like you to indicate your level of comprehension of the materials. Basically, please report how much you understood the material, *not* how useful the material was.

1. Praise

very poor below average above superior excellent
poor average average

2. Other special time techniques (reflection, imitation, description, enthusiasm)

very poor below average above superior excellent
poor average average

3. Special Time

very poor below average above superior excellent
poor average average

4. Commands

very poor below average above superior excellent
poor average average

5. Time-Out

very poor below average above superior excellent
poor average average

6. Multi-Stage Time-Out (time-out room and then time-out chair if needed)

very poor below average above superior excellent
poor average average

7. Age appropriate emotion regulation strategies

very poor below average above superior excellent
poor average average

8. Reinforcement strategies (i.e., sticker-charts)

very poor	poor	below average	average	above average	superior	excellent

IV. Parenting Techniques – Usefulness in affecting child behavior

In this section, we would like you to indicate how useful each of the following techniques was to improve positive interactions with your child and decrease inappropriate behavior.

1. Praise

Extremely useless	useless	slightly useless	neutral	somewhat useful	useful	extremely useful

2. Other special time techniques (reflection, imitation, description, enthusiasm)

Extremely useless	useless	slightly useless	neutral	somewhat useful	useful	extremely useful

3. Special Time

Extremely useless	useless	slightly useless	neutral	somewhat useful	useful	extremely useful

4. Commands

Extremely useless	useless	slightly useless	neutral	somewhat useful	useful	extremely useful

5. Time-Out

Extremely useless	useless	slightly useless	neutral	somewhat useful	useful	extremely useful

6. Multi-Stage Time-Out (time-out room and then time-out chair if needed)

Extremely useless	useless	slightly useless	neutral	somewhat useful	useful	extremely useful

7. Age appropriate emotion regulation strategies

Extremely useless	useless	slightly useless	neutral	somewhat useful	useful	extremely useful

8. Reinforcement strategies (i.e., sticker charts)

Extremely useless	useless	slightly useless	neutral	somewhat useful	useful	extremely useful

V. Feasibility

1. How would you rate the time-commitment of this program (i.e., were you able to dedicate the time needed?)

1	2	3	4	5	6	7	8	9	10
Not at all Feasible									Extremely Feasible

2. How would you rate the accessibility of the program (i.e., is it easy to access?, any problems with viewing/downloading the materials?)

very poor	poor	below average	average	above average	superior	excellent

VI. Confidence

1. Looking back, please rate your confidence in managing your child's behaviors <u>before this intervention.</u>

1	2	3	4	5	6	7	8	9	10
Not at all Confident									Extremely Confident

2. Please rate your confidence in managing your child's behaviors <u>after this intervention.</u>

1	2	3	4	5	6	7	8	9	10
Not at all Confident									Extremely Confident

V1. Your opinion

1. Would you recommend this program to a friend? Why or why not?

2. What do you see as the benefits of this program?

3. How could this program be improved upon?

4. We sought to create an intervention that reduced some of the barriers to accessing traditional services, such as cost, transportation, and childcare needs. Did this program reduce some of these barriers? Please comment on the feasibility/accessibility of the program.

5. Please include any other feedback you would like to provide for the researchers below.

Appendix I: Follow Up Tracking Form

Follow-Up Tracking Form

1. Currently, one month after completing the intervention, please rate your confidence in managing your child's behaviors.

1	2	3	4	5	6	7	8	9	10
Not at all Confident									Extremely Confident

2. Please note how often you use **any** of the strategies learned in the online intervention.

- A) approximately once a week
- B) 2-4 days a week
- C) 5-7 days a week
- D) I no longer utilize any of the strategies I learned.
- If you no longer utilize these strategies, please explain why.

3. Please note how often you have been **practicing Child Directed Interaction (CDI) Special Time**?

- A) approximately once a week
- B) 2-4 days a week
- C) 5-7 days a week
- D) I no longer practice special time.
- If you no longer practice special time, please explain why.

4. Please describe whether you still utilize the **PDI techniques of commands, time-out warnings, and time-out**.

5. Please describe whether you currently use the strategies of **sticker charts or emotion-regulation systems**?

6. Please describe whether you still utilize the strategies of **praise, positive, attention, and/or "praising the opposite"**.

7. Please describe whether you have reviewed any of the handouts or modules you received since participating in the intervention.

Appendix J: Copy of Study Approvals by IRB

VirginiaTech

Office of Research Compliance
Institutional Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE: May 12, 2016

TO: Lee Cooper, Haley Melissa Gordon

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)

PROTOCOL TITLE: Adapting Parent Child Interaction Therapy to Custodial Grandparents : Stage 1 (Interviews)

IRB NUMBER: **16-311**

Effective May 12, 2016, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:	**Expedited, under 45 CFR 46.110 category(ies) 6,7**
Protocol Approval Date:	**May 11, 2016**
Protocol Expiration Date:	**May 10, 2017**
Continuing Review Due Date*:	**April 26, 2017**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Office of Research Compliance
Institutional Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE: April 3, 2017

TO: Lee Cooper, Haley Melissa Gordon, Elyse Hammond, Faith Schiefelbein

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)

PROTOCOL TITLE: PCIT for Custodial Grandparents: Online Parent Training Course

IRB NUMBER: **17-160**

Effective April 3, 2017, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:	**Expedited, under 45 CFR 46.110 category(ies) 5,7**
Protocol Approval Date:	**April 3, 2017**
Protocol Expiration Date:	**April 2, 2018**
Continuing Review Due Date*:	**March 19, 2018**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.