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Unpacking the Persuasive Power of an Evidence-Based Engagement Video for Parenting Programs

By

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DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

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DAVIS

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## Abstract

Parenting programs can serve as effective interventions for improving child behavioral problems, strengthening parent-child relationships and promoting healthy development. However, family engagement remains a significant challenge and there is a need for practical and cost-effective solutions. This study was a randomized controlled trial to evaluate the effectiveness of an original, evidence-informed video which leverages communication science best practices to enhance engagement. Parents of children aged 2-8 years were recruited through Prolific ( $N = 250$ ) and randomized to the engagement video or a standard-of-care informational video condition. After viewing the video, parents completed a battery of questionnaires about their expectancies for program helpfulness, program-related attitudes, parenting self-efficacy, anticipated commitment, and emotional and cognitive engagement in the video. Participants' engagement in the video (i.e., transportation) was tested as a potential mediator. Results showed that participants who viewed the engagement video reported greater expectancies for program effectiveness, higher parenting self-efficacy, stronger levels of anticipated commitment and more transportation into the video, compared to participants who viewed the informational video. Results further showed that transportation mediated all persuasive outcomes (i.e., expectancies, program-related attitudes, parenting self-efficacy and anticipated commitment), providing insights into why the engagement video was effective. Findings suggest that evidence-informed tools that absorb and engage people in the content can effectively shape parents' perceptions of parenting programs, help them feel capable to positively impact their child, and bolster their commitment to parenting change. Findings have implications for the development of future materials, and reveal the value of video-based tools that leverage visuals, storytelling, and modeling to engage families in treatment.

## Literature Review

Roughly 7-25% of young children exhibit externalizing behavior problems such as frequent temper tantrums, argumentativeness, noncompliance, low frustration tolerance, aggression, and hyperactivity (Campbell, 1991). Parents often feel powerless to help and the behaviors can take a serious toll on parents' well-being and relationships (Webster-Stratton & Spitzer, 1996). If left unchecked, challenging behaviors in early childhood can morph into serious issues in middle childhood, adolescence and adulthood (Campbell et al., 2000).

### Parenting Programs Can Help

Evidence-based parenting programs can curb this trajectory (McMahon, 2006). There are a number of such programs, including Parent-Child Interaction Therapy (PCIT; Eyberg, 1988), Parent-Child Care (PC-CARE; Timmer et al., 2018), The Incredible Years (Webster-Stratton et al., 1989), Triple P-Positive Parenting Program (Sanders, 1999), Helping the Noncompliant Child (McMahon & Forehand, 2003), Parent Management Training (Forgatch & Patterson, 2010). All of these programs share the goal of changing parenting practices to address behavioral problems.

In these programs, instead of a therapist working directly with the child, parents<sup>1</sup> are trained as the agents of change (McMahon, 2006). The focus is on changing parent-child interaction patterns, and empowering parents with skills to manage challenging behaviors, promote positive behaviors, and nurture strong relationships. In programs such as PCIT and PC-CARE, parents are coached *in vivo* by a therapist, while they practice the skills as they play with their child (Timmer et al., 2018). The therapist guides the parent in real-time by offering

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<sup>1</sup> To maintain consistency, the term "parent" will be used to refer to "caregivers" which can include foster parents, adoptive parents, extended family members, who also participate in parenting programs.

suggestions and support, helping her understand the purpose of the skills and commenting on the child's behavior. A therapist might coach, "That is so sweet, she just shared with you. Let her know how much you like that. Every time you praise a good behavior like sharing, Mia will do it more." The primary goal of coaching is for parents to master the skills, so they feel natural, comfortable, and easy to use in everyday life. The skills are intended to be generalized to a diverse range of settings and regularly used in day-to-day interactions with the child (Allen et al., 2014). In order to further master the skills, parents are assigned "homework," which often entails playing with the child for five minutes daily. The purpose of practicing and playing at home is to strengthen the relationship and reinforce what is learned in session (McNeil & Hembree-Kigin, 2011).

Evidence-based parenting programs are well-established as efficacious treatments (Lieneman et al., 2017). Outcome studies have demonstrated both clinically and statistically significant improvements in child disruptive behaviors and compliance (Brabson et al., 2018; Lieneman et al., 2017; Thomas et al., 2017). Behavioral improvements are maintained for one to six years after treatment completion (Boggs et al., 2004; Eyberg et al., 2001; Hood & Eyberg, 2003), and generalize to school settings (McNeil et al., 1991). Parents benefit from these programs too, with significant increases in parenting skills (Brabson et al., 2018) and confidence (Schuhmann et al., 1998), and decreases in stress (Thomas et al., 2017), emotion dysregulation (Zimmer-Gembeck et al., 2019) and depressive symptomology (Timmer et al., 2011).

### **What Makes Parenting Programs Work?**

Importantly, successful outcomes in parenting programs depend on parental engagement: signing up for the program, attending sessions, actively participating during sessions, practicing and using the skills at home, and staying for the entire course of treatment (i.e., not dropping out)

(Gonzalez et al., 2018; Nock & Ferriter, 2005). Parental investment in the program is crucial for making parent-mediated programs work; attendance and homework completion are linked to reductions in harsh parenting, and increases in warm, supportive and involved parenting (Baydar et al., 2003; Nix et al., 2009). In turn, these parenting changes mediate reductions in child behavior problems (Chamberlain et al., 2008; Legato, 2015).

Thus, empirical work suggests that the mechanisms underlying improvements in child behavior problems are changes in parenting competence and new, healthy parent-child interaction patterns. This cycle of positive interactions begins with engagement, where the parent and child repeatedly practice new ways of getting along, both in session and at home. In session, parents learn concrete techniques for providing warm and responsive caregiving (Allen et al., 2014). This pattern of parenting contributes to the child's understanding that she or he will be nurtured and responded to when needed, such as in times of distress (Sroufe et al., 2005). In addition, through *in vivo* coaching, therapists help parents gain information about the child's behavior, development, needs and cues, as well as how to appropriately respond to the child (McNeil & Hembree-Kigin, 2011). In theory, therapists are teaching parents to become more sensitive. Parental sensitivity encompasses an understanding of the child's needs and cues, and appropriate expectations based on the child's developmental level (Teti & Candelaria, 2002); an absence of such knowledge is associated with dysfunctional parenting (Morawska et al., 2009).

During sessions, parents also learn to prevent coercive exchanges with the child (McNeil & Hembree-Kigin, 2011). Coercive exchanges result when the child does not comply or behaves aversively, and the parent becomes increasingly harsh, which further exacerbates the challenging behaviors (Patterson & Fisher, 2002). These maladaptive interactions are shown to undermine the parent's ability to provide warm, sensitive and non-harsh caregiving (Pardini et al., 2008),



and lead to behavior problems worsening over time (Smith et al., 2014). In order to avoid these negative interactions and the further escalation of behavior problems, parents learn to set consistent rules and limits and use non-harsh discipline methods (McNeil & Hembree-Kigin, 2011).

Importantly, parents gain these techniques and information during sessions, necessitating attendance. Consistent attendance likely translates to a greater dosage of information important for developing effective parenting skills, and more opportunities to practice positive interactions with the help of a therapist. At home, families' consistent practice of the techniques and positive interactions may help solidify this new way of relating and strengthen the child's attachment security. According to attachment theory, the security of attachment develops from repeated parent-child interactions, where over time the child learns what to expect from the caregiver (Bowlby, 1979). As a result of the parent consistently providing warm, responsive, and non-harsh caregiving, in session and at home, the child comes to expect sensitive responsiveness and nurturance from the parent (Girard et al., 2018). The transformations in parenting can lead the child to represent the parent in a new way, and this “altered interpretive framework” can strengthen attachment security (Sroufe et al., 2005, p. 223), which in turn is associated with fewer behavioral problems (Erickson et al., 1985; Speltz et al., 1995; Sroufe et al., 2005).

### **The Challenge Engaging Families in Parenting Programs**

As discussed above, the restructuring of interaction patterns and resulting improved child behaviors depend on parents' regular attendance and use of the skills (Baydar et al., 2003; Nix et al., 2009). This underscores parents' vital role as agents of change and the importance of engagement. Engagement, unfortunately, is a major challenge in parenting programs (Lau et al., 2018). Issues range from families enrolling but not continuing with treatment, inconsistently

coming to sessions, not completing between-session assignments, and dropping out (Chacko et al., 2016). Another issue is "going through the motions" rather than being fully invested in the process (Yatchmenoff, 2005, p. 85). Dropout rates from parenting programs range from 33% to 73% (Fernandez & Eyberg, 2009; Lanier et al., 2011; Liebsack, 2016; Werba et al., 2006), and between-session homework rates are low (Danko et al., 2016; Stokes et al., 2016). Among families who drop out, the majority do so within the first five sessions (Lanier et al., 2011; Liebsack, 2016), before significant improvements occur (Lieneman et al., 2019). This is problematic because unchecked behavior problems in early childhood can evolve into serious adjustment issues in middle childhood, adolescence and adulthood (Campbell et al., 2000).

### **How Can We Help Families Engage?**

In light of these problems, there is a critical need for more engagement tools to encourage families' commitment to programs that can help. In order to understand how to engage families, it is important to first identify factors that interfere. The reasons families do not engage are complex and cannot be narrowed down to a single factor (Staudt, 2007). Obstacles to treatment exist at many levels, vary greatly (Staudt, 2007), and combine and build on each other (Kazdin et al., 1997). No single demographic variable or parent/child characteristic has consistently been linked to engagement across studies (Nock & Ferriter, 2005). However, when risk factors are examined cumulatively, a pattern emerges in which stressed, impoverished single mothers with little education and low intelligence are at greater risk for poor engagement (Bagner & Graziano, 2013). Families can also face stressors that make participation difficult (Boggs et al., 2004; Champine et al., 2019; Fernandez & Eyberg, 2009), such as not having a ride to the clinic or potentially losing their job if they take another shift off. Engagement is also influenced by the quality of the relationship with the therapist (Karver et al., 2005), as well as larger systemic

factors, such as wait time (Ofonedu et al., 2017); therapist caseloads (Staudt et al., 2012); the climate, culture, and practices of the agency (Olin et al., 2010); and funding and social policies (Staudt et al., 2012).

Importantly, static factors (e.g., poverty, low educational attainment) are not realistic targets for engagement interventions because little can be done by therapists to alleviate the barriers they create (Nock & Ferriter, 2005). Systemic barriers (e.g., long wait time, large caseloads) are also not feasible targets. Day-to-day obstacles (e.g., lack of transportation) can be costly to address, and doing so has yielded little success in increasing engagement (Dumas et al., 2007; Fernandez & Eyberg, 2009). On the other hand, parental beliefs about therapy, one's child, and oneself are consistently related to engagement (Mah & Johnston, 2008) and are "malleable" (Nock & Ferriter, 2005). For example, parents are less likely to engage when they doubt the program will work (Nock et al., 2007), are caught off guard by the need for parental involvement (Miller & Prinz, 2003), disapprove of changing their parenting (Mah & Johnston, 2008) or do not feel capable of doing so (Nordstrom et al., 2008). Accordingly, engagement interventions have been designed to address these beliefs.

In such engagement interventions, a staff member or therapist will call the family or hold an additional orientation to demystify the treatment process, clarify misunderstandings, normalize feelings about being in therapy, address attitudinal barriers (e.g., stigma, skepticism), and instill hope (e.g., McKay et al., 1996). When extra time is spent engaging the family, they are more likely to come back for future sessions (McKay et al., 1996; Shepard et al., 2012; Thompson, 2013). The same holds true for adults in individual therapy (Reis & Brown, 2006). The problem, however, is that there are often barriers to engaging families in real-world settings.

In day-to-day clinical practice, therapists do not always have time to adequately engage families due to large caseloads, workload barriers, agency and insurance policies, and the prescriptive structure of manualized treatment (Staudt, 2007; Staudt et al., 2012). Furthermore, there is considerable variability in experience levels among therapists who provide parenting programs (Travis & Brestan-Knight, 2013). Trainees already struggle to adhere to all the requirements of a manualized treatment (Travis & Brestan-Knight, 2013), meaning it might be difficult for them to simultaneously engage families while also learning to deliver the treatment and navigate the abovementioned systemic and logistical barriers. Given these challenges, there is a need for engagement tools that are practical and cost-effective; do not place sole responsibility on therapists (Staudt et al., 2012) or require significant training to use (Winslow et al., 2018); and that can be implemented by both novice and experienced therapists. Video may serve as a solution to overcome some of these challenges and lay a foundation to help families succeed in parenting programs.

### **The Potential of Video**

Videos are a promising tool for better engaging families because they are more practical and feasible than resource-heavy strategies (Winslow et al., 2018), such as phone calls and additional orientation sessions. Videos can easily be distributed on a wide scale and are cost-effective in the long-run after producing (Webster-Stratton & Hammond, 1997). Additionally, videos do not further burden overworked providers (Rosaasen et al., 2018), and they are more likely to be routinely adopted compared to person-to-person strategies (Zwick & Attkisson, 1985).

Videos are used for a wide variety of purposes and have been shown to be effective in lessening stigma surrounding mental health services (Brecht et al., 2017), fostering willingness

to seek treatment (Gallo et al., 2015), increasing knowledge about therapy (Acosta et al., 1983; Zwick & Attkisson, 1985), fostering self-efficacy to perform health-related behaviors (Anderson, 2000), and reducing dropout from psychotherapy (Reis & Brown, 2006). Recently, Javier et al. (2019) and Winslow et al. (2018) demonstrated that theory-based recruitment videos could successfully increase enrollment in parenting programs among Filipino caregivers and divorcing parents, respectively. Their work revealed the value of developing carefully crafted video to get families in the door and the importance of basing the video's content on behavior change theories. The following sections and the overall aim of this project center around the development of a theory based-video to attract families, keep them in parenting programs and encourage their commitment to parenting change.

### **What Does the Video Need to Target?**

Winslow et al. (2016; 2018) recommends utilizing a theory-based approach when developing engagement strategies and videos, a method widely used in the prevention field. This approach involves selecting a theory that predicts behaviors and targeting malleable predictors. To illustrate: Javier et al. (2019) created a video to increase Filipino families' enrollment in parenting programs in response to large mental health disparities. Content was guided, in part, by the Health Belief Model (HBM; Becker, 1974). To target the HBM construct of perceived susceptibility, parents in the video discussed how Filipino youth are susceptible to risky behaviors in adolescence. To target perceived benefits, another HBM construct, the video featured parents and grandparents who recommended the program and explained its benefits, and experts who provided testimonials. Winslow et al. (2018) also addressed perceived benefits by incorporating testimonials and endorsements in their video to increase enrollment in a program for divorced parents.

In the realm of parenting programs for child behavioral problems, when considering factors that influence decisions to participate and implement new parenting skills, two important constructs emerge: parenting self-efficacy, and expectancies/attitudes about the program's helpfulness. Broadly speaking, self-efficacy refers to how capable and confident one feels (Bandura, 2003), and parenting self-efficacy embodies perceived abilities to exert influence over one's child (Coleman & Karraker, 1998). Parents with low parenting self-efficacy have lower expectations that a program and new skills will effect change (Jiang et al., 2014; Johnston et al., 2010; Nordstrom et al., 2008). They are also more likely to choose not to participate (Chacko et al., 2017; Dumka et al., 1997; McKay et al., 2001; Nordstrom et al., 2008), and are less likely to use the skills (Johnston et al., 2010). Expectancies are beliefs about the benefits of a behavior (Bandura, 2003). Expectancies about the helpfulness of a parenting program have been found to predict enrollment (Nordstrom et al., 2008) and intent to enroll (McCurdy et al., 2006; Nordstrom et al., 2008; Spoth et al., 2000). Expectancies also predict adherence (Johnston et al., 2010; Nock et al., 2007), such that people are more likely to use techniques that they think will benefit them.

A number of behavior change theories recognize the role that self-efficacy and expectancies/attitudes play in driving actions, including the social cognitive theory (Bandura, 2003), the theory of reasoned action (Ajzen & Fishbein, 1980), the theory of planned behavior (Ajzen, 1991). Although the theories use different terminology, collectively they underscore the necessity of helping families feel capable and that the program will pay off, in order to encourage their investment. This theoretical and empirical work has implications for the target and content of engagement tools; it tells us *what* needs to change. It does not, however, tell us *how* to make change happen. Communication science, particularly the subfield of persuasive

communication, can bridge that gap by providing insights and guidance into how to design engagement tools to maximize their impact.

## **Can Communication Science Help Us Better Engage Families?**

### ***The Power of Stories***

Persuasive communication aims to change attitudes, beliefs, and behaviors (Hardeman et al., 2002). For example, persuasive communication might be used to convey the message that sun exposure can cause skin cancer and that people should wear sunscreen. There are two main forms of persuasive communication, narrative and non-narrative persuasion, which use different strategies to persuade (Bilandzic & Busselle, 2013). Non-narratives rely on statistical evidence, rhetorical arguments and factual information, while narratives involve personal stories or testimonials to transmit the message and persuade (McQueen et al., 2019). Meta-analyses show that narratives are more persuasive than non-narratives in shaping attitudes, intentions and behavior (Braddock & Dillard, 2016; Shen et al., 2015). Furthermore, meta-analytic work shows that these persuasive effects persist over time (Oschatz & Marker, 2020). In summary, stories are a powerful method for changing minds and behaviors, and they can have a lasting impact on people.

**Stories Hook People In.** People process narratives differently than non-narratives, which may lead to more persuasiveness (Oschatz & Marker, 2020). With stories, people can become mentally and emotionally absorbed in the storyline and characters (Green & Donahue, 2008). According to the transportation-imagery model (Green & Brock, 2002), stories pull people in (i.e., transport them), just as one may get lost in a good book and forget the world around them (Green, 2021). There are multiple facets of transportation, including attentiveness, emotional investment, and mental imagery, which collectively contribute to being transported or hooked

into the storyline or message (Green, 2021). The transportation-imagery model suggests that the more people are transported, the more they are persuaded (Green & Brock, 2002). This is supported by meta-analytic research showing that greater levels of transportation are associated with a greater change in attitudes and beliefs (Van Laer et al., 2014).

**Stories Reduce Defensiveness.** Another reason stories are powerful is because they may make people less defensive than non-narrative attempts to persuade (Oschatz & Marker, 2020). People can become defensive when efforts are made to change their behaviors or attitudes (Bilandzic & Busselle, 2013). For example, an individual might react negatively to a brochure that lists all the reasons smoking is bad for one's health (Oschatz & Marker, 2020). In response, the person may disregard the message, question its validity, argue against it, or refuse to take action altogether (Kreuter et al., 2007). On the other hand, as discussed above, stories absorb people (Green, 2021). Kreuter et al. (2007) explain that when people are drawn into the story, they may have fewer mental resources available for arguing against the message. Furthermore, coming up with a counterargument would interfere with the flow of the story, so people would lose out on the entertainment and enjoyment of the story. It is proposed that when people are engrossed in a story, they are less likely to argue against the story's persuasive message, and therefore more likely to be influenced.

### **Crafting a Persuasive Story to Engage Families in Parenting Programs**

Because of their influential power, narratives are used in many settings, such as advertising (Mortimer, 2008), healthcare (Gray, 2009), and behavior change interventions (McQueen et al., 2019). Given their effectiveness in shaping attitudes, beliefs, and behaviors in both the short-term (Shen et al., 2015) and long-term (Oschatz & Marker, 2020), stories hold promise for enhancing engagement in parenting programs. The following sections focus on



empirically- and theoretically- informed persuasive techniques that can be embedded in stories. These techniques will be explored in the context of parenting programs and will include a discussion of their relevance and merit, specific challenges they can address, and how they can enhance engagement. Topics include: who tells the story (a parent messenger), the focus of the story (modeling engagement), and how the story is shown (visually). The subsequent section describes the practical application of these principles in developing a visual-based story for families beginning Parent-Child Interaction Therapy. The overarching aims of this endeavor are as follows: synthesize insights from communication science and engagement literatures; apply these insights to craft a practical tool for clinical use; and evaluate the effectiveness of this communication approach in encouraging, supporting and engaging families.

### ***Who Should Tell the Story and Why?: The Advantages of a Parent Messenger***

**Advantage #1: A More Persuasive Point of View.** The first consideration when crafting a story to engage families in parenting programs is who should tell the story. Stories can be told from different perspectives. A first-person point of view (POV) relays the story from the narrator's perspective (e.g., "I successfully quit smoking"), in contrast to a third-person POV, in which an external observer tells the story, looking in (e.g., "She successfully quit smoking") (Chen & Bell, 2022, p. 546). In the context of parenting programs, a first-person POV story would allow families to hear a firsthand account of treatment through the eyes of another parent, rather than through the eyes of an onlooker, such as a therapist or a narrator.

First-person narratives offer several advantages in terms of storytelling and persuasiveness. First, this intimate perspective provides a window into the protagonist's private thoughts and feelings (Bublitz et al., 2016). Self-disclosure is an attribute of high-quality narratives because it can help the audience like, trust, relate to, and identify with the storyteller

(Kreuter et al., 2008). In a meta-analysis, Chen and Bell (2022) found that stories told in first-person increased audience identification more than stories told in third-person. This is important because identification is related to persuasion; the more people identify with the storyteller/main character, the more they are impacted (Tukachinsky & Tokunaga, 2013).

**Advantage #2: Shared Experience.** A relatable parent messenger may also contribute to normalization and a sense of connection with other families. Kreuter et al. (2007) suggest that in the context of health narratives, identifying with the main character can provide the audience member with a sense of social support, especially if friends and family do not share or relate to the challenging health experiences. For example, an individual with breast cancer may find solace in another breast cancer survivor's story and feel less alone. This is relevant for parents beginning parenting programs, as they often express feelings of isolation (Webster-Stratton & Spitzer, 1996), and hearing from another parent may help them feel less alone. Moreover, parent stories may help normalize the challenges inherent in parenting a child with behavior problems. This is exemplified in a video about mental health problems created by Umpierre et al. (2015); in order to normalize families' experiences, feelings and concerns, information was embedded in a parent-to-parent conversation. In another example, Barnett et al. (2020) created a 90-second video advertisement to recruit parents to parenting programs. In one of the advertisements, a mother shares her initial hesitancy about starting the therapy to normalize these common feelings.

**Advantage #3: Conversational Language.** Another advantage of a parent firsthand account is that it allows for the program to be described in conversational language. This is significant because treatment descriptions can be very technical (Rolider et al., 1998) (e.g., "specialized, evidence-based behavior management program"). Casual language is important for

engagement; research consistently shows that people do not know what terms such as "evidence-based" mean (Becker et al., 2016; Okamura et al., 2020; Schofield et al., 2020), nor are they accepting of this terminology (Okamura et al., 2020). People report greater understanding and acceptance of therapy when it is described in conversational terms compared to technical terms (Rolider et al., 1998). Moreover, using a casual tone is a best practice when designing educational and engagement materials (Brame, 2015; Center for Disease Control, 1999). Therefore, a conversational parent-to-parent explanation may be the most effective approach and is also in line with best practices.

**Advantage #4: Parents Want to Hear From Other Parents.** Featuring a parent in the story is also crucial because people express desire to hear from others who have participated in the therapy or program. The majority of participants in an APA-led study said the best way to communicate therapy's value was by showing stories of how therapy has helped "real people with real life issues" (Faberman, 1997, p. 130). In parent focus groups concerning the best way to market parenting programs, the majority of parents suggested that success stories from other families would be the most powerful means to promote participation (Flores et al., 2015). Parents have also indicated that they would feel more convinced about the effectiveness of a parenting program and more interested in participating if other parents found the program helpful (Morawska et al., 2011).

**Advantage #5: Parent-to-Parent Trust.** Featuring a parent may also help foster families' trust in the program. Parents report that they would be more trusting of parenting information if it included parent stories (Zero to Three, 2018). Parents also indicate they would be more influenced by and trusting of other parents' testimonials about a parenting program, than testimonials by pediatricians, psychologists and teachers (Morawska et al., 2011). Using a trusted

messenger in health communications is warranted because if people distrust the messenger (e.g., a provider), they may reject what is being communicated (Kreuter et al., 2007). This is particularly relevant for engagement, because parents can be skeptical and distrustful if they have had bad experiences with child therapy and therapists (Kerkorian et al., 2006; Lindsey et al., 2013). In light of this, in order to promote engagement through story, it is necessary to consider from whom the message is coming. Hearing a firsthand account from another parent about the importance of engagement may be one way to decrease resistance and motivate parents.

**Advantage #6: A Peer Role Model.** According to the health communication and media literature, a parent messenger who delivers a message about engagement is considered an exemplar for engagement. An exemplar is an individual or character who exemplifies characteristics or behaviors of a larger group, or an event or situation (Gray, 2009).

Exemplification theory proposes that exemplars have a stronger influence on people than abstract representations, because exemplars make an issue or subject matter feel concrete, and are more emotionally evocative, attention-grabbing, and easy to understand (Zillmann, 1999). For these reasons, exemplars are commonly used in case studies and testimonials to share a message about a health behavior and motivate people to change their behaviors or beliefs (Biggs et al. 2019). For example, a public service announcement to combat alcohol abuse might present an exemplar who shares his experience of successfully quitting drinking.

Featuring an exemplar in a story is important for persuasive purposes. Kim et al. (2012) compared two stories about quitting smoking. One story featured an exemplar who shared her personal journey about quitting, as well as information about the threat of smoking risks and ways to quit. The other story had the same storyline and information, but referred generally to people who quit smoking. Participants, all of whom were smokers, were found to be more

engaged with the story that featured the exemplar's personal testimony, rather than the generic story. Engagement, in turn, predicted intentions to quit smoking. In line with this, a meta-analysis by Bigsby et al. (2019) found that messages that included an exemplar had a greater persuasive effect on attitudes, behaviors, and intentions than messages without an exemplar. This research suggests that in order to persuade families, showcasing one parent who exemplifies treatment engagement may be key. As discussed in the next section, modeling is a potentially valuable method for exemplifying engagement.

### ***What Should the Story be About?: Modeling to Promote Engagement***

Modeling is a technique that involves demonstrating desired behaviors by showcasing similar individuals engaging in those behaviors (Kreuter et al., 2007). Modeling is widely used in various settings, such as health education (Tuong et al., 2014), behavior change interventions (Michie et al., 2013), and entertainment education (Slater, 2002), and can take different forms including video modeling (Krouse, 2001) and storytelling (Shaffer & Zikmund-Fisher, 2013). For example, in a healthcare setting, a story may be used to model healthy behaviors such as wearing sunscreen, getting a cancer screening, or exercising (Shaffer & Zikmund-Fisher, 2013). The purpose of modeling is to educate people about a behavior, increase their self-efficacy to make changes, encourage them that it will be worthwhile, and motivate them to take action. The following section discusses how modeling can promote engagement in parenting programs.

**Modeling Function #1: Inform Families.** Modeling may promote engagement by informing families what it means to engage. According to social learning theory, people learn from watching others (Bandura, 2003). More specifically, social learning theory proposes that individuals acquire new behaviors by observing others and imitating those actions, a process termed observational learning (Bandura, 2003). Modeling provides a means for observational

learning; by witnessing the behavior in action and knowing what to expect, it may prepare people to engage in the behavior themselves (Kreuter et al., 2007). For these reasons, video modeling is often used in health education (Krouse, 2001) and is shown to be an effective method for promoting the adoption of new behaviors (for a review, see Tuong et al., 2014).

Some therapy preparation methods similarly depict a desired behavior (i.e., engagement in therapy). In vicarious pretherapy training, new clients are shown examples of actual or simulated therapy sessions to learn about the treatment process and what it means to engage (Ogrodniczuk et al., 2005; Walitzer et al., 1999). To illustrate, Acosta et al. (1983) produced a 12-minute therapy preparation video, *Tell It Like It Is*, which included clinical vignettes (e.g., scenes of clients and therapists talking), narration, and cartoons. Their goal was to elucidate what psychotherapy is like and how clients can benefit by taking an active role. The video was found to increase knowledge about therapy (Acosta et al., 1983), and a subsequent randomized control trial further demonstrated that clients who watched the video before their intake session were less likely to drop out compared to clients who saw an unrelated video (Reis & Brown, 2006).

Visually demonstrating how the program works through modeling may be beneficial because families have reported being confused about the therapy process and what is being taught (e.g., Attride-Stirling et al., 2004; Hebbeler & Gerlach-Downie, 2002). A systematic review found that visuals used in health education improve attention, comprehension, and recall, particularly among people with low literacy (Houts et al., 2006). Visual demonstrations thus have the potential to help families make sense of the program and what it means to engage. Furthermore, showing someone what to do is more effective than telling them what to do. For example, people are more likely to take medication when they see visuals of a peer taking the medication, compared to simply hearing instructions to take the medication (Ngho & Shepard,

1997). This suggests that if parents see another parent engage, they will be more likely to emulate these actions. Collectively, the research on video modeling, vicarious pretherapy training, and visuals underscore the power of visually showing families how to engage in order to help them succeed and get the most out in therapy.

**Modeling Function #2: Prepare Families.** Another function of modeling is to prepare families to persevere through the potential challenging and uncomfortable parts of treatment. In storytelling, revealing potential difficulties and obstacles involves adopting a "warts and all approach" (Shaffer et al., 2018, p. 435). Stories that show "what something was really like" are termed *experience narratives*, and are used in healthcare settings to give a more intimate window into a procedure or health-related experience (Shaffer et al., 2018, p. 435).

There is value in acknowledging the distressing, aversive, and unpleasant aspects of a new behavior or experience (Focella et al., 2016). Warning people ahead of time by providing a "realistic preview" may recalibrate expectations and build resilience (Shaffer et al., 2018). For example, in the workplace, realistic job previews are associated with lower attrition rates and more accurate expectations (Phillips, 1998). In a healthcare setting, when people are given a detailed explanation of a painful medical procedure, they feel less distress during the procedure, compared to people given no details (Johnson & Leventhal, 1974).

Warning individuals about potential obstacles and uncomfortable emotions is also part of therapy preparation (e.g., Walitzer et al., 1999; Zwick & Attkisson, 1985) and pre-treatment engagement strategies (e.g., Prinz & Miller, 1994). Therapy preparation research shows that prepared individuals have a different experience in treatment; they better understand what will occur (Acosta et al., 1983; Shuman & Shapiro, 2002) and are less likely to drop out (Reis & Brown, 2006; Swift & Callahan, 2011). Research by Gonzalez et al. (2022) further demonstrates

the positive impact of acknowledging costs in therapy. In this study, parents who saw a testimonial that focused on overcoming costs were more likely to engage, compared to parents who saw a testimonial that focused on the benefits of the program. The costs testimonial stated, “I almost didn’t do it. There were so many things getting in the way of doing it and just trying to find the time and the energy was hard. But I’m really glad that I set aside the time and I managed to have someone look after the kids. It wasn’t always easy, but I’m glad that I finished it” (p. 931). Collectively, these findings show that providing a comprehensive understanding of potential challenges and the ability to overcome them may play an important role in promoting engagement. Modeling is a valuable technique because it can provide both a realistic preview of the challenges, as well as a depiction of a model overcoming the challenges which may help increase self-efficacy.

**Modeling Function #3: Persuade Families That They Are Capable.** In addition to informing and preparing families, modeling can also potentially help families feel more efficacious in changing their parenting behaviors. Kreuter et al. (2007) explains that modeling is widely used in health education because people can be resistant to change, due to low self-efficacy and doubts that it will be worthwhile. For example, a person may avoid getting a preventative cancer screening because they do not know how to, and do not think it will be helpful. To combat this resistance, a model may be shown receiving a screening and proclaiming their relief that they are cancer-free. According to social cognitive theory, modeling allows people to see that it is feasible to perform the behavior and the positive outcomes that will result (Bandura, 2003). Therefore, modeling may decrease resistance by boosting self-efficacy and expectancies about the value of the behavior, which in turn promotes behavior change.



Modeling may be a valuable technique for increasing self-efficacy in parents, which according to social cognitive theory is vital for behavior change (Bandura, 2003). Indeed, engagement research shows that low self-efficacy is a major barrier to parents changing their behavior. Child behavioral problems are closely intertwined with low parenting self-efficacy. Parents of children with behavior problems feel less efficacious as parents (Baden & Howe, 1992), less able to influence their child (Chase & Peacock, 2017), and less confident in day-to-day parenting activities (Sanders & Woolley, 2005). In interviews and focus groups, parents relate the pain of parenting a child who rarely listens, and how that makes them feel ineffective, "like a total failure" (Assemany, 2004, p. 121; Webster-Stratton & Spitzer, 1996). These beliefs can interfere with engagement. Parents with low parenting self-efficacy are less interested in participating in parenting programs and less likely to follow through after signing up or being referred (Chacko et al., 2017; Dumka et al., 1997; McKay et al., 2001; Nordstrom et al., 2008). They also rate parenting programs as less acceptable (Chase & Peacock, 2017) and have lower expectations that the program and skills will work (Jiang et al., 2014; Johnston et al., 2010; Nordstrom et al., 2008). Low expectations are problematic because if parents doubt the skills will help, they are less likely to use them at home (Johnston et al., 2010; Nock et al., 2007).

Low acceptability, expectations and participation among parents with low parenting self-efficacy may be explained by several factors. First, parenting programs can be challenging (Mah & Johnston, 2008), and individuals with low self-efficacy are more likely to avoid challenging tasks (Sexton & Tuckerman, 1991). Second, parenting programs involve active parental involvement, however parents with low parenting self-efficacy doubt their ability to influence their child (Chase & Peacock, 2017; Mah & Johnston, 2008). If a mother does not think she can effect change, she may question whether she can successfully apply the skills (Hoza et al., 2006)

and whether they will make any difference. In turn, she may avoid the skills altogether. Evidence for this comes from a study by Johnston et al. (2010) in which 101 mothers of children with ADHD were taught a package of parenting skills. During a one-week follow-up, mothers with low self-efficacy reported using and liking the skills less compared to mothers with higher self-efficacy; the former also observed fewer changes in their child's behavior. Johnston et al. (2010) suggest that confident mothers feel more capable and, consequently, use the skills more, which in turn drives changes in the child's behavior. Therefore, feelings of capability are perhaps a necessary precursor for success in parenting programs (Coleman & Karraker, 1998).

Social cognitive theory proposes that modeling could help parents feel capable, and that they can make a difference for their child. Observing others succeed on a task may lead to the belief that "if they did it, so can I," increasing self-efficacy and, in turn, motivating action (Pajares et al., 2009, p. 8). This is supported by research showing that video modeling increases self-efficacy to perform a behavior (Anderson, 2000) and the adoption of new health behaviors (Abed et al., 2014; Tuong et al., 2014). Therefore, seeing a relatable parent, who also struggled with behavior problems and who once felt unable to impact their child, stick with the program and achieve positive outcomes may foster the belief, "I can do this."

**Modeling Function #4: Highlight the Benefits of Engaging.** In addition to helping families feel capable, another potential advantage of modeling is that it can show the value of participating in the program. According to social cognitive theory, expectancies—defined as the beliefs about the outcomes of a behavior—play a crucial role in driving behavior change, alongside self-efficacy (Bandura, 2003). Behavior change theories, such as the theory of reasoned action and the theory of planned behavior, similarly recognize that attitudes drive behaviors, and that people are more motivated to act when they perceive the benefits as

outweighing the costs (Ajzen, 1991; Ajzen & Fishbein, 1980). This theoretical proposition is well-supported empirically. Prospective studies show that parents are more likely to sign up, or express intent to sign up, if they think the program topics are useful (Nordstrom et al., 2008; Spoth et al., 2000). Parents also use the skills at home more when they perceive them as beneficial (Johnston et al., 2010; Nock et al., 2007), as do adults in individual therapy (Westra et al., 2007). Likewise, skepticism and negative perceptions are major barriers to engagement, and doubtful parents are less likely to participate (McCurdy et al., 2006), use the techniques (Nock et al., 2007), and return for future sessions (McKay et al., 2001).

To promote engagement, it is therefore important for families to feel convinced that their participation will be worthwhile. Modeling is an opportune technique for this because it shows the rewards of partaking in a behavior (Bandura, 2003). For example, to encourage physical activity, a model may be shown looking energized and healthy as a result of exercising. Many direct-to-consumer advertisements for prescription drugs apply this principle by featuring a model who appears happy and healthy due to the medication (Welch Cline & Young, 2004). According to social cognitive theory, when people see someone being rewarded for a behavior, they will be motivated to adopt the same behavior because they also want to be rewarded (Bandura, 2003). Therefore, if families see another family benefit from the program, they may be more inclined to participate so they can directly benefit as well.

**Modeling Function #5: Draw a Link Between Engagement and Benefits.** Modeling may also clarify how the benefits that arise from parenting programs are due to engagement. Drawing a link between parents' positive actions and child behavioral improvements is important for multiple reasons. Parents of children with behavior problems are more likely to feel that misbehaviors are due to factors other than their parenting (e.g., chance, fate, temperament, peers,

or teachers), and feel less responsible and less able to do something about the behaviors (Campis et al., 1986; Chase & Peacock, 2017; Morrissey-Kane & Prinz, 1999). Because of this, parents may be less likely to think they can be part of the solution, or that anything can be done (Morrissey-Kane & Prinz, 1999). Parents in treatment do not always recognize the impact of their positive actions on the child's positive behaviors, and this may be problematic for engagement (Attride-Stirling et al., 2004; McNeil & Hembree-Kigin, 2011). For example, Attride-Stirling et al. (2004) found that parents who dropped out perceived improvements in the child's behaviors to be random, rather than related to changes in their parenting, yet parents who completed the program perceived the two to be related.

Behavior change interventions commonly make an explicit connection between a behavior and its outcomes to show people how the two are related (Hardeman et al., 2002). Modeling is another technique to demonstrate a cause-and-effect relationship, because it displays an action, as well as the consequences of that action (Bandura, 2003). For example, a health education video may present an individual undergoing a cancer screening and subsequently having the cancer detected early, leading to successful treatment and health outcome (Kreuter et al., 2007s). Modeling is often embedded in narratives (Shaffer & Zikmund-Fisher, 2013), perhaps because causality is inherently part of both storytelling and modeling. Stories show a sequence of events, and causally link the events together for closure (Braddock & Dillard, 2016).

Modeling and storytelling may be instrumental in showing why parenting programs work. Showcasing a proactive parent engage and achieve positive outcomes, may help parents better understand their pivotal role in the process. As one mother advised families beginning a parenting program, "Give it your all...Put forth that work, because if you don't put forth the work you won't see any changes" (Handman, 2022). Modeling provides the means to depict this

advice, and potentially bolster parents' sense of agency and motivation, with the understanding that through active participation, they *can* make a difference for their child. As will be discussed, showing those changes with visuals may be especially persuasive.

### ***How Should the Story be Shown?: Visually***

Various domains use visuals to persuade, from behavioral interventions to public health, to advertising (Brennan et al., 2019; Messaris, 1997; Michie et al., 2013; Sullivan et al., 2021). The potency of visuals can be attributed to several factors, including their ability to make abstract concepts more concrete (e.g., Lee et al., 2011), their power to evoke emotions (e.g., Andrews et al., 2014) and to serve as "proof" of claims (Rickard et al., 2017). Based on this, visuals have relevant applications for showing the benefits of participating in a parenting program. Explanations of how people will benefit from therapy are a common part of therapy preparation materials (Walitzer et al., 1999) and parenting program recruitment videos (Javier et al., 2019; Winslow et al., 2018). However, oral descriptions can be abstract and lack emotional vividness (Patterson et al., 2008). Textual descriptions (e.g., a handout) of a programs' benefits may also be uninspiring, lacking concreteness and emotional resonance.

In line with the adage, "A picture is worth a thousand words," there is considerable empirical evidence that visually depicting the consequences of a behavior is more persuasive than simply describing consequences (e.g., Brennan et al. 2019; Chang, 2013; Lee et al., 2011). This research suggests that to encourage behavior change, we should visually *show* people how they will benefit, be harmed, or be at risk, rather than *tell* them. Consequently, visuals are harnessed in behavior change interventions (Michie et al., 2013) and public health campaigns (Brennan et al., 2019) to shift attitudes and action. Visual persuasion is also widely employed in commercial advertising and marketing to sell products and services (Messaris, 1997), such as

before-and-after photos and video testimonials. Direct-to-consumer advertisements for prescription drugs similarly make use of visuals to demonstrate the effectiveness of a drug (Sullivan et al., 2021), often by showing people who have seemingly benefited (Welch Cline & Young, 2004).

One reason visuals are so persuasive is because they are interpreted by people as "proof" of a claim (Rickard et al., 2017). Visuals are also powerful because they can evoke emotions. For example, showing people graphic depictions of the adverse effects of smoking was found to induce fear, which, in turn, led people to think negatively about smoking and want to quit (Andrews et al., 2014). Similarly, a visual-based story about alcohol consumption causing breast cancer elicited negative emotions in participants and, in turn, greater intentions to reduce alcohol use (Ma & Yang, 2022). Sontag (2018) found that showing people photographs of a happy person who recovered from depression evoked positive emotions, which then increased their aspirations to be like that person. Therefore, the positive visuals inspired people because they made them feel *good*. In sum, visuals can make people *feel* a certain way, and these feelings can make people think and act differently. This is in line with the extensive empirical literature documenting the persuasiveness of emotions (Nabi & Green, 2015; Nabi et al., 2020).

The research described above suggests a story intended to engage families could benefit from visuals and can show families what they will gain. According to the transportation-imagery model (Green & Brock, 2002), making a story with a parent model visually-based (i.e., a narrative told through illustrations or photographs; Ma & Yang, 2022) will further persuade families. The transportation-imagery model posits that the more people are absorbed (i.e., transported) into the storyline, the more they are impacted; there is an extensive literature on transportation as a mediating variable to explain the persuasive effects of narratives (Van Laer et

al., 2014). The experience of being transported involves being absorbed in the message/story, being emotionally affected, and being able to picture oneself in the storyline's events (Green, 2021). Visuals, therefore, may further transport people given their ability to evoke emotions (e.g., Andrews et al., 2014; Ma & Yang, 2022; Sontag, 2018), hold attention (e.g., Houts et al., 2006), and make concepts feel concrete (e.g., Lee et al., 2011).

## **How Can These Principles, Research, and Theories be Translated to Practice?**

### ***A Parent Story to Engage Families in Parent-Child Interaction Therapy***

The following section discusses the application of persuasive communication methods (e.g., modeling), as well as additional evidence-informed techniques, to craft a visually-based, theoretically-grounded video for families beginning Parent-Child Interaction Therapy (PCIT; Eyberg, 1988). PCIT was selected as the target program for the video because dropout rates are higher in PCIT compared to shorter parenting programs (Timmer et al., 2021), and engaging families remains a considerable challenge (Lieneman et al., 2019; Timmer et al., 2021). Many families choose to leave PCIT after the first few sessions, before significant improvements occur (Lieneman et al., 2019). Because information and skills are gradually rolled out in PCIT (e.g., parents learn relationship skills, followed by discipline skills), families who drop out early miss key parts of the program, such as how to discipline in a consistent and non-coercive manner (McGoron & Ondersma, 2015). Promoting engagement and preventing early termination from PCIT is warranted because PCIT is shown to be a powerful program (Thomas et al., 2017), and effective among a diverse range of cultures, ethnicities, populations, and diagnoses (e.g., Bagner & Eyberg, 2007; McCabe & Yeh, 2009; McNeil et al., 2005; Timmer et al., 2005).

The video-based story created for the current study is about one fictional mother's experience in PCIT. Her parenting experiences and treatment-related attitudes and challenges are

rooted in the engagement literature and based on parent interviews and focus groups. This serves to make her story realistic and relatable, in order to increase persuasiveness (Tukachinsky & Tokunaga, 2013). Good stories also need to be grounded in theory to explain the character's actions (Kreuter et al., 2007). The mother's engagement and decision-making can be understood in terms of the previously described social cognitive theory (Bandura, 2003), as well as the barriers to treatment model (Kazdin et al., 1997). The ensuing discussion is an abridged version of the story, with select visuals presented. It does not fully capture the nuances of the story or the scope of the embedded techniques. Rather, it serves to illustrate the practical application of key principles and describe the instrument that will be evaluated in the current study.

**Who Tells the Story and What is it About?** The story's protagonist is a mother, "Lucy," who participates in PCIT with her son "Ezra." Lucy recounts the PCIT experience from her viewpoint to increase the story's persuasiveness (Chen & Bell, 2022). The story starts with Lucy desperately looking for help to address Ezra's out-of-control, challenging behaviors (shown in Figure 1). She deeply desires for her son

to be able to handle himself well, and for them both to have a better life.

Lucy joins a social media support group for parents of children with behavior problems where she learns about PCIT. She enrolls in PCIT, but her hopes quickly wane when she

learns about PCIT's methods and the need for active parental involvement. During the second week of PCIT, Ezra's behaviors are still not improving, leading Lucy to wonder whether it is

**Figure 1**

*A Depiction of Challenging Behaviors*





worthwhile to participate. This indecision unleashes a host of fears about what will happen if Ezra's behaviors continue to go unchecked. As a last resort, Lucy inquires about other parents' experiences with PCIT, and based on their advice to stick with it, she decides to give PCIT another try. By sticking with PCIT, Lucy realizes her power to positively impact her son.

**What is the Story's Message?** As the story's main messenger, Lucy delivers and models a message about how engaging in PCIT was worth it to help her child. Lucy is the messenger because parents trust other parents (Morawska et al., 2011), and it is important to use a trusted messenger in health communications (Kreuter et al., 2007). The story's central message is to "stick with it." The message is derived from interviews and focus groups with parents who advised about the need for perseverance in parenting programs (e.g., Assemany, 2004; Handman, 2022; Zeedyk et al., 2008).

"Stick with it" is considered a gain-framed message. Gain-framed messages highlight the advantages of engaging in a behavior or complying with a recommendation (O'Keefe & Jensen, 2009). In a systematic review of videos to change health behaviors, most used gain-framed messages to promote behavior change (Tuong et al., 2014). This type of messaging may be persuasive because it makes people feel good; a meta-analysis found that gain-framed messages effectively elicited positive emotions, and the more people were emotionally moved, the more they were persuaded (Nabi et al., 2020).

The "stick with it" message is strategically embedded in the story's structure and events. A systematic review found that persuasive health-related narratives commonly weave the message into the sequence of events (De Graaf et al., 2016). In line with this, the message first appears in parent-to-parent social media posts, and then is shown through Lucy's actions. At the end of the story, Lucy recommends to other families to "stick with it" in her own social media

post. Message repetition and explicit recommendations to the audience are two facets of high-quality health narratives (Kreuter et al., 2008).

Lucy serves as an exemplar for engagement, or "sticking with it." She models persisting through challenges, staying open to the treatment techniques, and making PCIT part of everyday life. Using a parent model to exemplify engagement can show families what it means to engage, prepare them for challenges, and persuade them that they are capable and that it will pay off.

### **What Does the Mother Model?**

*Seeking Out Help.* The first positive action modeled by Lucy is the decision to enroll in PCIT. Parents can be hesitant to seek mental health services, and a common barrier is the belief that the child's problems will naturally improve over time (Pavuluri et al., 1996). This is reflected when Lucy asks parents in a support group whether challenging behaviors will get better. As shown in

**Figure 2**

*The Mother Asks if Misbehaviors Improve With Age*



Figure 2, parents of older children warn her that the behaviors can intensify if they remain unchecked, and express regret about not getting professional help when their child was young. This, along with parent recommendations that PCIT can help, prompts Lucy to enroll in PCIT. In this scene she is modeling an active investment in her son's mental health care.

### ***Persisting Through the Awkward, Unexpected, and Challenging Parts of Therapy.***

Based on other parents' endorsements, Lucy is hopeful about PCIT. Parents have anticipatory expectations about what their child's therapy will be like (Dew & Bickman, 2005). Many parents

in PCIT anticipate that a therapist will "fix" their child, rather than focus on their parenting (McNeil & Hembree-Kigin, 2011). As seen in Figure 3, Lucy imagines PCIT to be like individual child therapy without her direct involvement.

Lucy's enthusiasm wanes when she discovers more about how PCIT works. After learning about a program, parents form judgments about its helpfulness and utility, and some attitudes and

**Figure 3**

*The Mother's Misconceptions About Her Son's Therapy*



beliefs can be a barrier to engagement (Johnston et al., 2010). Parents' expectations concerning their role in treatment are linked to their willingness to participate, and when there is a mismatch of expectations, parents are more likely to drop out (Miller & Prinz, 2003). When Lucy realizes that *she* is the focus of therapy, she is caught off guard, leading to a shift in attitudes and feelings. Her emotions turn from hope (Figure 3) to discomfort (Figure 4). An emotional shift in the storyline is a tactic shown to make health messages more persuasive (Nabi, 2015). As seen in Figure 4, Lucy is illuminated by a spotlight to represent her feelings of self-consciousness.

**Figure 4**

*The Mother's Self-Consciousness and Discomfort Being Observed and Coached*



Parents can feel uncomfortable and anxious about PCIT's focus on the parent and being observed from behind a one-way mirror (Assemany, 2004; Kohlhoff et al., 2019; McNeil & Hembree-Kigin, 2011). Parents can also feel sensitive to being coached through an earpiece and can construe coaching as criticism rather than advice (Assemany, 2004).

Lucy's dissatisfaction with the treatment approach and requirement for active parent involvement is due to her low parenting self-efficacy, common among parents of children with behavioral problems (e.g., Baden & Howe, 1992). Parents who question their ability to shape their child's behavior view parenting programs as less acceptable (Chase & Peacock, 2017) and less likely to work (Jiang et al., 2014; Johnston et al., 2010; Nordstrom et al., 2008). In line with this, Lucy begins to doubt PCIT because she doubts that *she* is capable of driving change in her son's behavior. Lucy also expresses concerns about the effectiveness of PCIT's techniques, specifically the utility of play for helping behavior problems. Play is a large component of many parenting programs, however parents are often skeptical about play, and can view it as unrealistic and too positive (Furlong & McGilloway, 2012). As the story builds, Lucy's low parenting self-efficacy and low expectancies contribute to her almost dropping out, as explained by social cognitive theory (Bandura, 2003) and in line with the empirical literature (e.g., Chacko et al., 2017; Nock et al., 2007).

The final obstacle concerns Lucy's beliefs about change trajectories. Ezra's destructive behaviors continue into the second week of PCIT, as shown in Figure 5. Lucy discloses, "It was an awful

**Figure 5**

*The Mother's Concerns About Lack of Improvements*



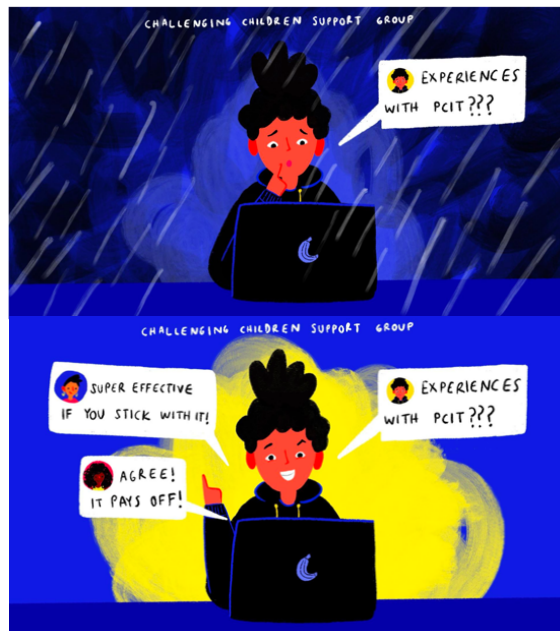
week. I have to be honest, I was *really* questioning whether PCIT was working at all. Was it all a waste?". Child behavioral improvements can be gradual (Lanier et al., 2011; Lindhiem & Kolko, 2010), and families who expect quick changes are more likely to drop out early (McCabe, 2002).

The story reaches a climax due to the experiences, beliefs and feelings discussed above.

These include: Lucy's initial misconceptions about her role in therapy; doubts about the skills and her capability to make therapy work; and beliefs about how quickly change should be happening. These attitudinal barriers culminate, and Lucy deliberates whether to stop treatment during week three. This is in line with the barriers to treatment model which proposes that the more barriers add up, the more families are likely to drop out (Kazdin et al., 1997). This is also the point in time when the majority of dropout occurs (Lanier et al., 2011; Liebsack, 2016).

**Figure 6**

*Introduction of the "Stick With It" Message*



Rather than dropping out, Lucy models the decision to seek opinions about PCIT from her peers in the support group. Parents who completed PCIT encourage her to "stick with it." This is the first explicit introduction of the story's message (Figure 6). Based on the parents' advice, Lucy decides to give PCIT another chance, modeling commitment and determination.

***Actively Participating in PCIT/ Being an Agent of Change.*** The remainder of the story centers around Lucy modeling engaging outside of session and staying the full course of treatment, as well as showcasing the benefits that arose from this. A considerable amount of the

**Figure 7**

*Consistent Implementation of Special Playtime*



graphic (Figure 7) is used to depict Lucy's consistency in doing special playtime. This is important to model because at-home practice of skills accounts for changes in parenting above and beyond attendance (Berkel et al., 2018).

Lucy models special playtime consistency and repetition in order to encourage families to develop their own special playtime habit. A parallel goal is to foster positive attitudes about special playtime, which is important because between-session homework rates are low in PCIT (Danko et al., 2016; Stokes et al., 2016). This is often due to parents not buying into the homework rationale and perceiving it to be unhelpful and burdensome (Chacko et al., 2013). Multiple techniques are utilized to foster positive views about the value of special playtime. As shown in Figure 8, Lucy is seen

enjoying playtime with her son. Her positive facial expressions may help shape the viewers' attitudes, because people use the emotional expressions of others as a source of information when

story is devoted to modeling implementation of "special playtime."

In PCIT parents are assigned to do daily special playtime at home, which entails practicing the skills while playing with their child for five minutes. A calendar

**Figure 8**

*The Mother Shown Enjoying Special Playtime*



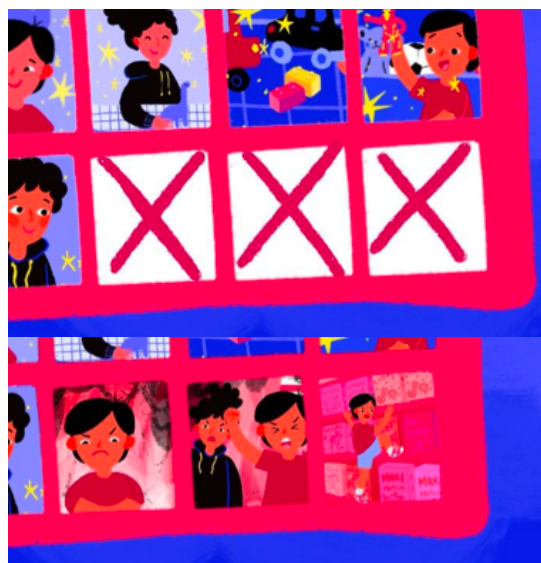
they form attitudes (Van Kleef et al., 2015). Lucy makes the case that special playtime has been instrumental in improving the relationship with her son, stating, "The more we did it, the more the vibe between us started to change." Making a case for why a behavior is valuable is a widely used method to change attitudes about a behavior (Hamilton & Johnson, 2020; Michie et al., 2013).

It is equally important to emphasize how special playtime can address behavior problems, as this is the primary reason parents seek PCIT (McNeil & Hembree-Kigin, 2011). To address this, a technique termed loss-framing is used, which focuses on the disadvantages of *not* engaging in a behavior (O'Keefe & Jensen, 2009). To emphasize what is lost by not doing consistent special playtime, Lucy shares, "Ok, so this one week I learned a hard lesson after our special playtime routine slipped. Ezra was having some *really* hard days" (Figure 9).

Lucy then states what is gained once they resume regular special playtime: "It really clicked for me. Special playtime is like *medicine* to help my son have more good days." Metaphors are one technique to provide rationale for therapeutic activities (Burns, 2007) and rationales are shown to impact expectancies about the helpfulness of therapy (Ahmed & Westra, 2009; Arch et al., 2015). Overall, the intent is to show how Lucy's actions contribute to improvements and underscore the importance of engaging outside of session. The story also features Lucy participating in coaching and staying the full

**Figure 9**

*The Consequences of Not Doing Consistent Special Playtime*



**Figure 10**

*The Mother Modeling Engagement*



course of treatment (Figure 10), which are two other dimensions of engagement that contribute to positive outcomes (Baydar et al., 2003; Lieneman et al., 2019).

**What Benefits are Shown?** In order to show the payoff and value of engaging

in PCIT, the visuals highlight improvements in Ezra's behaviors, Lucy and Ezra's relationship, and Lucy's confidence as a parent. Collectively, the visuals are intended to elicit hope. Dillard and Nabi (2006) explain that when developing persuasive emotion-based appeals, it is important to consider in advance which emotion will be the most effective for achieving the desired outcome. For example, if the goal is to convince people about the health hazards of cigarettes, it would be most productive to elicit disgust so people create a negative association with smoking. If the goal is to help people feel capable and recognize that it is possible to make positive changes, Dillard and Nabi (2006) recommend that the message evokes hope. The visuals in the current story are meant to inspire hope about improvements in the child's functioning, the parent-child relationship, and parents' well-being and confidence, in order to show demoralized families that it *is* possible to make a difference.

***Positive Child Behaviors in Day-to-Day Life.*** Figure 11 presents some of the visuals showing Ezra's positive and adaptive behaviors in everyday life. One example is Ezra holding Lucy's hand in a public setting. Children running off in potentially dangerous locations (e.g., a



**Figure 11**

*The Child's Improved Behaviors in Day-to-Day Life*



parking lot) is a common challenge among families in PCIT, and safety is a primary concern. Ezra is also shown behaving well at mealtimes as this can be a struggle for many families, as can brushing teeth, another day-to-day task which can easily provoke tantrums and be stressful for parents.

*The Strengthened Relationship.* The visuals in Figure 12 depict satisfying and rewarding interactions between Lucy and Ezra. This is important to highlight because behavior problems are associated with significant parenting distress and conflictual interactions (Barroso et al., 2018; Williford et al., 2007). The visuals, intended to capture a mutually beneficial parent-child relationship, are based on

**Figure 12**

*The Strengthened Parent-Child Relationship*

guidelines from FrameWorks Institute, an organization that provides evidence-informed recommendations for communications about social issues. According to FrameWorks (2020), messaging



to promote healthy relationships with caregivers in early childhood often centers solely on how children benefit. FrameWorks recommends that the message acknowledge the joy, pleasure, and gratification that come from strong relationships, and how *both* children and caregivers benefit. As such, the visuals are intended to portray Lucy's contentment in her parenting role, and the meaningful and emotionally rewarding relationship she has built with her son in PCIT.

***Parental Empowerment and Confidence.*** The visuals shown in Figure 13 signify Lucy's new identity as a confident mother. Here, Lucy shares examples of the tools she gained in PCIT (e.g., rules and limits), and her body language represents the empowerment that comes from having a way to help her son. Showcasing the functional benefits (e.g., having effective tools) along with the emotional benefits (e.g., being empowered) is important; health narratives that include the emotional benefits are more persuasive than narratives that include only the

functional benefits (Keer et al., 2013). Parents of children with behavior problems often feel powerless and helpless (Webster-Stratton & Spitzer, 1996), therefore showing the mother's transformation may appeal to a psychological need to be effective and have certainty in knowing what to do. Portraying the mother's new identity may also inspire parents. Sontag (2018) found that when people see photographs of an individual who has recovered from depression, it induces positive emotion and, in turn, aspirations to

**Figure 13**

*The Mother's Empowerment*



be like that person. Therefore, visuals of the mother's new identity may make parents feel good, and inspire them to engage with the program in order to also feel more capable and empowered to positively impact their child's development.

### **Current Study**

In light of the pressing need for practical tools to engage families in parenting programs, the current study aims to assess the utility of a theory-driven, empirically informed video in helping to meet these needs. The study seeks to examine the effectiveness of the above-described parent story video, which integrates storytelling, parent modeling and visual techniques to foster positive views about parenting programs, and ultimately increase participation. This multi-part investigation first evaluates the impact of the parent story on parents' expectancies, attitudes, anticipated commitment and parenting self-efficacy. Secondly, it seeks to answer the question of *why* the parent story may persuade families more than an informational video. To address the latter aim, transportation will be explored as a mediating variable. Transportation is the psychological experience of being fully immersed in the story/message, emotionally impacted, and able to envision oneself participating in the events described, such as engaging in a parenting program (Green, 2021).

**Aim 1:** The first aim is to examine whether the parent story is more persuasive than a standard-of-care informational video about PCIT. It is hypothesized that the parent story will result in higher expectancies about PCIT's helpfulness (H1a); more favorable attitudes towards PCIT (H1b); greater levels of anticipated commitment to PCIT (H1c); and higher parenting self-efficacy (i.e., the belief that one can influence their child's behavior) (H1d).

**Aim 2:** The second aim is to investigate which communication approach is more effective in transporting people. It is hypothesized that the parent story will yield greater levels of transportation compared to the informational video (H2).

**Aim 3:** The third aim is to examine the potential mediating role of transportation. Drawing from the transportation-imagery model (Green & Brock, 2002) and supporting evidence for transportation's persuasive impact (Van Laer et al., 2014), it is expected that transportation will mediate the association between the parent story and expectancies (H3a), attitudes (H3b), anticipated commitment (H3c), and parenting self-efficacy (H3d).

## **Methods**

### **Participants**

Participants were parents with a biological child between the ages of 2 and 8 years, recruited from Prolific. Prolific is an online platform for collecting survey and experimental data. Compared to similar platforms such as Amazon's Mechanical Turk (MTurk), Prolific is shown to yield higher quality data. Prolific participants are more likely to provide meaningful responses, pass attention checks, follow instructions, and work slowly enough to comprehend all items, compared to MTurk participants (Douglas et al., 2023).

Prolific offers a built-in screening system for the recruitment of a specific population. Researchers are able to filter participants based on demographic factors (e.g., gender identity, age, and nationality) and other criteria (e.g., parenthood status). The study is only made visible to eligible participants, however they are unable to see the study's specific recruiting criteria. For the current study, individuals needed to live with a biological child born between 2015-2021, be fluent in English, and reside in the United States. To ensure participants were representative of parents in PCIT, the recruitment strategy aimed for a sample of approximately 25% male and

75% female, given that 13-21% of parenting program attendees are fathers (for a review, see Tully et al., 2017). To participate, individuals also needed a Prolific approval rating over 95%, which indicates a history of reliable responding (Chandler & Shapiro, 2016), and is a recommended guideline in crowdsourced data collection (Peer et al., 2014).

The study was conducted from July 12, 2023 - July 25, 2023, and study spots were made available in small batches on both weekends and weekdays. This approach is recommended by Lu et al. (2022) when collecting crowdsourced data because weekday participants are found to differ from weekend participants in terms of employment status. In addition, the batches were released at various times throughout the day (i.e., morning, afternoon, early evening, and night) to avoid temporal bias (Young & Young, 2019), as well as accommodate different time zones and participation after work and childcare obligations.

In total, 294 participants completed the study and 14.9% ( $n = 44$ ) were excluded, resulting in a final sample of 250 individuals. The majority of excluded individuals showed evidence of inattentive and careless responding, which signaled their need for removal from the dataset (e.g., Chandler et al., 2020; Lu et al., 2022). Following best practices, multiple methods were used to assess and safeguard against low quality responding, including participant response time for each questionnaire, inconsistent answers on reverse coded questions, and attention checks (Hunt & Scheetz, 2018; Lu et al., 2022; Young & Young, 2019). Of the 44 excluded participants, 27 were removed for meeting at least two out of the three following criteria: completing the measures extremely quickly, not passing consistency checks, and failing attention checks. An additional four participants were excluded for an exceptionally fast response time, which was less than the minimal time needed to comprehend the questions (e.g., 7 seconds spent on a block of 24 questions).

The remainder of individuals ( $n = 13$ ) were excluded because they were not part of the target population. This information was discovered through a validity check and participant-provided comments. As discussed, Prolific's pre-screening feature was used to recruit parents with a child born between 2015 to 2021. As recommended (e.g., Lu et al., 2022), a screening question was embedded in the study to validate that participants actually had a child within the 2-8 year age range. This validity check resulted in the removal of six individuals due to their child being outside of that age range. Finally, seven participants were excluded because they provided a comment at the end of the study indicating that they answered in a way that could have affected their responses, and/or that their responses may not be valid (e.g., they had their teenager in mind rather than their young child; their child had nonverbal autism and they would not be able to participate in PCIT).

Table 1 presents the demographic characteristics of the final sample ( $N = 250$ ). Most of the participants identified as female (73.6%). The sample's racial/ethnic composition was 68.4% White/Caucasian, 14% Black/African American, 9.6% Hispanic/Latino, 3.6% Asian/Pacific Islander, 2.4% multiracial/biracial, and 1.6% Native American/Alaskan Native. Participants were relatively well-educated, with over half holding a bachelor's degree or greater (54.8%). The majority of participants was married (67.2%) and had a household income of over \$50,000 (65.2%). Approximately half of the parents indicated that they had received a mental health disorder diagnosis (47.2%) and prior treatment (56.0%), and 17.6% had PHQ scores above the clinical cutoff, indicating the likelihood of major depressive disorder. Most parents had just one child between 2-8 years of age (68%), while 28.4% had two children, and 3.6% had three children in this age range. If parents had more than one 2-8 year old child, they were asked to report on whichever child had the most behavioral difficulties, or to select one child if none of

their children had behavioral difficulties. Of the children, 20.8% had a diagnosed mental health or developmental disorder, and 19.2% had previously participated in services.

## **Procedures**

All study procedures were approved by the University of California, Davis Institutional Review Board. The study was listed on the Prolific platform ("Watch a video about therapy and answer some questions") and visible only to eligible people. The description included basic information (e.g., people would be asked to complete questionnaires about their child and themselves), study requirements (needed to use a laptop, desktop or tablet computer with working audio and answer all questions in order to receive compensation), approximate length (20 minutes), and compensation amount (\$4.00).

Upon accepting the survey, participants were provided with a Qualtrics link, where they encountered an online consent form, followed by demographic and clinical history questions about their 2-8 year old children, and a questionnaire about the presence of child behavioral problems. Similar to Schleider and Weisz (2018), if the parent had multiple children between the ages of 2 and 8, he/she was asked to answer the clinical history items and measure of behavior problems for the child identified as having the most challenges or, select one child if they had no concerns. After this, participants completed baseline measures of parenting self-efficacy. Participants were then randomly assigned to watch the informational video or parent story video with the Qualtrics randomization feature. Both groups were told they would be watching a video about Parent-Child Interaction Therapy, and to watch the whole video and ensure that sound is on. Participants were unable to fast forward or advance to the next page until the video was complete. After the video played, the transportation questionnaire was administered. Participants were then asked to provide comments or suggestions about the video in an open-ended text box,

and to complete the expectancies, attitudes, and anticipated commitment questionnaires and a follow-up measure of parenting self-efficacy. Participants then completed a depression screener and provided demographic and clinical history information, as well as any additional feedback.

### **Video Conditions**

Both conditions watched a video about PCIT matched in terms of informational content and messaging. The control condition saw an audiovisual presentation with text on screen read aloud by the study's author, and very simple graphics. A standard-of-care approach was used for the control condition, and the video was designed to approximate a therapist's description of PCIT provided to families during the intake session. Typically, families are shown a handout about the program while the therapist verbally reviews and elaborates on the handout's content. To approximate this, a recorded slideshow presentation was created. The slides had limited text in bullet point format. The word choice was based on a handout about PCIT created by the UC Davis Child and Adolescent Abuse Resource Evaluation Diagnostic and Treatment (CAARE) Center (See Appendix A). Each slide contained a black and white graphic (e.g., stick figures of a parent and child playing), and the slide about coaching showed a photograph of a PCIT therapist coaching a parent. Information on the slides was read aloud and briefly expanded on by the narrator. The tone of the narration was neutral, and the video was largely informational and devoid of emotional content. Total running time was 5 minutes and 28 seconds. Please refer to Appendix B for the script.

The experimental condition watched a visual story about PCIT told from a parent's first-person perspective. Illustrations of a mother and son participating in PCIT were created by a professional artist. The illustrations capture the experience of doing PCIT and the emotions a parent might feel before, during, and after treatment. The story's script was written in



conversational language, as though a parent were speaking to another parent, and was narrated by a professional voice-over actress. Total running time was 7 minutes and 17 seconds.

Informational content was matched as much as possible between conditions. Topics covered in both included: PCIT's target audience, the two phases and goals of treatment, the structure and format of sessions (i.e., parents are coached while playing with their child), parents' role during and between sessions, the benefits of practicing the skills at home, and PCIT's research base and outcomes. Both videos also included a message about the importance of engaging in treatment in order to achieve positive outcomes. In the standard-of-care video, the message was in the form of bulleted text on screen (i.e., "How to get good results. PCIT requires commitment and active involvement: coming to session each week, doing special playtime every day and practicing the skills"). In the parent story, however, the same message was embedded in the form of advice from one parent to another to "stick with it." The mother also models this advice, in order to visually demonstrate what it means to stick with it. Please refer to the literature review portion for comprehensive information about the parent story and Appendix C for the script.

## **Measures**

### ***Parent Demographic and Clinical History Questionnaire***

The parent demographic questionnaire asked about parents' age, gender identity, race/ethnicity, education, family income and marital status. Clinical history questions inquired about prior mental health disorder diagnosis (yes/no), participation in mental health services (yes/no), and, if applicable, the type of treatment (individual therapy/group therapy/psychiatric services/online/text therapy/other).

### ***Child Demographic and Clinical History Questionnaire***

The child demographic questionnaire asked about the number of participants' children, and the ages and gender of their 2-8 year old children. Parents with more than one 2-8 year old child were asked to complete the clinical history items in regard to the child whose behaviors concerned them the most, or to choose one child if they had no concerns. Child clinical history questions inquired as to whether the identified child had been diagnosed with a developmental or mental health problem (yes/no), whether the child had received mental health services or mental health help (yes/no), and, if so, the type (individual therapy/group therapy/family or parenting therapy/other).

### ***Parental Depressive Symptomology***

Depressive symptomology was assessed with the 2-item *Patient Health Questionnaire-2* (PHQ-2; Kroenke et al., 2003). The PHQ-2 consists of the first two items from the *Patient Health Questionnaire-9* (PHQ-9; Kroenke et al., 2001), and is used to screen for depression. The items inquire about the frequency of depression symptoms (specifically regarding mood and pleasure) experienced in the past two weeks. Items are rated on a 4-point scale ranging from 0 (*not at all*) to 3 (*nearly every day*), and are summed to produce a total score ranging from 0-6. When used as a screener, cutoff scores of 3 or greater indicate that major depressive disorder is likely (Staples et al., 2019). The PHQ-2 is shown to be a reliable and valid screening tool (Löwe et al., 2005; Staples et al., 2019).

### ***Child Challenging Behaviors***

Challenging behaviors were measured with the *Weekly Assessment of Child Behavior-Positive* (WACB-P; Timmer et al., 2021), a 9-item caregiver report of behaviors for children ages 2 to 12 years. The WACB-P can be used to assess and screen for challenging and positive

behaviors common among children in this age range. For each item, caregivers report on the intensity of the behavior (i.e., how frequently the behavior happens) on a 7-point scale ranging from 1 (*never*) to 7 (*always*). Scores are summed to yield a total intensity score, with lower scores indicating more challenging behaviors, and higher scores indicating more positive behaviors. In a psychometric analysis, the WACB-P was shown to have good internal reliability, with Cronbach's alpha coefficient ranging from .83-.87, and evidence for strong convergent validity with the *Eyberg Child Behavior Inventory (ECBI)*; Robinson et al., 1980), an established measure of child behavior problems (Timmer et al., 2021). Chronbach's alpha was .90 in this study.

### ***Parenting Self-Efficacy***

Parenting self-efficacy was assessed with six items combined from two established measures. Five items were derived from the Parental Efficacy Subscale of the *Parenting Locus of Control* (Campis et al., 1986). This subscale is shown to discriminate significantly between parents of children with behavior problems and parents of children with no identified difficulties (Campis et al., 1986), and has been shown to have good internal and test-retest reliability (Freed & Thompson, 2011). Following the approach of Lovejoy et al. (1997) and Hassall and McDonald (2005), items from the original 10-item subscale with the highest factor loading were selected (Campis et al., 1986). The items are as follows: (1) "What I do has little effect on my child's behavior"; (2) "No matter how hard a parent tries, some children will never learn to mind"; (3) "If your child tantrums no matter what you try, you might as well give up"; (4) "When something goes wrong between me and my child, there is little I can do to correct it"; (5) "Parents should address problems with their children because ignoring them won't make them go away." An additional item ("I believe I can learn to change my child's behavior") was added

from the Perceived Ability to Change subscale of the *Parent Motivation Inventory* (Nock & Photos, 2006). Items are rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), and four of the six items were reverse scored. Scores are summed to produce a total parenting self-efficacy score, with higher scores representing a greater sense of effectiveness in parenting. Parents completed the measure at two time points, before and after receiving information about PCIT. Reliability in the current study was  $\alpha = .73$  and  $\alpha = .76$ , respectively. Please refer to Appendix D for a list of the items.

### ***Transportation***

Transportation was measured with four items adapted from Green and Brock's (2000) *Transportation Scale*. The original 15-item scale was created to assess the construct of being transported, or "hooked," into the storyline or message, and taps into different facets of transportation, including attentiveness, emotional investment in the storyline, and mental imagery (Green, 2021). The scale is commonly used in communications, media studies and psychology research to gauge a story's impact, and transportation is often examined as a persuasive mechanism (e.g., Van Laer et al., 2014).

Chen (2015) utilized four items from the original scale to measure transportation when viewing advertisement videos, and reported strong internal consistency, and adequate evidence for convergent and discriminant validity. The same four items used by Chen (2015) were used in the current study with some adaptations, including changing the item "affected me emotionally" to "moved me emotionally" to make the wording more commonplace. In addition, items were modified to ensure their relevance to PCIT. The resulting four items are as follows: "I could picture myself in Parent-Child Interaction Therapy (PCIT) as I watched the video"; "I was totally involved in the video while watching it"; "The video moved me emotionally"; "My mind

wandered while I watched the video." Participants rated their level of transportation on a 7-point scale, ranging from 1 (*not at all*) to 7 (*very much*). Scores were summed, with one item reverse scored, to yield a total transportation score. Higher scores indicate greater levels of transportation. For the current study, internal reliability was poor for the four-item scale ( $\alpha = .59$ ), so one item was removed ("My mind wandered while I watched the video"), which improved reliability. Chronbach's alpha for the three-item scale was .62. Please refer to Appendix E for a list of the items.

### ***Expectancies About PCIT's Effectiveness***

Parents' expectancies about PCIT's helpfulness were assessed with five items based on the *Credibility/Expectancy Questionnaire - Parent Version (CEQ-P)*; Nock et al., 2007). The CEQ-P was designed for clinical outcome studies to measure parents' perceived credibility and outcome expectancies for parent training. Outcome expectancies, which refer to beliefs about the benefits of therapy and the likelihood of positive outcomes (Constantino et al., 2012), are shown to predict engagement among adults in therapy (for a review, see Constantino et al., 2018) and parents in parenting programs (e.g., Corso et al., 2010; McCurdy et al., 2006; Nock et al., 2007; Nordstrom et al., 2008). In prior studies, the internal consistency of the CEQ-P has ranged from .79 to .90 (For a review see Hock et al., 2015).

The CEQ-P consists of six items and two subscales. Three items assess beliefs about the credibility of treatment, and three items assess expectancies for treatment effectiveness. The CEQ-P expectancies scale focuses solely on expectancies for improvement in child behavioral problems. For a more comprehensive assessment, it was deemed important to capture expectancies about a range of outcomes relevant to PCIT, including improvements in behavior problems, parenting stress and confidence, and the parent-child relationship. In the current study,

four of the items began with the prompt: "How successful do you think PCIT would be in...", followed by "...reducing your child's behavior problems/ reducing your parenting stress/ helping you feel more confident as a parent/ improving your relationship with your child." For each outcome, participants rated their expectancies on a 9-point scale ranging from 1 (*not at all*) to 9 (*very much*). Based on the CEQ-P, one item asked, "By the end of PCIT, how much improvement in child behavior problems do you think would occur?" and used an 11-point scale ranging from 0% to 100%. Chronbach's alpha for the scale was .94. Please refer to Appendix F for a list of the items.

### ***Attitudes Towards PCIT***

Attitudes were assessed with a study-created semantic differential scale, which is often used to evaluate attitudes in advertising (e.g., Spears & Singh, 2004) and communication and psychological research (Allen, 2017). Semantic differential scales feature a concept or noun, along with two opposing adjectives or phrases on either end of the scale (Allen, 2017) (e.g., "The advertisement is: Appealing/Unappealing"). Typically a 7-point rating scale is used, reflecting a continuum of attitudes, with the opposite ends of the scale representing extreme positive and negative attitudes. Respondents are asked to select the point on the scale that captures how they feel about the concept.

Thornton and Calam (2011) created a six-item semantic differential scale to gauge attitudes about group parenting programs and found that positive attitudes predicted intentions to attend. Based on this approach, a scale was created for the study, with 11 bipolar adjective pairs relevant to PCIT and PCIT's components. Participants responded to four sets of items concerning: (1) parental involvement; (2) play to help behavior problems; (3) practicing the skills at home; and (4) *in vivo* coaching. Examples include, "Being coached in the moment

sounds: Comfortable/Awkward"; "Being involved in my child's treatment: Is necessary for helping my child/ Is not necessary. That's a therapist's job." Items are rated on a 7-point scale, with 1 representing the most negative attitude and 7 representing the most positive attitude. Items are summed to form a single measure of attitudes, with higher scores indicating more positive attitudes towards PCIT. Cronbach's alpha was .85. Please refer to Appendix F for a list of the items.

### ***Anticipated Commitment***

Participants' anticipated commitment to PCIT was assessed with a 4-item measure created for the study, based on the *Treatment Acceptability/Adherence Scale (TAAS)* (Milosevic & Radomsky, 2013). The *TAAS* was designed to measure acceptability and anticipated adherence in anxiety-focused interventions. It is intended to be administered after an individual learns about the treatment, or during the first few sessions. The current study's measure was created to evaluate how much parents anticipate they would commit to a parenting program.

In line with the structure of the *TAAS*, the current study's measure includes both positively and negatively worded items. The *TAAS* item, "If I begin this treatment, I would likely drop out", was changed to "There's no way I would finish" to make the wording more extreme. One item was modified from the *Readiness for Parenting Change Scale (REDI)* (Chaffin et al., 2009) which was created to assess motivation among parents enrolled in a court-mandated parenting program. The *REDI* item "I am committed to completing this program, whatever it takes" was changed to "I would be committed to completing PCIT, whatever it takes" to allow for the questionnaire to be completed by people not currently enrolled in the program. One item was adapted from the *Expectations About Counseling-Brief (EAC-B)* (Tinsley, 1982), designed to gauge expectations about what participation in counseling entails (Anderson et al., 2013). The

EAC-B item "I expect to stay in counseling for a few weeks, even if it's not helping" was changed to, "I would stick with it even if it didn't seem to be helping." One item was based on the *Therapy Expectations Questionnaire (TEQ)*; McCabe, 2002) which was created to assess parents' expectations about parent training. The TEQ has a 2-item subscale intended to measure expectations about how quickly the child will improve. For the current study, the TEQ item, "If my child did not get better after a few sessions, the treatment is not working" was modified to "I would stop coming if my child did not get better after a few sessions" to gauge anticipated behaviors rather than perceptions of treatment.

Participants were instructed to imagine that they had been referred to PCIT and to rate the extent to which they agreed or disagreed with the statements on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Two items were reverse scored, and scores were summed to yield a total score, with higher scores indicating greater intentions to commit. Chronbach's alpha for this adapted measure was .85. Please refer to Appendix G for a list of the items.

### **Analytic Plan**

All analyses were performed using IBM SPSS (version 27). A series of *t*-tests and chi-square analyses were first conducted to examine whether there were any demographic differences between the conditions that needed to be controlled for. In addition, the groups were compared in terms of parental report of depressive symptomology and baseline parenting self-efficacy, as attitudes about parenting and parenting interventions have been reported as varying by both depressive symptom levels (e.g., Cohen et al., 2015; Schulte, 2008) and self-efficacy (e.g., Jiang et al., 2014; Johnston et al., 2010; Nordstrom et al., 2008), and therefore would need to be included as a covariate in main analyses if these characteristics varied by condition. Next,



descriptive analyses were conducted, and bivariate associations between dependent variables were examined. To address H1a, H1b, H1c, and H1d, independent samples *t*-tests were performed to examine whether expectancies about PCIT's helpfulness, attitudes about PCIT, anticipated commitment, and transportation levels differed between video conditions. To address H2, a one-way ANCOVA was performed to examine whether parenting self-efficacy differs between conditions after watching the video. Baseline parenting self-efficacy (i.e., parenting self-efficacy measured before showing the video) was included as a covariate.

To test H3a, H3b, H3c, and H3d, mediation analyses were performed using the PROCESS macro version 4.2 with the regression bootstrapping method (Hayes, 2013). Four sets of mediation analyses were conducted to examine the mediating effect of transportation on the relationship between video condition and expectancies about PCIT's helpfulness, attitudes about PCIT, and anticipated commitment to PCIT. To examine the mediating effect of transportation on parenting self-efficacy after viewing the video, an additional mediation analysis was performed with baseline parenting self-efficacy scores as a covariate. The models were tested based on 5000 bootstrap samples and a 95% confidence interval. The effects are significant if the confidence interval does not include zero (Hayes, 2013).

## **Results**

### **Randomization Check**

A series of *t*-tests and chi-square analyses were conducted to examine any group differences in demographics, baseline parenting self-efficacy, and parental depression. As shown in Table 1, results indicated no significant differences between participants in the two conditions, therefore no covariates were included in further analyses testing main hypotheses.

**Table 1***Sample Characteristics by Video Condition*

	Video condition			<i>p</i>
	Informational video	Parent story video	Total	
	<i>n</i> = 124	<i>n</i> = 126	<i>n</i> = 250	
	N (%) or Mean (SD)			
Parent age				.427
18-24 years	4 (3.2)	2 (1.6)	6 (2.4)	
25-34 years	49 (39.5)	41 (32.5)	90 (36.0)	
35-44 years	52 (41.9)	53 (42.1)	105 (42.0)	
45-54 years	16 (12.9)	25 (19.8)	41 (16.4)	
Over 55 years	3 (2.4)	5 (4.0)	8 (3.2)	
Parent gender identity				.327
Female	92 (74.2)	92 (73.0)	184 (73.6)	
Male	30 (24.2)	34 (27.0)	64 (25.6)	
Gender non-conforming	2 (1.6)	-	2 (0.8)	
Parent race/ethnicity				.347
Asian/Pacific Islander	3 (2.4)	6 (4.8)	9 (3.6)	
Black/African American	16 (12.9)	19 (15.1)	35 (14.0)	
Hispanic/Latino	16 (12.9)	8 (6.3)	24 (9.6)	
Native American	3 (2.4)	1 (0.8)	4 (1.6)	
White/Caucasian	83 (66.9)	88 (69.8)	171 (68.4)	
Multiracial/Biracial	2 (1.6)	4 (3.2)	6 (2.4)	
Prefer to self-describe	1 (0.8)	-	1 (0.4)	
Marital status				.239
Single	18 (14.5)	9 (7.1)	27 (10.8)	
Married	79 (63.7)	89 (70.6)	168 (67.2)	
Domestic partnership	16 (12.9)	18 (14.3)	34 (13.6)	
Separated	1 (0.8)	3 (2.4)	4 (1.6)	
Divorced	8 (6.5)	7 (5.6)	15 (6.0)	
Widowed	2 (1.6)	-	2 (0.8)	
Education				.066
< High school diploma	-	2 (1.6)	2 (0.8)	
High school degree or equivalent	36 (29.0)	32 (25.4)	68 (27.2)	
Associate's/ technical degree	26 (21.0)	15 (11.9)	41 (16.4)	
Bachelor's degree	43 (34.7)	59 (46.8)	102 (40.8)	
Master's degree	12 (9.7)	16 (12.7)	28 (11.2)	
Doctorate	6 (4.8)	1 (0.8)	7 (2.8)	
Other	1 (0.8)	1 (0.8)	2 (0.8)	
Household income				.307
< \$20,000	14 (11.3)	9 (7.1)	23 (9.2)	
\$20,000-\$34,999	17 (13.7)	9 (7.1)	26 (10.4)	
\$35,000-\$49,999	19 (15.3)	19 (15.1)	38 (15.2)	
\$50,000-\$74,999	23 (18.5)	31 (24.6)	54 (21.6)	
\$75,000-\$99,999	21 (16.9)	19 (15.1)	40 (16.0)	
> \$100,000	30 (24.2)	39 (31.0)	69 (27.6)	

Note. *p* values were obtained from Chi-square or *t*-tests.

**Table 1***Sample Characteristics by Video Condition*

	Video condition			<i>p</i>
	Informational video	Parent story video	Total	
	<i>n</i> = 124	<i>n</i> = 126	<i>n</i> = 250	
	N (%) or Mean (SD)			
Parent mental health diagnosis				.101
% Yes	65 (52.4)	53 (42.1)	118 (47.2)	
% No	59 (47.6)	73 (57.9)	132 (52.8)	
Parent previous mental health treatment				.514
% Yes	72 (58.1)	68 (54.0)	140 (56.0)	
% No	52 (41.9)	58 (46.0)	110 (44.0)	
PHQ score	1.40 (1.73)	1.33 (1.63)	1.36 (1.67)	.714
PHQ clinical cut off				.291
% Above	25 (20.2)	19 (15.1)	44 (17.6)	
% Below	99 (79.8)	107 (84.9)	206 (82.4)	
Baseline parenting self-efficacy	26.15 (3.36)	26.30 (2.95)	26.17 (3.29)	.713
Number of children	2.06 (1.00)	2.19 (1.12)	2.12 (1.06)	.320
Number of children between 2-8 years	1.34 (0.54)	1.37 (0.56)	1.36 (0.55)	.623
WACB-P score	41.81 (9.39)	41.63 (9.19)	41.72 (9.28)	.879
Child mental health/developmental disorder diagnosis				.948
% Yes	26 (21.0)	26 (20.6)	52 (20.8)	
% No	98 (79.0)	100 (79.4)	198 (79.2)	
Child previous treatment				.561
% Yes	22 (17.7)	26 (20.6)	48 (19.2)	
% No	102 (82.3)	100 (79.4)	202 (80.8)	

*Note.* *p* values were obtained from Chi-square or *t*-tests. *PHQ* = Patient Health Questionnaire-2. *WACB P* = Weekly Assessment of Child Behavior – Positive.

## Correlations

Table 2 presents correlations among primary outcomes. Expectancies about PCIT's helpfulness were strongly related to attitudes about PCIT, and moderately related to anticipated commitment. Transportation while watching the video was strongly related to expectancies, and moderately related to attitudes, anticipated commitment, and time two parenting self-efficacy.

**Table 2***Correlations Among Primary Outcomes*

Variables	1	2	3	4	5
1. Expectancies	–				
2. Attitudes	.70**	–			
3. Anticipated commitment	.58**	.61**	–		
4. T2 parenting self-efficacy	.28**	.37**	.37**	–	
5. Transportation	.72**	.60**	.51**	.31**	–

*Note.* T2 parenting self-efficacy = Time two parenting self-efficacy, measured after the video was shown.

\*\* $p < .01$ .

**Which Video Type is More Effective?**

An independent samples  $t$ -test was conducted to examine differences between video conditions in regard to expectancies about PCIT's effectiveness (H1a), attitudes about PCIT (H1b), anticipated commitment to PCIT (H1c), and transportation (H2). As shown in Table 3, results revealed a significant effect of video condition on expectancies about PCIT's helpfulness,  $t(248) = 2.57, p = .011$ . Viewers of the parent story rated PCIT to be more helpful and beneficial compared to viewers of the informational video, with a small effect size,  $d = .33$  (Cohen, 1988). Similarly, there were significant differences in anticipated commitment between groups,  $t(248) = 2.13, p = .034$ , with a small effect size,  $d = .27$  (Cohen, 1988). Participants who watched the parent story indicated that they would be more committed to PCIT than participants who watched the informational video. The groups also significantly differed in terms of transportation,  $t(248) = 4.71, p < .001$ , with a medium effect size,  $d = .60$  (Cohen, 1988). Viewers of the parent story reported being more transported while watching the video than did

viewers of the informational video. There was no significant difference between video conditions on attitudes about PCIT,  $t(248) = .27, p = .789$ . Positive attitudes towards PCIT after watching the video were similar among viewers of the parent story and the informational video.

A one-way ANCOVA was conducted to examine whether parenting self-efficacy differs between groups after watching the video, controlling for baseline levels of parenting self-efficacy (H1d). There was a significant difference between groups in levels of parenting self-efficacy after viewing the video, controlling for baseline parenting self-efficacy,  $F(1,247) = 4.83, p = .029$ . The effect size, calculated as eta squared ( $\eta^2$ ), was 0.02, indicating a small effect.

**Table 3**

*Differences Between Video Conditions on Outcomes*

	Video condition				<i>p</i>
	Informational video		Parent story video		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Expectancies	32.13	8.39	34.77	7.92	.011
Attitudes	68.58	7.26	68.83	7.63	.789
Anticipated commitment	22.15	4.67	23.33	4.15	.034
T2 parenting self-efficacy	27.35	2.90	27.96	2.54	.029
Transportation	15.50	3.12	17.39	3.22	< .001

*Note.* T2 parenting self-efficacy = Time two parenting self-efficacy, measured after the video was shown. *p* values were obtained from independent samples *t*-tests and an ANCOVA.

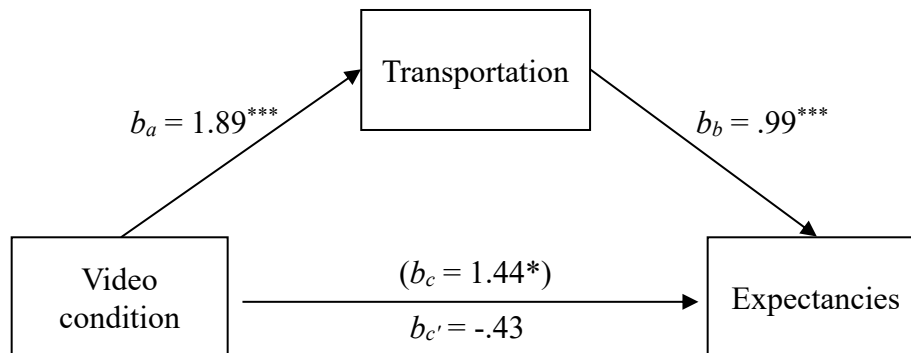
## Mediation Models: Does Transportation Into the Video Explain the Outcomes?

### *Expectancies About PCIT's Helpfulness*

Utilizing the PROCESS macro (Hayes, 2013), the first mediation model examined the mediating role of transportation in the relationship between video condition and expectancies about PCIT's helpfulness (H3a). Participants who watched the parent story video were more transported by the experience compared to participants who watched the informational video ( $b = 1.89, p < .001$ ). Greater levels of transportation were subsequently related to higher expectancies about PCIT's helpfulness ( $b = .99, p < .001$ ). The direct effect of video condition on expectancies was not significant ( $b = -.43, p = .29$ ). Results indicate that transportation fully mediated the association between video condition and expectancies. Please refer to Figure 14.

**Figure 14**

*The Mediating Effect of Transportation in the Relationship Between Video Condition and Expectancies About PCIT's Helpfulness*



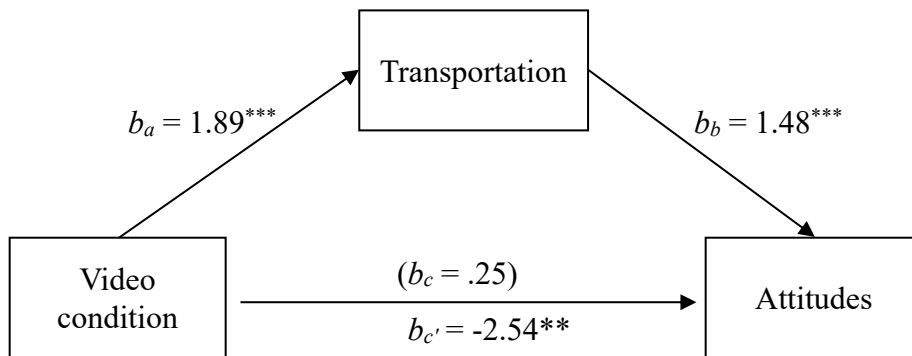
*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . All presented effects are unstandardized;  $b_a$  is the effect of video condition on transportation (the informational video is coded as 0, the parent story video is coded as 1);  $b_b$  is the effect of transportation on expectancies;  $b_{c'}$  is the direct effect of video condition on expectancies;  $b_c$  is the total effect of video condition on expectancies.

### *Attitudes About PCIT*

The second mediation model tested whether transportation mediated the relationship between video condition and attitudes about PCIT (H3b). As shown in Figure 15, participants who watched the parent story video were more transported, compared to participants who watched the informational video ( $b = 1.89, p < .001$ ). Greater levels of transportation while viewing the video was associated with more positive attitudes about PCIT ( $b = 1.48, p < .001$ ). Video condition also had a significant direct effect on attitudes ( $b = -2.54, p < .01$ ). Because both the indirect and the direct effects were significant, this indicates partial mediation. Transportation partially explained the relationship between video condition and attitudes about PCIT.

**Figure 15**

*The Mediating Effect of Transportation in the Relationship Between Video Condition and Attitudes About PCIT*



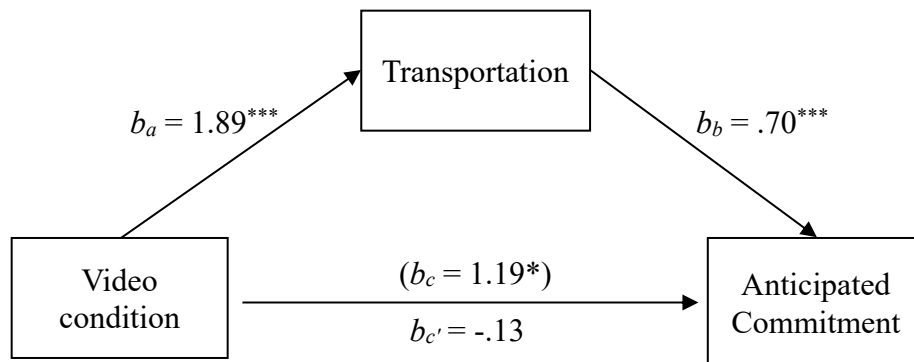
*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . All presented effects are unstandardized;  $b_a$  is the effect of video condition on transportation (the informational video is coded as 0, the parent story video is coded as 1);  $b_b$  is the effect of transportation on attitudes;  $b_{c'}$  is the direct effect of video condition on attitudes;  $b_c$  is the total effect of video condition on attitudes.

### *Anticipated Commitment to PCIT*

The third mediation model examined whether transportation explained the association between video condition and anticipated commitment to PCIT (H3c). As presented in Figure 16, there was a significant indirect effect of transportation in the relationship between video condition and anticipated commitment. Viewers of the parent story video reported being more transported into the video ( $b = 1.89, p < .001$ ), which in turn was associated with higher levels of anticipated commitment to PCIT ( $b = .70, p < .001$ ). The direct effect of video condition on anticipated commitment was not significant ( $b = -.13, p = .80$ ). This indicates that transportation fully explained the relationship between the parent story and anticipated commitment.

**Figure 16**

*The Mediating Effect of Transportation in the Relationship Between Video Condition and Anticipated Commitment to PCIT*



*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . All presented effects are unstandardized;  $b_a$  is the effect of video condition on transportation (the informational video is coded as 0, the parent story video is coded as 1);  $b_b$  is the effect of transportation on anticipated commitment;  $b_{c'}$  is the direct effect of video condition on anticipated commitment;  $b_c$  is the total effect of video condition on anticipated commitment.

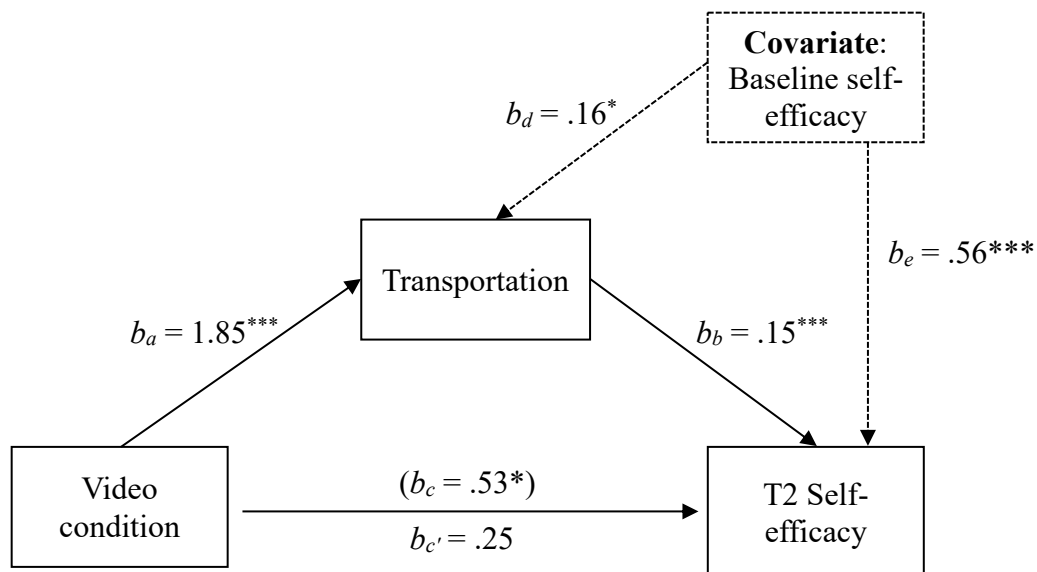


### Parenting Self-Efficacy

The fourth mediation model examined whether transportation mediated the relationship between video condition and parenting self-efficacy after watching the video, controlling for baseline parenting self-efficacy (H3d). There was a significant indirect effect of transportation in the relationship between video condition and parenting self-efficacy. Viewers of the parent story video were more transported ( $b = 1.85, p < .001$ ), which in turn was associated with higher levels of parenting self-efficacy ( $b = .15, p < .001$ ). The direct effect of video condition on T2 self-efficacy was not significant ( $b = .25, p = .73$ ). This indicates that transportation fully accounted for the relationship between the parent story and parenting self-efficacy (Figure 17).

**Figure 17**

*The Mediating Effect of Transportation in the Relationship Between Video Condition and Time Two Parenting Self-Efficacy*



*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . All presented effects are unstandardized;  $b_a$  is the effect of video condition on transportation (the informational video is coded as 0, the parent story video is coded as 1);  $b_b$  is the effect of transportation on parenting self-efficacy;  $b_c$  is the direct effect of video condition on parenting self-efficacy;  $b_c'$  is the total effect of video condition on parenting self-efficacy;  $b_d$  and  $b_e$  are the effects of the covariate on transportation and T2 parenting self-efficacy (i.e., self-efficacy, measured after the video was shown).

## Discussion

### The Persuasive Power of a Parent Story

The study evaluated an original video-based parent story intended for engaging families in parenting programs. The parent story, grounded in theory and guided by communication science best practices, was tested against a standard-of-care informational video about a parenting program. As hypothesized, viewers of the parent story perceived the parenting program to be more effective and beneficial than did viewers of the informational video, in terms of improving their child's behavior, reducing parenting stress, strengthening the relationship with their child, and boosting their confidence as a parent. The parent story also bolstered greater intentions to commit to the program and persevere through challenges and slow progress, compared to the informational video. Viewers of the parent story also reported feeling more efficacious and able to positively impact their child after watching the video, than did viewers of the informational video.

Contrary to expectations, participants viewing the parent story and informational video both reported positive attitudes about PCIT. One possibility is that parents in the sample had pre-existing positive attitudes about the parenting program components that were assessed with the attitudes scale (play, parental involvement, practicing at home, and coaching). If parents already felt positively about playing with their child, being involved in their child's treatment, practicing at home, and being coached in the moment, the communication approach may not have mattered much. In other words, there was no need to persuade if parents already held positive evaluations. Another possibility is that both communication approaches were equally effective in fostering positive attitudes about parenting programs. Overall, meta-analyses show that stories are more persuasive than informational approaches (e.g., Braddock & Dillard, 2016; Shen et al., 2015),

however some studies have found that narrative and informational communication strategies work equally well (De Graaf et al., 2016). In the realm of parenting programs, stories may be most useful when parents need to be convinced that something is possible in order to bolster their commitment, while simply providing information may be enough to shape attitudes.

Collectively these findings extend the existing evidence base on the persuasive power of storytelling (Shen et al., 2015). Compared to an informational video, the parent story was more effective in bolstering parents' belief in their own efficacy and the program's impact, and their intentions to commit to parenting change. Storytelling, as a form of communication is innately persuasive, as it is proposed to lower defensiveness (Oschatz & Marker, 2020). The power of the parent story may also have been due to the inclusion of a parent model, as a story's effectiveness can be enhanced by embedding additional persuasive techniques such as modeling (Bilandzic & Busselle, 2013; De Graaf et al., 2016). Finally the parent story may have been persuasive and compelling because of its ability to transport, that is absorb people into the story, capture their attention, and move them emotionally (Green, 2021).

### **Why the Story Worked: Unpacking the Role of Transportation**

Strong group differences emerged in terms of transportation. As hypothesized, viewers of the parent story reported being more transported when watching the video compared to viewers of the informational video. Participants who watched the parent story had higher overall transportation scores (i.e., summed scores), as well as higher ratings on the scale's individual items, which included: "I could picture myself in Parent-Child Interaction Therapy (PCIT) as I watched the video"; "I was totally involved in the video while watching it"; "The video moved me emotionally." This suggests that the parent story was more emotionally evocative, attention grabbing, and facilitated the experience of being able to see oneself participating in treatment. As

further hypothesized, transportation was found to mediate all outcomes (i.e., expectancies, attitudes towards parenting programs, parenting self-efficacy and anticipated commitment). These findings provide an explanation of *why* the parent story had a stronger impact; viewers of the parent story were more persuaded because they were transported while they watched the video. Results demonstrate the powerful role of transportation in the persuasion process, providing further support for the transportation-imagery model (Green & Brock, 2002) and building on the evidence base regarding transportation as a persuasive mechanism (Van Laer et al., 2014). By examining transportation as a mediator, this process-oriented approach provided not only a deeper understanding of the mechanisms at play (Hayes, 2018), but also valuable insights for crafting effective materials.

### ***Visualizing Engagement***

A granular examination of the transportation scale items provides a more intricate picture behind transportation's persuasive effects. Consider the item, "I could picture myself in Parent-Child Interaction Therapy (PCIT) as I watched the video." This item corresponds to the imagery facet of transportation and taps into being able to visually immerse oneself in the story (Green, 2021). For multiple reasons the visuals in the parent story may have facilitated the transportive experience of immersion and, in turn, persuasion. For one, visuals make abstract concepts more concrete (Lee et al., 2011). Some therapy preparation methods show examples of actual or simulated therapy sessions in order for new clients to vicariously experience therapy (Ogrodniczuk et al., 2005; Walitzer et al., 1999). Visuals are also used in advertising to simulate a product or experience and are shown to contribute to potential consumers' sense of ownership and attachment, which, in turn, is proposed to drive consumer behavior (Kamleitner & Feuchtl, 2015). The visuals in the parent story may have served a similar function. Showcasing PCIT in

action and providing a concrete representation of what it looks like to engage may have allowed parents to mentally simulate the experience of being in PCIT. Parents may have developed a sense of ownership of the therapeutic process by "seeing" themselves in the program, and "experiencing" PCIT through the video. They were perhaps not just passive viewers, but instead potential participants, envisioning themselves actively engaged in their child's treatment. This induced sense of ownership, resulting from immersion in the story, may have contributed to parents reporting that they would be more committed to PCIT.

The heightened sense of anticipated commitment among viewers of the parent story can also be understood in terms of social learning theory. Social learning theory proposes that observing someone act inspires individuals to act in the same way (Bandura, 2003). This phenomenon can be seen in video modeling research; watching a peer engage in a behavior is shown to promote behavior change (Tuong et al., 2014). In line with this, seeing a peer perform a behavior is more effective than being given instructions to perform the behavior (Ngoh & Shepard, 1997). In the context of the current study, both the parent story and the informational video included a message about the necessity of engagement in PCIT. The parent story, however, had a more potent impact on anticipated commitment levels. Perhaps *seeing* another parent commit provided a more compelling and convincing message, compared to hearing instructions about this in the informational video.

### ***Visualizing Success***

In addition to reporting that they would be more committed to PCIT, viewers of the parent story also reported greater feelings of being able to impact their child after watching the video. In the parent story, the interplay of modeling and visuals may have led parents not only to visualize themselves participating in PCIT, but also to perceive themselves *succeeding* in PCIT.

Seeing the parent model overcome her initial feelings of being powerless in shaping her son's behavior may have contributed to a sense of "I can do this too." These findings support the social cognitive theory proposition that observing another individual successfully make changes can help someone feel more capable to do the same, and align with empirical evidence showing that video modeling can increase self-efficacy (e.g., Anderson, 2000).

### ***Seeing is Believing***

Viewers of the parent story were also more expectant that PCIT would result in positive outcomes and benefit their family. Visual depictions of the program's benefits could have added to the persuasiveness of the parent story by making the outcomes feel tangible, concrete and immediate. Visuals are widely utilized across disciplines to make the consequences of a behavior more salient (e.g., Brennan et al. 2019; Michie et al., 2013), and research shows that they can be interpreted as "proof" of a claim (Rickard et al., 2017). Viewers of the parent story may have perceived PCIT to be more helpful because they *saw* how it could help.

### ***Feeling is Persuading***

The visuals may have further persuaded parents by impacting them emotionally. Viewers of the parent story indicated that they were more emotionally affected by the video compared to viewers of the informational video (as measured with the transportation scale item, "The video moved me emotionally."). The parent story may have been emotionally evocative because there is considerable evidence that visuals are an effective means for inducing emotions (e.g., Ma & Yang, 2022; Sontag, 2018). Watching another parent engage and be able to help her son may have instilled a sense of optimism and hope about what is possible. Furthermore, the mother embodied the video's message ("if you stick with it, it will pay off"), which is considered a gain-framed message (i.e., a message about the advantages of a behavior; O'Keefe & Jensen, 2009).

Gain-framed messages are more likely to make people feel positive (Nabi et al., 2020); thus, seeing the gain-framed message in action may have aroused positive emotions in parents.

Emotions, in turn, are shown to play a key role in the persuasive process. For example, highly emotional stories are more persuasive than less emotional stories (De Graaf et al., 2016), and the more a message induces an emotional response, the more it persuades (Nabi et al., 2020).

Therefore, it is possible that parents felt more expectant that PCIT would help and committed to participating because the visuals, and the visual representation of the gain-framed message, made them feel positive, optimistic and hopeful.

### **The Main Takeaway: Materials Matter**

Collectively, the findings show that how parenting programs are presented to families matters. The more parents could observe the program in action, watch another parent engage, and see the program pay off, the more they were engaged in the material (i.e., transported) and, in turn, persuaded. Thus, in a clinical setting, carefully crafted and engaging materials may help to engage families in treatment. The results demonstrate how the communication approach can differentially color parents' perceptions of the program. Compared to the informational video, the parent story had a greater impact on shaping parents' beliefs that they and the program can make a difference for the child, and bolstering their commitment to parenting change. This mindset serves as a foundation for success in parenting programs. People are more likely to take action when they think "I can do this, and this will pay off" (Chacko et al., 2017; Dumka et al., 1997; Jiang et al., 2014; Johnston et al., 2010; McKay et al., 2001; Nordstrom et al., 2008).

While self-efficacy and expectancies are crucial factors for engagement, it would be simplistic and reductionist to attribute the challenges of engagement to these two factors alone. Engagement is a substantial and complex issue, determined by multiple, interwoven factors that

are dynamic and exist at many levels (Staudt, 2007). As such, engagement in parenting programs has been the focus of considerable scholarly attention, resources and dedicated efforts (e.g., McCabe et al., 2020; McKay et al., 1996; Winslow et al., 2016). The crux of this paper is that communication science offers valuable insights for developing practical tools to support families and therapists serving families. The intent of this applied work and investigation is to demonstrate how such insights can be translated into a product for clinical use. The parent story video created for the current study is not proposed as a panacea, but rather a tool for building *momentum*.

Momentum is likely a key ingredient when families begin treatment. When the program is first introduced, parents form judgments about its helpfulness and utility (Johnston et al., 2010), likely considering, "Will therapy work? Can I make it work? Do I want to make it work? Do I like this?". This early juncture in treatment is a vulnerable time. Liebsack (2016) found that almost one-quarter (24%) of families did not return after learning about the program and skills in the first two sessions. The extant research suggests that doubt about the program and one's capabilities to influence the child are particularly large obstacles to getting started in treatment (Chacko et al., 2017; Dumka et al., 1997; Jiang et al., 2014; Johnston et al., 2010; McKay et al., 2001; Nordstrom et al., 2008; Oh & Bayer, 2017). In the same vein, positive expectations about treatment and oneself seem to drive momentum towards starting treatment (McCurdy et al., 2006; Nordstrom et al., 2008; Spoth et al., 2000) and using the skills (Johnston et al., 2010; Nock et al., 2007). Momentum to use the skills early on is crucial given that skill use is the active ingredient driving changes in the child's behavior (Chamberlain et al., 2008; Legato, 2015). When the child improves, it may sustain momentum; in interviews and retrospective qualitative surveys, parents indicate that improvements motivated them to keep participating (Assemany,



2004) and overcome logistical issues (Glueck, 2017). Therefore, at the beginning of treatment, parents' key question may be, "Will this work?". As treatment progresses, their question likely shifts to "Is this working?". When parents first arrive, helping them understand that the program can work and that they can make it work may be crucial to drive momentum, so parents return, try the skills, see them work for their family, and, in turn, gain their own momentum.

The parent story video may be a valuable tool to build momentum, and the findings have implications for the development of more tools for parenting programs to build momentum and sustain engagement. First, future materials should prioritize the use of visual storytelling to inform as well as immerse parents into the therapy process. Graphics, simulated therapy sessions and illustrative case studies can all serve to build that sense of immersion. Second, materials should harness the power of modeling. Seeing another parent go through the therapy process and experience success may empower and motivate families. Future materials could include testimonials and stories from parents who successfully completed the program, emphasizing the initial challenges they overcame, the skills they learned, and the benefits they saw. Third, materials should be heavily visual. This is particularly important when selling the benefits of a program. Visuals can make the benefits feel tangible, immediate and attainable to help increase expectancies that therapy will help. Fourth, the emotional component of the parent story seemed to be particularly persuasive. Therefore, rather than focusing just on "facts" and providing information, the tools should connect emotionally with families. This can be achieved with storytelling, and as well as materials in which parents speak to common challenges and fears. Collectively, these elements can make materials more engaging, compelling and meaningful, in order to increase expectancies and self-efficacy and, in turn, promote behavior change. Ultimately, however, the impact of the parent story and future materials on attitudes, beliefs and

engagement (i.e., attendance, use of skills during session) clearly needs to be evaluated in a clinical setting.

### **Limitations and Future Directions**

The primary limitation of this study concerns the generalizability of the findings. The impact of a persuasive communication approach can vary depending on the receiver's personal characteristics (Zheng & Phelps, 2012), and there are a number of ways parents in the study may have differed from parents considering PCIT as a treatment for their child's serious behavioral problems. Study participants were similar to the target population in some respects: all had a 2-8 year old child, and nearly one-third (29.6%) of the children had clinically concerning levels of behavioral problems. However, in parenting programs such as PCIT, most children typically have clinically concerning behavioral problems (Thomas et al., 2017). The experience of parenting a child with challenging behaviors could affect perceptions of the program and the persuasiveness of the parent story video.

Parents beginning treatment are possibly not as easily convinced about the benefits of a program due to the severity of their child's concerning behaviors. Adults with more severe mental health problems are less likely to think their therapy will help (Cohen et al., 2015; Safren et al., 1997). While the link between child symptom severity and parental expectancies is inconsistent (e.g., Bonner & Everett, 1986; Cromley, 2008; Nock & Kazdin, 2001), parents of children with behavior problems are more likely to perceive challenging behaviors as permanent and unchangeable (Baden & Howe, 1992). In interviews with families in a parenting program, Assemany (2004) noted that some parents expressed pessimism about whether their child could change due to years of unsuccessful attempts to address the behaviors. These perceptions of misbehaviors and experiences with past approaches that have not worked may contribute to

parents in a clinical setting being more demoralized. The video was created precisely because of this, with the intent of offering hope. However, it clearly needs to be evaluated in a sample of families referred to PCIT to gauge the effectiveness in persuading families about the program's helpfulness.

Another important caveat is that the study sample could differ from families referred to PCIT in terms of socioeconomic disadvantage and day-to-day stressors. The majority of the sample was married (67.2%), held a college degree or greater (54.2%), and had a household income over \$50,000 (65.2%). While families enrolled in parenting programs are from socioeconomically diverse backgrounds, many families participate in community mental health settings and are from lower-resource backgrounds (Staudt, 2007). These families often face considerable levels of stress and daily hassles, such as unreliable transportation, lack of childcare for siblings, demanding employment schedules, competing priorities, and other logistical obstacles (Champine et al., 2019). These stressors and burdens can make it difficult to attend sessions and devote time to playing at home (McNeil & Hembree-Kigin, 2011; McNeil & Herschell, 1998).

The discrepancy between the study sample and families in a clinical setting has several implications. The video's core message of "stick with it" encourages families to be consistent in implementing the skills and playing at home, and to remain committed even if improvements are not immediate. Highly stressed families often have a sense of urgency when they come to parenting programs (McNeil & Herschell, 1998) and are looking for techniques to quickly manage challenging behaviors (McNeil & Hembree-Kigin, 2011). The message's essence — to be patient and persistent — could feel unrealistic to highly stressed families. The mother in the video models commitment, but modeling is less effective when the viewer perceives themselves

as substantially different from the model (Pajares et al., 2009). In fact, a common challenge in persuasive communication work is determining how inspirational and outstanding the model should be (Allen & Collisson, 2020; Lockwood & Kunda, 2000).

Meta-analytic evidence shows that the more the audience member feels similar to the model/character, the more they identify with them (Huang et al., 2023) and, in turn, are persuaded (Tukachinsky & Tokunaga, 2013). It is possible that parents in the study were able to relate more because they experience fewer day-to-day stressors and barriers, which make participation difficult. Of note is that the barriers the mother in the video overcomes are psychological and attitudinal in nature, rather than logistical. In a clinical setting, families may find it unfeasible and impractical to engage in daily play sessions with their child, as modeled by the mother in the video. The very engaged mother could potentially undermine how capable and committed families may feel in being able to implement the program themselves. Therefore, in addition to examining the effectiveness of the video among families referred to treatment, it would also be fruitful to assess the extent to which parents in a clinical setting relate to the mother. Such investigations would likely uncover considerable variability; some parents relate, while others do not.

Ultimately, the solution is to create multiple materials with models of various backgrounds, living situations, capabilities, caregiving relations etc., which is a best practice in persuasive communication work (Kreuter et al., 2008). Meta-analyses show that tailored communication materials outperform generic materials (Noar et al., 2007; Sohl & Moyer, 2007). While there are commonalities among parents in parenting programs, they also differ in many ways. For the above-described highly stressed families, testimonials from real-life parents who have successfully navigated similar obstacles could be of value. Discussions of overcoming

obstacles is sometimes included in therapy preparation materials (e.g., Shuman & Shapiro, 2002), and parents are more likely to engage when they hear another parent share how it was worthwhile to overcome challenges in order to be able to participate (Gonzalez et al., 2022). Another fruitful area for future work would be the creation of visual stories in which a parent models sharing concerns about barriers and problem-solving with their therapist.

Another important future direction is the development of culturally tailored engagement tools. Parents arrive at parenting programs embedded in a web of social and cultural contextual factors. As is the case with self-efficacy and expectancies, social and cultural factors can influence how parents perceive and engage with a program (e.g., Matos et al., 2006; McCabe et al., 2005). In some cases, the familial context plays a crucial role, necessitating the importance of family as well as parental buy-in (McCabe et al., 2005). This is especially relevant for parents who share caregiving duties with other family members, which is more likely in Latinx and African American families (Falicov, 1998; Forehand & Kotchick, 1996). Engaging extended family members is important because they can be part of the decision-making about the child's treatment (McCabe et al., 2005). For example, McCabe et al. (2005) reported that among Mexican American families, an average of four people were involved in decisions to seek help for behavioral problems. It is not uncommon for family members to disapprove of outside help and parenting programs (Brown et al., 2014; McCabe et al., 2005) and, when this is the case, parents are less inclined to engage (Thornton & Calam, 2011; White & Wellington, 2009). With this in mind, McCabe et al. (2020) created a handout for grandparents as part of their engagement package to help personalize parenting programs for culturally diverse families. Another example is the culturally tailored recruitment video for Filipino families produced by Javier and colleagues (2019). The video incorporated both parents and grandparents in order to

acknowledge their respected caregiving roles and boost cultural identification. Given that engagement takes place in context, and family members can be an integral part of this context, the creation of more engagement tools and sharable videos that promote collective family buy-in is well-warranted.

Cultural factors can also influence parents' and family members' buy-in of the program and skills (Calzada et al., 2013; Christian-Brandt & Philpott, 2018; Matos et al., 2006). Reluctance can be due to stigma, and concerns about receiving outside help and sharing personal information with outsiders (Lindsey et al., 2013; Yeh et al., 2003), as well as mistrust of mental health services and providers (Forehand & Kotchick, 1996; Richardson, 2001). In addition, there can be a mismatch between parents' cultural background, their values and parenting goals with the goals and skills taught in parenting programs (Calzada et al., 2010; Matos et al., 2006; Murry et al., 2004). Culturally modified parenting programs have been developed to address differences in parenting values and preferences, and to adapt the techniques and programs to create a better cultural fit for the family (e.g., McCabe et al., 2005). McCabe et al. (2013) also recommend helping families understand how the program and skills align with their cultural parenting goals. For example, obedience and child compliance are common parenting goals in Mexican American families, and likewise a primary treatment goal in most parenting programs (McCabe et al., 2013). However, it may not be immediately clear to families how program components such as play and positive attention can encourage the child to comply more. Building on the personalized engagement approach by McCabe and colleagues (2020), video-based tools can be created that feature an array of parents and caregivers with various cultural values and goals who talk about how the program helped their needs.

Another promising topic for engagement tools would be caregiver discussions and insights about how they align the skills to fit with the values of their family and culture. Javier et al. (2019) provide an example of how this can be done. In their recruitment video for Filipino families, parents and grandparents discussed how they wove their cultural values into the program's skills. Therapist and expert endorsements may add another layer of credibility to culturally tailored tools. Barnett et al. (2020) found that Spanish-speaking caregivers reported greater intentions to seek help when they learned about therapy from a therapist, perhaps due to the cultural value of *respeto*, which emphasizes obedience and respect for authority. In short, given the complexity and diversity of families who participate in parenting programs, there is a need for: (1) further investigation regarding the effectiveness of the parent story video among diverse families in a clinical setting (as 68.4% of the study sample was White); and (2) ongoing efforts to create engagement materials that respect and acknowledge the diverse set of beliefs and values that families hold.

## **Conclusion**

This study has multiple implications for parenting programs. Results add to the evidence base regarding the effectiveness of video, and underscore how video-based tools may be a practical and flexible approach to supplement parenting programs. Videos are a promising means of supporting therapists in program delivery, and engaging, educating and empowering families both inside and outside of session, potentially improving the program's reach and impact. Materials for parenting programs should not be an afterthought, but rather prioritized as an intervention in themselves. This is in line with the communication science evidence base regarding the positive impact that theory-based and empirically-informed materials can have on beliefs, attitudes and behaviors. Importantly, not all communication approaches are created

equal. Results of the current study show that the way in which information is presented can significantly affect how families perceive the program, and influence how capable and committed they feel to implement it. In line with current research literature, this study showed that visuals, modeling and storytelling are effective elements of persuasion, and potentially engagement. These findings can inform the development of future materials, including culturally tailored tools. By leveraging proven strategies from other disciplines and by unpacking why they work, we can enhance parenting programs, contributing to the ultimate goal of promoting healthy development in children across diverse communities.



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## Appendix A

# Parent – Child Interaction Therapy (PCIT)



### What is PCIT?

PCIT works with parents and children together to improve the quality of the parent-child relationship and to teach parents the skills necessary to manage their child's severe behavior problems. PCIT is proven effective by over 100 research studies.

### How does PCIT work?

There are two parts to PCIT. In the first part, Relationship Enhancement, therapists coach parents to increase positive and supportive communication with their child. The second part, Strategies to Improve Compliance, teaches effective child-management skills. Parents learn and practice specific skills during therapy until they master them and their children's behavior improves.

### Who is PCIT for?

- **Parents who are:**
  - Overwhelmed, depressed, stressed, feel guilt and are confused about how to deal with their children's disruptive and challenging behaviors
- **Children who:**
  - Are between the ages of 2 and 7 years
  - Exhibit many of the following behavior problems:
    - Difficulty in school, preschool, and/or daycare
    - Aggression toward parents, siblings, and/or other children
    - Sassing back to their parents
    - Refusing to follow directions
    - Frequent temper tantrums
    - Swearing
    - Defiance
  - Are currently living with their parent (or will soon be reunited)
  - May be on medication to manage their behavioral problems
  - Are currently in foster care (treatment can be conducted with biological, foster, or adoptive caregivers)

For information on PCIT Training please visit: [pcit.ucdavis.edu](http://pcit.ucdavis.edu)



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## Appendix B

### Informational Video Script

- Hello, I'm going to describe Parent Child Interaction Therapy, or PCIT for short. PCIT is an evidence based specialized therapy program for young children and their parents. Other caregivers can participate too, including foster and adoptive parents, grandparents, relatives, or any other important adult in child's life. The main goals of PCIT are to strengthen the relationship between parents and children, and help parents learn to manage stressful child behavior problems.
- PCIT is for children between the ages of two and eight who have challenging and disruptive behaviors, such as defiance, aggression towards parents, siblings, or peers, playing roughly with toys, swearing, sassiness back to parents, difficulties in preschool, school, or day care, temper tantrums, non-compliance, and refusing to follow directions. PCIT is a good fit for parents and caregivers who are stressed, overwhelmed, or unsure about how to manage their child's behaviors.
- PCIT is considered an evidence-based treatment due to its research base. Research has shown that PCIT effectively decreases the frequency and severity of child behavior problems, and increases child compliance with caregivers' commands. In addition, research shows that caregivers demonstrate a significant improvement in parenting skills and reductions in parenting stress.
- PCIT is a skill-building program, meaning that parents learn new skills to parent more effectively. PCIT focuses on changing the parents' behavior and teaching parents' skills rather than a therapist working with the child. PCIT has two phases with different goals. The first phase is called the Child-Directed Interaction, or CDI for short. The goal of CDI is to improve the relationship between the child and the parent. In this phase, parents learn PRIDE skills, which are a way to communicate with children in a positive and supportive manner. The second phase is called Parent-Directed Interaction, or PDI for short. In this phase, parents learn effective behavior management strategies. The first phase, CDI, is the foundation for the second phase, PDI. Specifically, children are more willing to accept discipline in PDI because of the strengthened relationship formed in CDI.
- PCIT sessions are one hour each week. Both the parent and child attend together. Parents are assigned to practice the PCIT skills at home for five minutes every day. Parents are also encouraged to use the skills as much as possible throughout the day to change their parenting.
- Play is a large part of PCIT. During sessions, parents and children play together and the child gets to choose the toys. Parents practice the skills while playing with their child and being coached by a therapist.
- PCIT uses in vivo coaching, which means in the moment. This involves the parent wearing a bug-in-the ear device while playing with the child in the playroom. The therapist sits behind a one-way mirror and observes the parent and child interact. Through the bug-in-the ear device that the parent is wearing, the therapist coaches the parent on how to use the PCIT skills and provides feedback.
- Parents are assigned five minutes of daily homework called special time. Special playtime involves playing one-on-one with the child while the child chooses what they want to play with and the parent uses the PCIT skills. Doing special playtime everyday is important for caregivers acquiring the skills for improving the child's behavior problems and for strengthening the connection between the parent and the child.

- Getting good results in PCIT requires commitment and active involvement in the therapy. This involves coming to session each week, doing special playtime consistently every day, and practicing the skills throughout the day. Thank you!

## Appendix C

### Parent Story Video Script

- Hi, my name is Lucy. I'm mom to Ezra. My clever, curious, sweet little guy
- Life used to be bad
- I had just wanted my son to handle himself well
- No matter what I did, *nothing* worked
- [Mom finds support group called 'Challenging Children Support Group']
- I was hoping this was just a phase
- [Mom posts: 'Please tell me it gets better.' Parents reply: 'Our boy is 14. I wish we got help when he was young'; 'It's gotten so much worse with age']
- This freaked me out
- We were headed down a dark road
- It wasn't all bad news though
- [Mom reads parent posts about PCIT in support group: 'PCIT therapy is really helping us!'; 'PCIT is great'; 'PCIT was amazing!']
- Other parents were really liking PCIT therapy
- I was *so* hopeful PCIT was the answer and a therapist would really be able to help my son
- I wanted so badly for PCIT to work but I didn't expect the focus to be so much on *me*
- A therapist watching me from behind a 1-way mirror and talking in my ear. Did she think I was a bad mom? It also seemed unrealistic because we were mostly just playing
- It was an *awful* week
- I have to be honest, I was *really* questioning whether PCIT was working at *all*. Was it all a waste?
- Was this going to be our life? Was my son a lost cause? Had I failed my boy?
- I wanted to hear other parents' experiences with PCIT
- [Mom posts in support group: 'Experiences with PCIT?'. Parents reply: 'Super effective if you stick with it'; 'Agreed! It pays off big']
- I decided we were going to give it another chance
- I'm so glad we stuck with PCIT
- You learn how to do PCIT in 2 parts
- Part one, the Child-Directed Interaction, is all about connecting and positive communication
- You learn PRIDE skills, a language to communicate to kids in a way that *they* understand how you see them, hear them, and love them and have noticed when they do something good, like a compliment for behaviors you like
- I sprinkle in PRIDE skills *all* day to catch my son's good behaviors and motivate him to keep it up. It's automatic for me now
- You also learn special playtime. A type of 1-on-1 play where you use lots of the PRIDE skills to fill your kids love cup, give your undivided attention, and go with *their* flow
- You aim to do special playtime at home for 5 minutes each day
- To be honest, at first I didn't think it would help and I *didn't* want to do it
- But those daily 5 minutes of play set things in motion by taking the edge off
- And then the more we did it, the more the vibe between us started to change
- Ok so this one week I learned a hard lesson after our special playtime routine slipped
- Ezra was having some *really* hard days
- Once we got back on track, it really clicked for me...

- Special playtime is like *medicine* to help my son have more good days
- I was actually really surprised how much easier things were getting before we got to the second half...
- The Parent-Directed Interaction is all about discipline and cooperation
- Listen, it doesn't turn your kid into a perfect robot angel...it's your kid but with *sparkle*. They actually *want* to obey and please you more thanks to all the tools in your back pocket from part 1 that that help you grow closer and get on the same page. In part 2, I gained *more* tools to help him cooperate
- I learned how to get my expectations clearly across
- To take the *emotions* out of my reactions...
- And stay calmmm
- To stay STRONG and enforce rules and limits
- and if he tests those limits, which *all* kids do from time-to-time, I have a solid back up plan...loophole free
- It's predictable. He knows what's coming next and so do I. Parenting is less scary now
- Both parts of PCIT have made *such* a difference.
- I *finally* have a way to support my son that works
- I now know, I *didn't* fail my little guy. And he wasn't a lost cause. Not at *all*. He just has a *strong* spirit, and that can come with a big set of needs.
- It's no wonder nothing was working before! Most parenting help isn't meant for really *feisty*, passionate kids
- PCIT is specifically for strong-willed kids
- My therapist said it's backed by *tons* of research and the gold standard therapy for behavior problems, even the *most* extreme
- I really realized it's just a matter of the *right* approach to help my little guy succeed
- I also realized you *shouldn't* have to go at it alone
- Before PCIT I had just felt *so* alone. In PCIT, you do it *together*. They *support* you in making changes
- At first it felt weird, but it ended up being *amazing*. They guide you in the moment through the ups and through downs, helping you execute and respond, and tweak things to work even *better*
- It *really* helps with getting the hang of a solid plan to support your kid
- It was *so* worth it, but it wasn't a quick fix. It didn't happen overnight or after a single PCIT session or playtime
- That's because we were breaking old patterns and cycles and ways of responding
- And we were building new ones. That takes time and practice and repetition
- Each time we did it, I got *stronger*...like building muscle. Now I'm able to do the things my son needs in the heat of the moment...without losing steam so quickly...or if I'm stressed or have a headache, or feel like I have nothing left to give
- And the more we repeated it, the more things got better with my son
- With him making responsible choices ...listening to mom...being helpful...playing nicely...using his words...having great manners...and calming down quicker
- My little guy has really grown. Oh my goodness he feels like *such* a good kid
- I am *beyond* proud of him. Proud of us both for all our work together in PCIT
- [Mom posts selfie with Ezra. Caption reads: PCIT has been a game changer for us! If I did it, anyone can! # PCIT #StickWithIt]

## Appendix D

### Parenting Self-Efficacy Scale



**We will now ask how you feel about parenting. Please indicate how much you agree or disagree with the statements below.**

**What I do has little effect on my child's behavior**

Strongly disagree 1	2	3	4	Strongly agree 5
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**No matter how hard a parent tries, some children will never learn to mind**

Strongly disagree 1	2	3	4	Strongly agree 5
------------------------	---	---	---	---------------------

**If your child tantrums no matter what you try, you might as well give up**

Strongly disagree 1	2	3	4	Strongly agree 5
------------------------	---	---	---	---------------------

**I believe that I can learn to change my child's behavior**

Strongly disagree 1	2	3	4	Strongly agree 5
------------------------	---	---	---	---------------------

**When something goes wrong between me and my child, there is little I can do to correct it**

Strongly disagree 1	2	3	4	Strongly agree 5
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**Parents should address problems with their children because ignoring them won't make them go away**

Strongly disagree 1	2	3	4	Strongly agree 5
------------------------	---	---	---	---------------------

## Appendix E Transportation Scale



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**We will now ask you some questions about the video you watched. Please indicate how much you agree or disagree with the statements below.**

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**I could picture myself in Parent-Child Interaction Therapy (PCIT) as I watched the video.**

Not at all 1	2	3	4	5	6	Very much 7
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**I was totally involved in the video while watching it.**

Not at all 1	2	3	4	5	6	Very much 7
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**The video moved me emotionally.**

Not at all 1	2	3	4	5	6	Very much 7
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**My mind wandered while I watched the video.**

Not at all 1	2	3	4	5	6	Very much 7
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# Appendix F

## Attitudes Towards PCIT and Expectancies About PCIT's Effectiveness Scales



**Think about all the information you received about Parent-Child Interaction Therapy (PCIT) in the video. Based on everything you learned:**

**Being coached in the moment sounds:**

Comfortable	○ ○ ○ ○ ○ ○ ○ ○	Awkward
Good	○ ○ ○ ○ ○ ○ ○ ○	Bad
Useful	○ ○ ○ ○ ○ ○ ○ ○	Useless

**Practicing the skills at home everyday is:**

Reasonable	○ ○ ○ ○ ○ ○ ○ ○	Unreasonable
Valuable	○ ○ ○ ○ ○ ○ ○ ○	Pointless
A good use of time	○ ○ ○ ○ ○ ○ ○ ○	A bad use of time

**Being involved in my child's treatment:**

Sounds great	○ ○ ○ ○ ○ ○ ○ ○	Sounds terrible
Makes sense: Parents should be part of the solution	○ ○ ○ ○ ○ ○ ○ ○	Doesn't make sense: My child is the one with problems
Is necessary for helping my child	○ ○ ○ ○ ○ ○ ○ ○	Is not necessary. That's a therapist's job

**Playing more with my child sounds:**

Like a good way to deal with behavior problems	○ ○ ○ ○ ○ ○ ○ ○	Like a bad way to deal with behavior problems
Helpful	○ ○ ○ ○ ○ ○ ○ ○	Unhelpful

**How successful do you think PCIT would be in reducing your child's behavior problems?**

Not at all 1	2	3	4	Somewhat 5	6	7	8	Very much 9
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**How successful do you think PCIT would be in reducing your parenting stress?**

Not at all 1	2	3	4	Somewhat 5	6	7	8	Very much 9
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**How successful do you think PCIT would be in helping you feel more confident as a parent?**

Not at all 1	2	3	4	Somewhat 5	6	7	8	Very much 9
-----------------	---	---	---	---------------	---	---	---	----------------

**How successful do you think PCIT would be in improving your relationship with your child?**

Not at all 1	2	3	4	Somewhat 5	6	7	8	Very much 9
-----------------	---	---	---	---------------	---	---	---	----------------

**By the end of PCIT, how much improvement in child behavior problems do you think would occur?**

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
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## Appendix G

### Anticipated Commitment Scale



**Imagine you and your child were referred to Parent-Child Interaction Therapy (PCIT).**

**Please indicate how much you agree or disagree with the statements below; even if you're not sure about your answer, please take your best guess.**

**I would be committed to completing PCIT, whatever it takes**

Strongly disagree 1	2	3	Neither agree nor disagree 4	5	6	Strongly agree 7
------------------------	---	---	---------------------------------	---	---	---------------------

**I would stop coming if my child did not get better after a few sessions**

Strongly disagree 1	2	3	Neither agree nor disagree 4	5	6	Strongly agree 7
------------------------	---	---	---------------------------------	---	---	---------------------

**I would stick with it even if it didn't seem to be helping**

Strongly disagree 1	2	3	Neither agree nor disagree 4	5	6	Strongly agree 7
------------------------	---	---	---------------------------------	---	---	---------------------

**There's no way I would finish**

Strongly disagree 1	2	3	Neither agree nor disagree 4	5	6	Strongly agree 7
------------------------	---	---	---------------------------------	---	---	---------------------