**Providing Psychometric Support for the READI-SF among
Clinic-Referred Latino Families**

by

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Abstract

Given the high prevalence of child mental health problems and their long-lasting negative consequences if left untreated, it is important to investigate factors that affect family engagement in psychological intervention services (Costello, Copeland, & Angold, 2011; López-Romero, Romero, & Andershed, 2015; Nock & Photos, 2006). Specifically, Latino families have been shown to experience greater mental health disparities and have unique factors that affect parental engagement (Flores, 2010; Kapke & Gerdes, 2016). Expanded from the Transtheoretical Stages of Change Model (Prochaska & DiClemente, 1982), the concept of parental readiness to engage in treatment is an understudied attitudinal factor that influences parent engagement in mental health services (de Haan et al., 2013; Staudt, 2007; Wade & Andrade, 2015). Limited measures are available to assess this construct (Nock & Photos, 2006; Wade & Andrade, 2015); however, the Readiness, Efficacy, Attributions, Defensiveness, and Importance Scale (READI) is one scale developed to evaluate factors related to parental motivation and readiness for treatment (Brestan, Ondersma, Simpson, & Gurwitch, 1999b). Recently, preliminary evidence of reliability and validity for a short version of the READI (READI-SF) was provided within a community sample of African American families (Proctor, 2016).

Still, research with diverse families who are seeking treatment is needed to further validate this measure and to reach populations most at risk for disengagement. The current project aimed to examine the psychometric properties of the READI-SF among English- and Spanish-speaking Latino families, including its reliability, factor structure, and convergent and

predictive validity. Participants were 100 parents who sought Parent-Child Interaction Therapy (PCIT) services from a community mental health center in Washington D.C. Results supported a two-factor structure for the READI-SF using 13 of the original 17 items, with some invariance between parents who completed the English or Spanish version. These two scales demonstrated adequate internal consistency, measuring parent readiness for change and perceived importance of seeking treatment. Parent ratings on the READI-SF scales were shown to be related to parent-reported child behavior problems, single parenthood, and mastery of therapy skills, providing some evidence for convergent and predictive validity. Limitations and future directions for the current project were discussed.

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List of Abbreviations

PMT   Parent Management Training

PCIT   Parent-Child Interaction Therapy

DBD   Disruptive Behavior Disorder

DHHS   Department of Health and Human Services

RFC   Readiness for Change

TTM   Transtheoretical Model of Change

PMI   Parent Motivation Inventory

PRFCS   Parent Readiness for Change Scale

READI   Readiness, Efficacy, Attributions, Defensiveness, and Importance Scale

READI-SF READI - Short Form

EFA   Exploratory Factory Analysis

US   United States

CFA   Confirmatory Factor Analysis

ECBI   Eyberg Child Behavior Inventory

DPICS   Dyadic Parent-Child Interaction Coding System

CDI/PDI   Child-Directed Interaction/Parent-Directed Interaction

EMR   Electronic Medical Record

ML/MLR   Maximum Likelihood/Robust ML

MIMIC   Multiple Indicators, Multiple Causes

Introduction

The call for increased development, dissemination, and use of evidence-based psychological treatment methods has resulted in a proliferation of intervention programs that demonstrate efficacy in reducing a variety of psychological problems among children and adolescents (APA Presidential Task Force on Evidence Based Practice, 2006; Chorpita et al., 2011). Given that estimates for the prevalence of childhood mental health problems range from 13 to 40 percent (e.g., Costello, Copeland, & Angold, 2011; Costello, Egger, & Angold, 2005; Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015) and that numerous negative outcomes are associated with mental health problems in a variety of domains, including academic, social, health-related, and occupational functioning (e.g., Bentovim, 2014; López-Romero, Romero, & Andershed, 2015; Sasser, Kalvin, & Bierman, 2016), these treatment programs provide substantial benefits to individuals, families, and communities. In particular, parent management training (PMT) is an efficacious method of reducing child defiant and disruptive behavior and improving parent-child relationships (Eyberg, Nelson, & Boggs, 2008; Michelson, Davenport, Dretzke, Barlow, & Day, 2013; Pearl, 2009). Based on social learning and behavioral principles, PMT targets parents' use of reinforcement and punishment as well as communication methods to promote positive child behavior (e.g., compliance) and to decrease negative child behavior (e.g., whining, aggression, crying; Kazdin, 1997; Pearl, 2009). Different variations of PMT, including Parent-Child Interaction Therapy (PCIT; Eyberg & Funderburk, 2011), have demonstrated efficacy among children with disruptive behavior disorders (DBDs) in research trials and in community mental health settings for various parent and child outcomes (e.g., Brestan & Eyberg, 1998; Eyberg et al., 2008; Lanier et al., 2011; Michelson et al., 2013; Thomas, Abell, Webb, Avdagic, & Zimmer-Gembeck, 2017).

Despite their empirical support and increased dissemination, only approximately half of children with mental health problems obtain treatment services even among those with severe impairment (Merikangas et al., 2010). Additionally, a large percentage of families (51-68%) who seek treatment drop out prematurely and receive inadequate dosage of psychological treatment (Gonzalez, Weersing, Warnick, Scahill, & Woolston, 2011; Pellerin, Costa, Weems, & Dalton, 2010; Wamser-Nanney & Steinzor, 2016). Approximately 40 to 60% of families in PMT drop out prematurely (Chacko, Wymbs, Chimiklis, Wymbs, & Pelham, 2012; Fernandez & Eyberg, 2009) as these programs have been shown to have difficulty engaging parents of children with DBDs despite the associated positive outcomes (Armbruster & Kazdin, 1994; Nock & Ferriter, 2005; Prinz & Miller, 1994). Failure to participate in treatment or premature termination of services may result in reduced treatment benefits and losses in mental health resources, such as personnel and financial losses (Armbruster & Kazdin, 1994; Block & Greeno, 2011; Boggs et al., 2005; Brogan, Prochaska, & Prochaska, 1999; Nock & Ferriter, 2005; Prinz & Miller, 1994).

Parent Engagement in Treatment

Initiation and participation in psychological services for children with mental health problems relies heavily on caregivers, particularly for younger children or certain treatment approaches (e.g., PMT; Nock & Ferriter, 2005). At a minimum, parents need to help schedule appointments and provide transportation for most children to attend therapy sessions. Moreover, family context and parent-child relationships are often considered in the development of child psychopathology, necessitating some level of parental involvement during treatment sessions (Kazdin & Weisz, 1998). Parental participation and engagement in treatment has been shown to be related to better quality of mental health treatment and improved treatment response (Dowell & Ogles, 2010; Haine-Schlagel & Walsh, 2015; Nix, Bierman, & McMahon, 2009). As such, it

is important to identify factors that affect parents' readiness and willingness to engage in their child's treatment (Nock & Photos, 2006).

Engagement in treatment is a multi-step process that includes recognition of the child's problems, actions taken to seek and initiate services, and continued completion of therapeutic activities throughout treatment (Becker et al., 2015; Gopalan et al., 2010; McKay & Bannon, 2004). Furthermore, treatment engagement incorporates behavioral and attitudinal components. Behavioral aspects of engagement involve "client performance of tasks that are necessary to implement treatment and to ultimately achieve outcomes," such as their attendance for therapy sessions, completion of homework activities, and compliance with the requests of the clinician (Staudt, 2007, p. 185). By contrast, attitudinal factors encompass parent's "emotional investment in and commitment to" therapeutic services, such as parental beliefs about causality, expectations about roles and outcomes of treatment, attitudes towards therapy, motivation to change, and belief in their ability to complete therapeutic tasks (e.g., self-efficacy; Becker et al., 2015; Staudt, 2007, p. 185). Thus, treatment engagement involves both session attendance and adherence to intervention practices, reflecting parental investment and active involvement in the therapeutic procedures (Gopalan et al., 2010; Nock & Ferriter, 2005). Parents who are ready to fully engage in treatment are likely to have "a hopeful stance, conviction with respect to the appropriateness of intervention goals and processes, and confidence in personal ability to carry out the intervention plan" (King, Currie, & Petersen, 2014, p. 6).

Several factors have been shown to be related to parental engagement in treatment though results are not consistent across studies due to differences in conceptualization and methodology (de Haan, Boon, de Jong, Hoeve, & Vermeiren, 2013). Still, child and family characteristics, such as ethnic minority status, homelessness, the child's diagnosis and level of impairment, low

socioeconomic status, single parenthood, stress, and parent psychopathology, have been found to be associated with parents' initial and continued engagement in treatment services (e.g., de Haan et al., 2013; Fernandez & Eyberg, 2009; Gopalan et al., 2010; Kazdin & Wassell, 2000; Ofonedu, Belcher, Budhathoki, & Gross, 2017). For many families, attending therapy is a burden that requires time and financial resources, creating barriers to accessing and participating in treatment (Kazdin, 1996; Kazdin & Wassell, 2000). In addition, cognitive factors, such as perceived demands of treatment, perceived relevance of treatment, and attitude towards treatment, may affect parent's engagement in these services (de Haan et al., 2013; Mah & Johnston, 2008; Miller & Prinz, 2003; Nock & Ferriter, 2005). Parents who do not believe in the effectiveness of therapy, who are misinformed about the structure of therapy, or who attribute their child's problems to internal attributes are less likely to attend and adhere to treatment (Miller & Prinz, 2003; Nock & Kazdin, 2001).

Parental Engagement for Latino Families

Given the association between ethnic minority status and parental engagement, initiatives have been enacted to investigate factors affecting mental health utilization of ethnic minority families (e.g., Becerra, Androff, Messing, Castillo, & Cimino, 2015; de Haan et al., 2013; Kapke & Gerdes, 2016; McCabe, Yeh, Garland, Lau, & Chavez, 2005). Research has demonstrated that mental health disparities are more pronounced for families from ethnic or racial minority backgrounds, including Latino families (Flores, 2010; Miller, Southam-Gerow, & Allin, 2008). Families with an ethnic minority status are more likely to drop out of treatment prematurely and are, overall, less likely to engage in mental health services (e.g., de Haan et al., 2013; Fernandez & Eyberg, 2009; Gopalan et al., 2010; Ingoldsby, 2010). Even though environmental risk factors (e.g., acculturation, discrimination, socioeconomic status) place Latino youth at a greater risk for

developing mental health problems (Gonzales, Fabrett, & Knight, 2009), numerous mental health disparities exist for Latino families, including higher unmet needs for mental health care; higher odds of being uninsured; and lower odds of mental health visits, outpatient visits, and antidepressant prescriptions (Flores, 2010). Latino families are also more likely to receive lower quality of care through reduced access to evidence-based interventions and negative interactions with health-care providers (e.g., Lee, Ayers, & Kronenfeld, 2009; Shavers et al., 2012; US Department of Health and Human Services [DHHS], 2001). Even with increasing efforts for dissemination, Latino families tend to be the most underrepresented group in studies examining interventions like PMT, resulting in a lack of understanding about their effects within this ethnic group (Ortiz & Del Vecchio, 2013; Zayas, Borrego, & Domenech-Rodríguez, 2009). Overall, a number of individual, family, and systemic factors affect parental engagement in mental health services and subsequent treatment response among Latino families (Kapke & Gerdes, 2016).

In particular, Latino families experience unique challenges and present with cultural characteristics that affect youth mental health services utilization and engagement (Kapke & Gerdes, 2016). Using a socio-ecological framework (Bronfenbrenner, 1977), cultural and community-based factors, such as discrimination, mental health stigma, and reduced access to mental health services (via barriers in transportation, child care, insurance), influence Latino families' willingness to engage in treatment and their subsequent therapy outcomes (Kapke & Gerdes, 2016; Lee et al., 2009; Shavers et al., 2012). In addition, endorsement of sociocultural beliefs, including simpatia, respect for authority and hierarchical family structure (respeto), personalismo, collectivism, and adherence to traditional gender roles, is likely to impact Latino family participation in mental health treatment (McCabe et al., 2005). These values emphasize close, interdependent, and collaborative relationships within families as well as family structures

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for power, roles, and authority based on age and gender, influencing family perceptions, expectations, and experiences within treatment (McCabe et al., 2005; Sue & Sue, 2013; Yeh, Hough, McCabe, Lau, & Garland, 2004). Lower levels of engagement in public health services and poorer perceptions of health services (e.g., more discrimination, poor quality of services) have also been shown for Spanish-speaking Latino parents compared to English-speaking Latino and non-Hispanic white families, suggesting that language may serve as an additional barrier (Becerra et al., 2015; Fawley-King, Haine-Schlagel, Trask, Zhang, & Garland, 2013).

To address these mental health disparities, some interventions have culturally adapted their protocols to better align with the values and context of underserved groups, including Latino families (e.g., Domenech-Rodríguez, Baumann, & Schwartz, 2011; Martinez & Eddy, 2005; McCabe & Yeh, 2009). For example, PCIT protocols have been developed for Puerto Rican American and Mexican American families that incorporate adaptations, such as extended session time, inclusion of other members of the extended family, and increased psychoeducation and orientation to treatment (Matos, Torres, Santiago, Jurado, & Rodríguez, 2006; McCabe et al. 2005). Although these treatments have demonstrated some preliminary efficacy, research has not consistently shown greater outcomes or reduced attrition for these culturally adapted PCIT protocols compared to standard PCIT, demonstrating the complexity of the problem (Matos, Bauermeister, & Bernal, 2009; Matos et al., 2006; McCabe et al. 2005; McCabe, Yeh, Lau, & Argote, 2012; McCabe & Yeh, 2009). As such, insight into factors related to utilization and engagement of youth mental health services, especially among Latino families, is important to inform engagement interventions, assessment procedures, and treatment adaptations (de Haan et al., 2013; Kapke & Gerdes, 2016). One factor believed to affect parental engagement that has

only recently been empirically investigated is parents' readiness for change (RFC) and for treatment (Littell & Girvin, 2005; Spoth, Redmond, Haggerty, & Ward, 1995).

Readiness for Change

Parents presenting for therapy services represent a heterogeneous group in terms of their initial skill level, their understanding of the treatment process, and their motivation for change, influencing their readiness to engage in treatment and to change their behaviors (Miller & Prinz, 2003). Although a limited amount of research has investigated parental RFC, the concept has been studied more broadly in other clinical populations, including adults with substance abuse, obesity, and trauma (e.g., Capone & Wood, 2009; Murphy & Rosen, 2006; Robinson & Vail, 2012; Stein et al., 2009). In this literature, client readiness for change has been conceptualized in several different ways: as moving through distinct stages or as a continuum on which individuals fall. One of the most widely known conceptualizations is the Transtheoretical Model of Change (TTM; DiClemente & Prochaska, 1983; Prochaska & DiClemente, 1982) that was derived from the addiction literature. TTM describes the stages that individuals pass through to intentionally change maladaptive behavior patterns as well as the processes of change that are believed to motivate this movement (Littell & Girvin, 2002; Prochaska, DiClemente, & Norcross, 1992; Prochaska & Velicer, 1997).

Within the TTM, there are five stages of change that can be visually represented as a spiral: precontemplation, contemplation, preparation, action, and maintenance. Individuals move forward and backward (e.g., relapse) through stages sequentially but are thought to only be in a single stage at a time, making them mutually exclusive (Prochaska et al., 1992). In the TTM precontemplation phase, individuals are unaware of their problems and have no intention of changing their behavior, usually presenting for treatment under pressure from others (e.g.,

spouse, family, employers). The contemplation phase involves an individual becoming aware of a problem but not committing to changing their behavioral pattern. During the preparation phase, individuals are intending to take actions to change in the near future and begin making small steps towards change, while the action phase encompasses major modifications that an individual makes to his/her behavior, environment, and experiences to change their problems. Finally, the maintenance phase requires individuals to continue their behavioral change in order to prevent relapse and persist in their altered behaviors (Norcross, Krebs, & Prochaska, 2011; Prochaska & DiClemente, 1982; Prochaska et al., 1992).

Viewing readiness using TTM stages provides an opportunity to match individuals with specific treatment models depending on their stage upon initiation (Armitage, 2009; Norcross et al., 2011). Still, alternative conceptualizations have been proposed to address shortcomings in the theoretical and empirical support for the TTM (e.g., Armitage, 2009; Blanchard, Morgenstern, Morgan, Labouvie, & Bux, 2003; Littell & Girvin, 2002; West, 2005). Grouping individuals into subtypes based on their readiness for change as well as other contextual factors has been shown as a method of identifying treatment readiness (Andrade, Browne, & Naber, 2015; Blanchard et al., 2003; DiClemente & Hughes, 1990; Girvin, 2004). For example, some researchers have identified two meaningful subtypes of individuals (e.g., precontemplation, contemplation/action) that align with the TTM and differ in their help-seeking feelings, thoughts, and actions (Edens & Willoughby, 1999; Willoughby & Edens, 1996). However, differences in the number of subtypes identified and the methodology used to create clusters limits the clinical utility of this assessment method (Blanchard et al., 2003). RFC has also been proposed as a multidimensional construct that is measured on a continuum, reflecting variations for intention to change (Carey, Purnine, Maisto, & Carey, 1999; Littell & Girvin, 2005). A continuous readiness factor would eliminate

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the assumption of homogeneity present in stage-based and subtype conceptualizations, enabling pre-treatment methods to be tailored based on an individual's readiness score (Wade & Andrade, 2015). Since RFC has expanded to child and family psychopathology and treatment, some of these conceptualizations have been used to develop assessment measures of parental readiness.

Assessing Parental Readiness

Given the high percentage of families who do not receive treatment or who drop out prematurely particularly among ethnic minority families (e.g., Gonzalez et al., 2011; Merikangas et al., 2010; Pellerin et al., 2010), it is important to assess for factors that impact engagement in treatment, such as parental motivation or RFC (Morrison, 2010). To increase access to mental health services, the development and implementation of interventions that target aspects of parental engagement has begun, demonstrating initial success in reduced drop out, improved attendance, and increased implementation of skills (e.g., Chacko et al., 2012; Ingoldsby, 2010; Miller & Prinz, 2003; Nock & Ferriter, 2005). Some of these successful interventions implement strategies to address parental motivation and RFC, such as motivational interviewing (Chaffin et al., 2009; Nock & Ferriter, 2005; Nock & Kazdin, 2005; Swartz et al., 2007). However, research has shown that the influence of motivational interventions used prior to treatment may depend upon parents' pre-treatment level of readiness, suggesting that parents with low pre-treatment readiness benefit the most (Chaffin et al., 2009). Moreover, parents who report higher levels of RFC tend to be less likely to drop out of treatment and to remain in treatment longer compared to those with lower pre-treatment RFC, suggesting that motivation enhancement may not be needed for some families (Webb, Thomas, McGregor, Avdagic, & Zimmer-Gembeck, 2017).

As such, measuring parental readiness for treatment may inform clinicians about the need to include motivational enhancement techniques prior to treatment or about the type of therapy

that is most appropriate for a family (Spoth et al., 1995; Wade & Andrade, 2015). Parents who report lower initial readiness for change may require motivational interviewing, psychoeducation about child psychopathology and treatment effectiveness, or less intensive treatment methods to prevent premature drop out. Additionally, the incorporation of assessment techniques has been linked to "successful" engagement interventions, resulting in improved attendance, adherence, and cognitive preparation (Becker et al., 2015). The pre-treatment assessment process not only provides clinicians with information about client functioning but also creates an opportunity for the development of a strong client-therapist alliance, which may contribute to increased parental engagement (Becker et al., 2015; Sattler, 2002). As such, the assessment of parental readiness may help clinicians tailor initial treatment techniques and may also serve as an opportunity to develop rapport and increase treatment "buy-in" with parents.

Measures of Parental Readiness for Change

Although certain areas of psychology (e.g., substance abuse, addiction) have a long history of assessing and utilizing RFC, this construct has only recently been applied to child and family psychotherapy (Corden & Somerton, 2004; Wade & Andrade, 2015). As a result, few measures of parental motivation or readiness have been developed or undergone comprehensive psychometric evaluation. In fact, only three measures of parental RFC are currently available and utilized in the literature. First, the Parent Motivation Inventory (PMI; Nock & Photos, 2006) was developed to assess parents' motivation to participate in psychosocial treatment based on three aspects of motivation: desire for child change, readiness for change, and perceived ability to change. This 25-item measure has demonstrated good internal consistency, test-retest reliability, and predictive validity for subsequent barriers to treatment, representing a single component (Nock & Photos, 2006). However, no additional studies have examined the PMI's psychometric

properties, particularly using appropriate factor analytic methods, raising concerns about the measurement of the unidimensional construct of motivation.

Second, the Parent Readiness for Change Scale (PRFCS; Brestan, Ondersma, Simpson, & Gurwitch, 1999a) was developed based on the TTM and adapted from the University of Rhode Island Change Questionnaire, a 32-item measure of stage change (McConnaughy, Prochaska, & Velicer, 1983). The original PRFCS was a 28-item measure of parenting readiness that tapped into the Precontemplation, Contemplation, and Action stages, having dropped the Maintenance scale due to its lack of relevance for families seeking treatment (Brestan et al., 1999a; Littell & Girvin, 2005). Subsequent analyses suggested that a truncated 17-item version of the PRFCS demonstrated better fit, maintained the three-factor structure, had adequate internal consistency, and was associated with related constructs, such as parenting behavior and child emotional and conduct problems (Andrade et al., 2015; Niec, Barnett, Gering, Triemstra, & Solomon, 2015; Wade & Andrade, 2015). Still, some studies have derived composite scores for the PRFCS stages, reflecting a continuous measure of readiness (Littell & Girvin, 2005; Mullins, Suarez, Ondersma, & Page, 2004). This method has demonstrated empirical support given the high inter-correlations between the three stage factors, which suggests the presence of a second-order factor of overall parental readiness (Wade & Andrade, 2015). As such, it is unclear what scoring method (stage-based vs. continuous) is most appropriate for the PRFCS.

Finally, the Readiness, Efficacy, Attributions, Defensiveness, and Importance Scale (READI; Brestan, Ondersma, Simpson, & Gurwitch, 1999b) is a 61-item measure of parental readiness to engage in treatment. The original READI incorporated seven components related to treatment engagement following the motivational interviewing model (Miller & Rollnick, 2002), including readiness to change, parenting style, self-efficacy to change parenting behaviors,

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parental attributions about the child's behavior, defensiveness or openness to change, and parents' perceived importance of treatment. Two additional scales were made available to improve clinical utility: a Lie Scale and a Belief in Corporal Punishment Scale (Brestan et al., 1999b). Studies utilizing the full READI have demonstrated adequate internal consistency for most of the scales, excluding the attributions scale, as well as convergent validity between scores on the READI and the PRFCS stages (Niec et al., 2015; Powe et al., 2011). A short version of the READI (READI-SF) has also been developed based on clinician feedback regarding the need for a brief screening measure, which utilizes the two subscales that demonstrated the strongest internal consistency (Proctor, 2016; Proctor, Brestan-Knight, Fan, & Zlomke, 2018).

Psychometric Properties of the READI-SF

The READI-SF (Figures 1 and 2) is a 17-item measure that includes two of the original READI scales designed to assess readiness for treatment engagement and perceived importance of treatment (Proctor, 2016; Proctor, Bailey, Zlomke, & Brestan-Knight, 2016; Proctor et al., 2018). The eight-item "Readiness" scale was designed to assess parents' readiness to put effort into changing their child's behavior (e.g., "I am ready to start working on my parenting," "I am eager to learn any skills the therapist can teach me"). The nine-item "Importance" scale was developed to tap into parents' perceptions of the importance of seeking treatment for their child's problems (e.g., "It is very important that my child's behavior problems are fixed," "It's worth it to spend money to help my child with his/her behavior"). To complete the READI-SF, parents rate the 17 items on a 5-point scale, ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*), with higher scores indicating greater readiness for treatment. The measure provides an overall readiness score as well as scores for the two subscales (Proctor, 2016).

Preliminary investigation of the subscales of the READI-SF has demonstrated adequate internal consistency for the overall readiness scale and the subscales among community and clinic-referred samples (Jones, Putt, Rabinovitch, Hubbard, & Snipes, 2017; Proctor, 2016; Proctor et al., 2016, 2018). Additionally, responses on the READI-SF subscales have shown convergent validity with some related constructs, including parental motivation as measured on the PMI, parent-reported child behavior problems, and parental stress (Jones et al., 2017; Proctor, 2016; Proctor et al., 2018). The READI-SF has also demonstrated preliminary discriminative validity, with scores predicting group membership in community versus clinical groups (Proctor et al., 2016). Moreover, the READI-SF subscales have predicted family attendance at a one-time preventative parenting group, with higher readiness scores being associated with increased rates of attendance (Proctor, 2016; Proctor et al., 2018).

Recently, Proctor and colleagues (2018) investigated the factor structure of the READI-SF. Although the READI-SF was derived from two scales of the READI (Brestan et al., 1999b), an exploratory factory analysis (EFA) using responses from a community-based sample of African American caregivers demonstrated that a three-factor model provided the best fit for the data per fit indices and model interpretability (Proctor, 2016; Proctor et al., 2018). This factor structure was based on responses for 15 items of the READI-SF as two items were found to be unreliable indices and were unexpectedly related to the other items. The three factors derived from the EFA appeared to represent constructs of: treatment readiness, readiness for change, and the importance of treatment. These new scales were moderately intercorrelated and demonstrated good internal consistency (Proctor, 2016; Proctor et al., 2018). Notably, the treatment readiness and RFC subscales were significant predictors of family attendance for a parenting workshop within the community sample while the importance subscale was not, which may be expected

within a preventative sample of caregivers (Proctor, 2016; Proctor et al., 2018). Overall, the READI-SF represents a promising measure of parental RFC and readiness for treatment given its brief format and continuous construct measurement; however, further psychometric evidence is needed to support its dissemination, use, and interpretation when assessing diverse families who are entering treatment.

Areas for Further Development

Understanding parents' level of readiness upon treatment entry could help clinicians to promote parental engagement and prevent attrition, particularly for families from an ethnic minority background who are most at risk for dropping out (e.g., de Haan et al., 2013; Fernandez & Eyberg, 2009; Gopalan et al., 2010; Ingoldsby, 2010). Despite increasing efforts to create tools that assess for parental RFC, most studies have limited ethnic diversity, with less than 7% of their samples representing Latino families (Jones et al., 2017; Nock & Photos, 2006; Proctor et al., 2018; Wade & Andrade, 2015). Development and application of psychological measures requires the investigation of psychometric properties, such as reliability and validity, within diverse populations to ensure that assessment tools are appropriately utilized and interpreted (Cicchetti, 1994; Cook & Beckman, 2006). Given the differences in cultural values, language, and level of acculturation within Latino families (McCabe et al., 2005; U.S. Census Bureau, 2012, 2013), it is important for researchers to demonstrate psychometric support for measures within this population.

As such, there are several areas in which the READI-SF requires further psychometric investigation. Only one published study has examined the READI-SF, rather than the full version of the measure, utilizing a community-based sample of predominately African American families (Proctor et al., 2018). Thus, further evidence is needed for basic measurement properties, such as

means, standard deviations, and internal consistency, within additional populations. Moreover, although the three-factor structure best fit the data in this community sample, some of the indices demonstrated a mediocre fit based on suggested interpretations, and the authors ultimately suggested using the total readiness score, indicating that further clarification of the factor structure is appropriate (Proctor, 2016; Proctor et al., 2018). Therefore, evidence is inconclusive regarding the superiority of a one-factor, two-factor, or three-factor model for the READI-SF.

Given that the READI-SF could serve as part of a pretreatment assessment to inform treatment planning, examination of the measure within a clinic-referred sample is also vital. It may be that parents of children who exhibit clinically significant levels of psychopathology and who are referred for mental health services have different patterns of readiness for treatment on the READI-SF compared to community-based families (Proctor et al., 2016). Moreover, Latino families seeking treatment may exhibit different endorsements on the READI-SF given the higher levels of mental health stigma and possible misconceptions about treatment within their community (Kapke & Gerdes, 2016). To date, no published study has investigated the READI-SF with clinic-referred or majority Latino samples, so the measure's convergent validity should be examined in these population for child, parent, and family characteristics that may relate to parental treatment engagement or drop out, such as child behavior problems, parent age, length of time living in the United States (US), parenting behaviors, and single parent household status (e.g., de Haan et al., 2013; Fernandez & Eyberg, 2009; Proctor et al., 2018; Werba, Eyberg, Boggs, & Algina, 2006). Finally, the predictive validity of the READI-SF for behaviors related to treatment engagement (e.g., treatment attendance, homework completion) should be examined to support its utility in determining whether families require motivation-enhancement services as has been suggested by previous literature (e.g., Chaffin et al., 2009; Webb et al., 2017).

Goals and Hypotheses of the Current Study

Based on current limitations in the empirical support for its psychometric properties, the purpose of the current study was to provide evidence of the READI-SF's reliability, convergent validity, and predictive validity within a sample of majority Latino families seeking treatment. First, normative information was provided based on parent responses, including means, standard errors, and internal consistency for all possible factors. It was expected that families in the proposed clinic-based study would have higher READI-SF scores compared to the previously examined community-based sample (Proctor et al., 2016). In addition, mean differences were examined between Spanish-speaking and English-speaking families given that language status has been shown to relate to lower levels of engagement in public health services and poorer perceptions of health services (Becerra et al., 2015; Fawley-King et al., 2013). Thus, we hypothesized that Spanish-speaking parents would report lower levels of parental readiness on the READI-SF compared to English-speaking parents.

Second, we investigated the factor structure of the READI-SF using confirmatory factor analysis (CFA) within the whole sample and tested for any differences in factor and indicator means based on language. Given that the READI-SF has not been previously examined among Latino families seeking treatment, this investigation was exploratory. Third, the association between parent ratings on the READI-SF, on the one hand, and the Eyberg Child Behavior Inventory (ECBI) scales, observed Dyadic Parent-Child Interaction Coding System (DPICS) parent behaviors, and demographic information (e.g., parent age, length of residency in the US, household status), on the other hand, were examined to provide convergent validity. It was hypothesized that parents with higher ratings of child behavior problems, lower observed use of negative or leading verbal behavior (e.g., commands, negative talk), and higher rates of positive

verbal behaviors (e.g., praise, reflection) at pre-treatment would endorse greater parental readiness for treatment based on previous research (Fernandez & Eyberg, 2009; Girvin, 2004; Proctor, 2016; Werba et al., 2006). We also predicted that single parent-status families, younger parents, and parents who had lived in the US for less time would report lower levels of parental readiness on the READI-SF (Becerra et al., 2015; de Haan et al., 2013; Fawley-King et al., 2013). Finally, the association between READI-SF scores at pre-treatment and parent treatment engagement behaviors throughout subsequent PCIT sessions (e.g., number of treatment sessions attended, percentage of days in which homework was completed) was investigated to provide predictive validity for the measure. We hypothesized that parents who endorsed greater readiness for treatment at intake would attend more PCIT sessions and would have a higher percentage of homework completion compared to parents with lower readiness scores (Proctor et al., 2018).

Method

Participants

Participants were 100 primary caregivers of children who received PCIT services through the Behavioral Health Services Unit at Mary's Center in Washington, D.C. Mary's Center is a community health center with eight locations that provides health care, education programs, and social services to underserved, diverse families. The center accepts a range of private insurance options as well as Medicaid and utilizes a sliding fee scale based on income for families without insurance. The Behavioral Health Services Unit at Mary's Center offers outpatient and school-based mental health services and utilizes evidence-based practices to address a variety of problems, including trauma, child conduct issues, depression, and anxiety. From 2015 to 2016, Mary's Center reported that 70% of the clients served were Hispanic/Latino, 63% were female, 34% were children, 39% were uninsured, and 44% were enrolled in Medicaid. During this time

period, 2,021 participants received mental health services at Mary's Center. For the PCIT clinic, a team of ten clinicians provide services under the supervision of a Level 1 PCIT trainer, with an estimated 80 to 100 families served per year. Throughout data collection, new clinicians were hired and trained in PCIT at Mary's Center. The length of time for which clinicians had provided PCIT services ranged from four months to seven years (M=2.76 years).

For the current project, families who met Mary's Center criteria for a PCIT referral, who initiated services with the center, and who provided informed consent were included in the study. Criteria for eligibility to receive PCIT services at Mary's Center included: having a child from ages 2 years to 6 years and 11 months; the child having a receptive language understanding of at least 2.5 years old; the child exhibiting disruptive or aggressive behavior that cannot be safely managed by the primary caregiver; parent reported child disruptive and/or aggressive behavior impacting the child's home, school, or community interactions; a primary caregiver willing to participate in all treatment sessions; and the primary caregiver having at least 50% custody of the child or working to achieve this goal with the support of an outside agency. The inclusion criteria used at Mary's Center were based on the suggested age range, target population, and level of parental involvement required to effectively implement PCIT (Eyberg & Funderburk, 2011). For families with two caregivers and/or multiple children who participated in PCIT, the clinician identified the "target" parent and child based on the rater and child with the highest ECBI score.

Approximately half (49.35%) of families who received PCIT services at Mary's Center during data collection provided informed consent to allow researchers to use their treatment data. Anecdotally, the PCIT level 1 trainer noted that families were less likely to consent to participate in research if they were illiterate, had private insurance, or had father involvement. For the current project, target parents were majority female (96%) and Latino (68%) with a mean age of

32.41 years (*SD*=8.53). For ten families, another caregiver who was involved in PCIT completed the READI-SF at intake. Approximately half (54%) of target caregivers who participated spoke Spanish as their primary language. The target child participating in PCIT for this sample were majority male (67%) with a mean age of 4.70 years (*SD*=1.37). Ten families had a target child as well as siblings who received PCIT at Mary's Center (14 siblings in total). Only data for the target parent and child were used in analyses. Income data were only available for about half of families, but for families who disclosed this information, most reported an annual income of less than $40,000 (94.2%). When comparing demographic characteristics based on parent language, English-speaking parents were significantly more likely to be single parents and less likely to have a female child in treatment compared to Spanish-speaking parents, $\chi^2(1) = 3.96$, *p*=.047 and $\chi^2(1) = 4.89$, *p*=.027. English-speaking parents also reported significantly longer residency in the US compared to Spanish-Speaking parents, *t(34)* = 6.68, *p* < .001. Means, standard deviations, and amount of missing data for demographic characteristics are reported in Table 1.

Procedures

The study received IRB approval from Auburn University in February of 2017 as well as approval for research collaboration through Mary's Center. Families who were deemed suitable for PCIT services were provided the opportunity to participate in the research study during the Mary's Center standard intake procedures. For the PCIT intake, families took part in preliminary sessions that involved completion of administrative forms and diagnostic assessment measures, participation in a DPICS observation, and engagement in treatment planning with a clinician. IRB-approved informed consent procedures were conducted during these initial sessions, and caregivers who provided consent were included as participants. Per Mary's Center procedures, assessment data and treatment information for each family were entered into an Electronic

Medical Record (EMR) by the PCIT therapist or other staff members. For the current project, de-identified data were pulled from the EMR and entered into a database, which researchers used to complete the study goals.

After completing the Mary's Center intake process, families participated in the standard PCIT protocol, which was conducted in the parent's preferred language. PCIT is an empirically supported parent training program designed to treat children ages 2 to 7 with disruptive behavior problems (Eyberg & Funderburk, 2011). PCIT has two treatment phases that target different skills: Child-Directed Interaction (CDI) and Parent-Directed Interaction (PDI). CDI focuses on improving the quality of parent-child relations through differential social attention and child-centered play, while PDI focuses on increasing child compliance and parent consistency when implementing discipline (Eyberg & Funderburk, 2011). Each phase of treatment includes one "teach" session, in which therapists provide psychoeducation through didactics and roleplay, and several "coach" sessions, in which therapists provide in vivo coaching to parents during play-based dyadic interactions (Eyberg & Funderburk, 2011). During treatment, parent-report and observational assessment measures are conducted at each session to track family progress, and parents are required to demonstrate skill mastery to advance from CDI to PDI. Additionally, in order to officially graduate from PCIT, parents have to demonstrate mastery of certain skills (e.g., giving effective commands, using positive attending) in session and report improvements in their child's behavior problems (Eyberg & Funderburk, 2011).

Measures

Demographic Information. Demographic information was collected for each family during the Mary's Center intake process and entered into the EMR. For the current study, the following information was used to describe the sample and for analyses: the age and gender of

the target caregiver and child as well as the caregiver's ethnicity, single or multiparent household status, income, length of residency in the US, and preferred language.

READI-SF. The READI-SF is a 17-item self-report measure of parents' readiness for change, treatment readiness, and perceived importance of treatment (Proctor, 2016). Caregivers rate their agreement with statements, such as "I want to change the way I discipline my child," and "I am willing to do whatever it takes to be sure that we get help," on a 5-point Likert scale (1-Strongly Disagree, 5-Strongly Agree). Responses for each item are summed to create a total readiness score as well as three subscale scores (Readiness for Change, Treatment Readiness, and Importance; Proctor, 2016), with higher scores indicating greater parental readiness. The available research on the psychometric properties of the READI-SF is summarized above. The total readiness scale and three subscales have previously demonstrated good internal consistency, with Cronbach's alphas ranging from .83 to .94 (Proctor et al., 2018).

For the current study, caregivers completed either the English or Spanish version of the READI-SF during the Mary's Center intake process, depending on their language preference. The READI-SF was translated into Spanish by Mary's Center staff using the back translation method (Brislin, 1970; Cha, Kim, & Erlen, 2007). The READI-SF was first translated into Spanish by a bilingual staff member and then translated back into English independently by a different bilingual staff member. The two versions of the measure were compared, and any discrepancies in translation were discussed and resolved (Brislin, 1970; Cha et al., 2007). The translators intended for the language of the READI-SF to be universal across different Spanish-speaking ethnic groups and to be simple for caregivers with lower reading abilities while still maintaining the READI-SF's integrity.

Eyberg Child Behavior Inventory (ECBI). During the Mary's Center intake, caregivers completed either the Spanish or English version of the ECBI, a 36-item parent-report measure of current child externalizing behavior problems, which has been validated for children ages 2 to 16 (Eyberg & Pincus, 1999). Items assess common behavior problems, such as "teases and provokes other children," "has temper tantrums," "is easily distracted," and "acts defiant when told to do something." The measure is composed of two scales: the ECBI Intensity Scale and the ECBI Problem Scale. For the Intensity Scale, parents rate how frequently each behavior occurs on a scale from 1 (*Never*) to 7 (*Always*), with higher scores indicating more frequently occurring behavior problems. After summing responses for all items on the Intensity Scale, a composite score of 131 or above indicates clinically significant conduct problems (Eyberg & Pincus, 1999). For the Problem Scale, parents respond to the question "Is this a problem for you" by circling YES or NO for each item. After summing the number of "yes" responses for the Problem Scale, a score of 15 or above indicates that a clinically significant number of the child's behaviors are considered to be problematic (Eyberg & Pincus, 1999). Cronbach's alpha for this sample was .95 for the ECBI Intensity Scale; Cronbach's alpha could not be calculated for the Problem scale because clinicians only entered total scores rather than item responses into the EMR.

With regards to its psychometric properties, the ECBI has demonstrated good internal consistency, with reported Cronbach's alphas ranging from .92-.95 and .91-.92 for the Intensity and Problem scales, respectively (Burns & Patterson, 2001). Both scales have also demonstrated good inter-parent agreement and test-retest reliability for time periods ranging from three weeks to 10 months (Eisenstadt, McElreath, Eyberg, & McNeil, 1994; Funderburk, Eyberg, Rich, & Behar, 2003; Robinson, Eyberg, & Ross, 1980). In addition, the ECBI correlates highly with other measures of behavior problems, including both parent-report (Child Behavior Checklist;

Preschool Behavior Questionnaire-Parent Completed) and observational measures (e.g., Boggs, Eyberg, & Reynolds, 1990; Butler, 2013; Cotter, 2016; Funderburk et al., 2003; Gross et al., 2007; Webster-Stratton & Eyberg, 1982). Finally, the two ECBI scales have been shown to discriminate children with conduct problems from those without as well as children who have received treatment from those who have not (Eyberg & Pincus, 1999; Eyberg & Ross, 1978). The ECBI has been previously translated into Spanish, and evidence of internal consistency, test-retest reliability, and concurrent validity has been demonstrated (García-Tornel et al., 1998).

Dyadic Parent-Child Interaction Coding System, Fourth Edition (DPICS-IV). The DPICS is a behavioral observation measure used to assess the quality of parent-child interactions in PCIT (Eyberg, Nelson, Ginn, Bhuiyan, & Boggs, 2013). For the DPICS, parent-child dyads are placed in a clinic playroom connected to a one-way mirror with instructions provided to the parent using a bug-in-the-ear device. Then, the frequency of parent and child verbalizations are coded by a clinician during three different structured play situations: child-led play, parent-led play, and clean up. Of the total 20-minute observation, the first 10 minutes are devoted to child-led play, during which parents are directed to let their child choose the play activity and to follow their child's lead. The first five minutes of this segment are considered a "warm up" to allow the parent and child to adjust to the setting, decreasing reactivity and increasing representativeness of the coded behaviors (Thornberry, 2013; Thornberry & Brestan-Knight, 2011). Following this warm up, dyadic interactions are coded continuously for five minutes. The remaining 10 minutes are devoted to parent-led play and clean up during which parent and child behaviors are coded for 5 minutes each. In parent-led play, parents are instructed to select the play activity and to direct the child to play by their rules, while in clean up, parents are instructed to get the child to pick up and put away the toys in the room on his/her own. This situational arrangement places

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increasing demands on the parent to exert control over the child throughout the observation (Eyberg et al., 2013). In the DPICS-IV, there are nine parent coding categories (see Table 2). For the current study, parent behaviors coded during the three situations for the pre-treatment DPICS observation were combined, and three composite coding categories were calculated and used for analyses: positive parent verbalizations (behavior description, labeled praise, unlabeled praise, and reflection), parent demandingness (direct commands/total commands), and inappropriate parent verbalizations (question, negative talk, direct commands, and indirect commands).

The DPICS has strong psychometric evidence for its reliability, validity, and treatment sensitivity (for a review, see Eyberg et al., 2013). High to adequate inter-observer agreement has been demonstrated for coding of both parent and child behaviors (e.g., Bessmer, 1998; Cotter, 2016; Deskins, 2005; Foote, 1999; Robinson & Eyberg, 1981). Regarding validity, studies have demonstrated that the DPICS can discriminate between clinic-referred and non-clinic referred families, with significant differences in the frequency of both child and parent behaviors (e.g., Bessmer, 1998; Bjørseth, McNeil, & Wichstrøm, 2015; Cotter, 2016; Robinson & Eyberg, 1981; Webster-Stratton, 1985). The frequency of several DPICS coding categories has also been shown to be associated with self-report measures of related constructs, including parent-reported child behavior problems and parental stress related to the child (Bessmer, 1998; Cotter, 2016; Foote, 1999). Finally, the DPICS has been shown to detect changes in the quality of parent-child interactions following completion of PCIT (e.g., Chaffin et al., 2004; Nieter, Thornberry, & Brestan-Knight, 2013; Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998).

Treatment Engagement. Treatment engagement was evaluated using two variables: average percentage of homework completion and number of sessions attended. During PCIT, each family is assigned to complete a brief homework activity over the week as outlined in the

protocol (Eyberg & Funderburk, 2011). At Mary's Center, PCIT families were given a document to track which days they completed homework, what activity they engaged in, and any questions or concerns they had about homework (Eyberg & Funderburk, 2011). Parents were required to bring this document to the next session or, if needed, recreate this information at the beginning of session. Parent reports of the number of days in which homework was completed for each week were entered into the EMR by the clinician. For the current study, homework completion was calculated by the research team as a percentage by dividing the number of days the parent reportedly completed homework during the week by seven, which is the typical number of possible homework days. If there was more than one week between treatment sessions (e.g., due to holidays or cancellation), homework was calculated for a single week to avoid penalizing parents for missed sessions (Danko, Brown, Van Schoick, & Budd, 2016). These homework percentages were then averaged across all treatment sessions to create an overall percentage of homework completion for each family. For treatment attendance, the total number of PCIT-related sessions that each family attended was counted by the research team, including initial intake sessions, and this number was used in the analyses.

Preliminary Analyses

Analyses were conducted using SPSS version 24 and MPlus version 8. SPSS was utilized to examine patterns of missing data for the READI-SF. Six items did not have any missing responses (items 1, 4, 7, 9, 14 and 16). For those with missing data, percentages ranged from one to three percent missing data for all items on the READI-SF except item 15 ("I have problems that are more important than my child's behavior right now"), for which 16% of responses were missing. For the ECBI, 14 caregivers were missing responses for the intensity scale, while 22 caregivers were missing responses for the problem scale. For the DPICS, twenty-four caregivers

did not have data for some or all coding categories. To manage missing data, multiple imputation was conducted with SPSS, and 59 datasets were generated based on recommendations from the amount of missing information (Bodner, 2008; Rubin 1987). Multiple imputation is preferred over more traditional methods of handling missing data (e.g., listwise/pairwise deletion, mean imputation), which can produce biased estimates and reduce the sample size (Enders, 2010; Kline, 2016). Imputed datasets were used for analyses run in SPSS, providing pooled results for compatible tests. To address the study's first aim, descriptive statistics were run to provide means, standard errors, skew, and kurtosis for the READI-SF items as well as the one-factor, two-factor, and three-factor models. In addition, Cronbach's alphas (α; Cronbach, 1951) were calculated for all possible models of the READI-SF. Given that SPSS would not provide pooled results for this analytical method, the average α was hand calculated based on the imputed data.

For the second study aim, MPlus was utilized to conduct CFAs for the READI-SF given that exploratory analyses have already been performed (Brown, 2015; Hoyle, 2000; Proctor et al., 2018). Previous studies have provided inconsistent support for one-factor, two-factor, and three-factor models; therefore, these CFA models were compared to determine which model provided the best fit for the sample (Brestan et al., 1999a; Brown, 2015; Proctor et al., 2018). CFAs were run using both the maximum likelihood (ML) estimator and the robust ML (MLR) estimator given evidence for ceiling effects and negative skew for READI-SF item 1 (see items means displayed in Table 3; Brown, 2015). For data that are non-normally distributed, using ML could lead to inflated chi-square values and underestimation of fit indices, particularly with small samples (Brown, 2015). A multiple indicators and multiple causes model (MIMIC; Jöreskog & Goldberger, 1975) was then run to examine the effect of language on the indicator intercepts and factor means as participants completed either the Spanish or English version of the READI-SF.

This technique is used to investigate the effect of a covariate when small sample size prevents the use of other statistical techniques (e.g., multiple-groups CFA; Brown, 2015; Vandenberg & Lance, 2000). Given the large number of indicators, Pearson *r* correlations were run between READI-SF items and parent language to determine which indicators to include in the analyses. Items 3, 4, 6, 8, 9, and 13 were significantly correlated with parent language and, thus, were incorporated into the MIMIC model.

Results from these analyses were used to inform the READI-SF factor structure utilized in subsequent statistical tests. *T*-tests were run to examine mean differences in responding on the READI-SF scales between English-speaking and Spanish-speaking parents. For the remaining study hypotheses, language was included as a covariate given that measurement invariance was observed in the MIMIC model. Regression analyses were used rather than Pearson *r* correlations as originally planned. Multiple linear and binary logistic regression analyses were run using imputed data to investigate the convergent and predictive validity of the READI-SF.

Results

Means, standard errors, and indicators of normality for the READI-SF are reported in Table 3. Visual inspection of the READI-SF's descriptive statistics suggested ceiling effects for both item and scale means; however, only item 1 ("I'm ready to start working on my parenting") exhibited skew and kurtosis that exceeded recommended levels (i.e., greater than 3 and 10, less than -3 and -10 for skew and kurtosis, respectively; Curran, West, & Finch, 1996; Nevitt & Hancock, 2000). Still, most item and scale means were close to the maximum score based on the READI-SF rating scale (e.g., item 1 mean of 4.67 out of 5; mean overall readiness of 73.58 out of 85). To examine the internal consistency of the READI-SF, average Cronbach's alphas were calculated using the imputed data (see Table 4). Several scales demonstrated adequate internal

consistency (i.e., α > 0.70; Cronbach, 1951; Tavakol & Dennick, 2011), including the total

READI-SF scale (mean α = 0.813), the Readiness scale from the two-factor model (mean α =

0.838), and the RFC and Importance scales from the three-factor model (mean α = 0.836; mean α

= 0.710). For some scales (i.e., total READI-SF scale, two-factor importance scale), reliability

analyses indicated that the internal consistency would be improved if items 11 and 15 were

removed. The mean Cronbach's alpha increased for both scales following item removal, and the

internal consistency of the two-factor Importance scale was subsequently deemed adequate

(mean α = 0.734). The only scale that did not demonstrate adequate internal consistency was the

Readiness scale from the three-factor model (mean α = 0.534).

Factor Structure of the READI-SF

A confirmatory factor analysis (CFA) was run in MPlus to examine the three-factor

structure of the 15-item READI-SF suggested by prior research (Proctor et al., 2018). The MPlus

output indicated a warning of "a non-positive definite first-order derivative product matrix" due

to items that appeared dichotomous, requiring further investigation. Even though the READI-SF

items utilized a 5-point rating scale, participants in our sample only endorsed ratings of "4" and

"5" for item 7 ("I'm eager to learn any skills the therapist can teach me") and item 17 ("I'd like to

learn what will work to change my child's behavior"). As such, the items appeared dichotomous

in the MPlus analyses, conflicting with the ML requirement of continuous indicators (Muhén &

Muhén, 2012). Using the robust mean- and variance-adjusted weighted least squares (WLSMV)

estimator in analyses was considered given that it can account for continuous and categorical

indicators in CFA; however, treating the items as categorical in analyses did not make sense

theoretically because the items were intended to have more than two responses (Brown, 2015).

Rather, these items demonstrated a restricted range and did not contribute much variance to the

model, suggesting that removing the items was more appropriate. For the three-factor model, items 7 and 17 loaded onto the Readiness factor (Proctor et al., 2018). Once removed, this factor had two indicators, which is considered the "minimum number of indicators per factor" with potential to yield specification error and technical problems (Kline, 2016 p. 195). Results for the revised three-factor model demonstrated poor model fit based on multiple indicators, including the chi-square test of model fit, the root mean square error of approximation (RMSEA; Steiger & Lind, 1980), the comparative fit index (CFI; Bentler, 1990), and the Tucker-Lewis index (TLI; Tucker & Lewis, 1973). These findings suggested that additional analyses should be conducted to evaluate alternative factor structures, including the two- and one-factor models that had been proposed during the READI-SF's development (Brestan et al., 1999a). Table 5 summarizes the fit indices for CFAs run to assess these different structures.

Consistent with previous research, items 11 and 15 were found to have low factor loadings for the two-factor ($\lambda_{11} = -.048$, $\lambda_{15} = .20$) and one-factor ($\lambda_{11} = -.10$, $\lambda_{15} = .20$) models (Proctor et al., 2018). Moreover, items 11 and 15 were not significantly correlated with most of the other READI-SF items, and reliability analyses indicated their removal improved internal consistency (see Table 6). As such, CFAs were also run with these items removed from the Importance scale to determine whether model fit improved (Table 5). For the one- and two-factor models, χ^2 difference tests were run to determine whether the fit was significantly worsened by constraining the items onto one factor given that the models were nested (i.e., 15-item models, 13-item models; Brown, 2015). In both cases, the one-factor model provided a significantly worse fit compared to the two-factor model based on the critical value of χ^2 with 1df being 3.84 ($\Delta\chi^2_{15} = 90.68$, $\Delta\chi^2_{13} = 97.27$). To examine model fit between non-nested models, the Akaike Information Criteria (AIC) and the Bayesian Information Criteria (BIC) were compared (Brown,

2015). The two-factor model with 13 items had the lowest AIC and BIC, suggesting that this model should be retained (Table 5). Visual inspection of the CFA fit indices along with results of these difference tests indicated that the two-factor model using an MLR estimator with items 11 and 15 removed demonstrated the best fit. While most other models demonstrated poor or unacceptable fit across the indicators, the two-factor model was the only one in which the lower bound of the 90% RMSEA confidence interval fell within the mediocre range (Browne & Cudeck, 1992; MacCallum & Browne, 2004). Still, the CFI and TLI indicators were close but did not fall within the range for good fit (CFI>.90, TLI>.95), and the χ^2 test of model fit was significant, indicating that the model did not fit the data perfectly (Brown, 2015; Hu & Bentler, 1999; Kline, 2016). Looking at the factor loadings for the two-factor model, all parameter estimates were statistically significant at $p < .05$ except item 2, and the factor loadings and communalities for most items were adequate (i.e., greater than .3; see Table 7).

Given the moderately poor fit of the two-factor model, modification indices were derived and inspected to determine what changes could be applied to improve model fit. They indicated that allowing the error variances for READI-SF item 2 ("Bad things could happen if my child's behavior doesn't get better") and item 10 ("If things don't change, my child's future could be hurt") to correlate would provide the greatest improvement for the model. These items were loaded onto the same latent factor and appeared to capture related constructs, so another CFA was run in which they were allowed to correlate. Given that the χ^2 difference tests cannot be used for models with the MLR estimator, a scaled difference in χ^2s (SDCS) test was conducted to examine the two-factor model with and without the correlated error variance (Brown, 2015; Satorra & Bentler, 2001, 2010). This modified model demonstrated significant improvement compared to the original two-factor model as evidenced by the SDCS test (scaled $\Delta\chi^2 = 40.15$,

Δdf = 1; Satorra & Bentler, 2001, 2010). After allowing error variances for these items to correlate, the two-factor model demonstrated reasonable fit for the data, with the lower bound supporting a close fit (RMSEA = 0.066, 90% CI = 0.032 - 0.095). The CFI and TLI were 0.93 and 0.91, respectively, which were partly indicative of good fit. Still, the χ^2 value was significant, $\chi^2 = 90.81$, p=.012, suggesting that the model did not fit the data perfectly. The error variances for items 10 and 2 were significantly correlated, $r = 0.61$, $p < .001$, showing that these items tap into related concepts. In addition, the RFC and Importance factors were significantly correlated, $r = 0.64$, $p < .005$, demonstrating that these factors capture distinct yet related constructs as would be expected. Overall, this two-factor model appeared to provide the best fit for the data and was retained for future analyses.

Based on the CFA results, a MIMIC model was conducted using the 13-item, two-factor structure to determine whether indicator intercepts and factor means differed depending on the participant's language (Brown, 2015). Language was included as a covariate for the latent factors (RFC and Importance) and several indicators (READI-SF items 3, 4, 6, 8, 9, and 13), which were selected due to their significant correlations with language. The MIMIC model had a close to mediocre fit for the data ($\chi^2 = 95.23$, df = 68, $p = .016$; RMSEA = 0.063, 90% CI = 0.028 - 0.092; CFI = 0.93; TLI = 0.91) with similar values for the fit indices compared to the above CFA. Overall, the addition of the covariate did not affect loadings of the READI-SF items except item 4, which became nonsignificant after language was incorporated (Table 7). Results showed a significant direct effect of participant language on RFC ($\beta = 0.21$, SE = 0.092, $p = 0.023$) and Importance ($\beta = 0.23$, SE = 0.11, $p = 0.027$). The latent factor means for RFC and Importance significantly differed across language groups, with parents who completed the Spanish version of the READI-SF having higher factor means compared to those who completed the English one.

Moreover, there was a direct effect of language on item 4 of the READI-SF ($\beta = 0.33$, SE = 0.067, $p < 0.005$), representing measurement invariance for this item. Holding the Importance factor constant, parents who completed the Spanish version of the READI-SF had higher mean scores for item 4 compared to those who completed the English version (Brown, 2015). No other significant direct language effects were observed for the READI-SF items examined. The MIMIC model explained 4.3% and 5.5% of the variance for the RFC and Importance factors, respectively.

Convergent and Predictive Validity

The 13-item, two-factor structure for the READI-SF was used for analyses investigating convergent and predictive validity. Means, standard errors, normality data, and missingness for these measures are reported in Table 8. Pooled results for *t*-tests indicated that Spanish-speaking parents reported significantly higher scores on the READI-SF RFC scale (N = 54, *M* = 27.21, *SE* = .41) compared to English-speaking parents at pretreatment (N = 46, *M* = 24.66, *SE* = .78), *t* = -2.88, *p* = .004. By contrast, there were no significant differences between reports of Spanish-speaking (N = 54, *M* = 30.79, *SE* = .45) and English-speaking parents (N = 46, *M* = 29.32, *SE* = .67) on the Importance scale, *t* = -1.82, *p* = .069. To examine convergent validity of the READI-SF, 16 linear regression analyses were run, including language as a covariate to account for measurement invariance. The RFC and Importance scales were entered as dependent variables, while the two ECBI scales, the three DPICS composite codes, and demographic characteristics were entered as independent variables into separate analyses. Results are reported in Tables 9 and 10. Living in a single parent household and parent reports of problematic child behavior as measured by the ECBI Problem Scale were the only significant predictors of parental RFC apart from language, *t* = -1.98, *p* = .048, and *t* = 2.78, *p* < .01 respectively. Language was a significant

predictor in five regression models of parental RFC and in four regression models of treatment importance (see Tables 9 and 10). After accounting for language, both the ECBI Intensity and Problem Scales were significant predictors of parents' perceived importance of treatment, $t = 4.61, p < .01$ and $t = 4.18, p < .01$. None of the DPICS composite categories or other parent characteristics (e.g., parent age, years of residency in the U.S.) examined were significant predictors for either parental RFC or treatment importance (Tables 9 and 10).

Within our sample, 12 families were still actively participating in treatment at the time of data analyses, so they were excluded from the predictive validity analyses. Fifty families had data regarding their homework completion. Of families that were missing homework data, 34 (87.18%) dropped out of treatment before they would be expected to participate in homework (e.g., before beginning CDI coach sessions). Given that homework completion was recorded each week throughout treatment, some families did not have data recorded for every session. On average, families had homework data for 69.61% of sessions that they attended. Parents reported completing the assigned homework on about half of the available days each week throughout PCIT (M = 55.21%, SD = 26.38%). Thirty-three families (37.5%) met the CDI mastery criteria required to progress through treatment, and 16 families (18.2%) graduated from PCIT. The mean number of sessions attended was 16.69 (SD = 9.67) for families who met graduation criteria and was 7.56 (SD = 6.69) for families who did not meet graduation criteria. The percentage of parents who met CDI mastery criteria and PCIT graduation criteria did not differ based on their preferred language, $\chi^2 (1) = 0.028, p = .87$ and $\chi^2 (1) = 0.26, p = .61$. There was a significant association between the number of years a clinician had been conducting PCIT and whether their family met CDI mastery and PCIT graduation criteria, $r = .37, p < .001$ and $r = .37, p < .001$.

For predictive validity, multiple linear regression analyses were run using imputed data to determine whether parental RFC or importance of treatment predicted treatment engagement (i.e., weekly homework completion, number of treatment sessions attended) after accounting for language. Four linear regression analyses were run with the RFC and Importance scales entered as independent variables, and treatment outcome variables entered as dependent variables into separate analyses (Table 11). Given that measurement invariance was observed in the MIMIC model, language was included but was not a significant predictor in any of the models. Neither the RFC scale nor the Importance scale significantly predicted either average percentage of weekly homework completion ($t = .52$, $p = .60$; $t = .37$, $p = .71$) or the number of treatment sessions attended ($t = 1.00$, $p = .32$; t = -.29, $p = .78$). Given that PCIT is not time-limited and treatment length depends upon parent's mastery of skills, families who attend more treatments sessions may do so for a number of reasons (e.g., difficulty mastering skills, more difficult child behavior). As a result, two follow up binary logistic regression analyses were run to examine whether READI-SF scales predicted CDI mastery completion (i.e., did parents meet mastery for CDI skills or not?). Although parent-reported RFC and perceived treatment importance on the READI-SF were not statistically significant predictors of whether parents met CDI mastery criteria, results for the RFC scale were trending towards significance ($p = .085$; Table 11).

Discussion

Parental readiness is a relatively new concept with the potential to assist clinicians and researchers in better understanding family engagement in and outcomes for child psychotherapy (Wade & Andrade, 2015). Even though dissemination efforts have increased for evidence-based treatments, research suggests that a large percentage of children and adolescents with mental health problems do not receive psychological treatment or drop out of treatment prematurely due

in part to lack of parental engagement in services (Gonzalez et al., 2011; McHugh & Barlow, 2010; Merikangas et al., 2010, 2011; Pellerin et al., 2010; Wamser-Nanney & Steinzor, 2016). Parent engagement in their child's treatment involves not only behavioral components, such as treatment attendance and adherence, but also cognitive components, including their motivation to change and treatment readiness (Becker et al., 2015; Staudt, 2007). Understanding how parental readiness relates to child psychopathology, parenting behaviors, and treatment retention would enhance client-centered treatment methods such that clinicians could meet parents "where they are," utilizing motivation-enhancement techniques or treatment tailoring as needed. Still, current measures of parental readiness lack sufficient evidence of reliability, convergent and predictive validity, and clinical utility, limiting the interpretation and application of findings (Andrade et al., 2015; Niec et al., 2015; Nock & Photos, 2006; Proctor et al., 2018; Wade & Andrade, 2015).

The current project aimed to address these gaps in the research literature by examining the psychometric properties of the READI-SF, a 17-item measure of parental readiness for and perceived importance of treatment. Notably, this study was the first to investigate the READI-SF with Latino families seeking PCIT in a community-based mental health clinic. Understanding parental readiness in this population is vital for two reasons. First, Latino families face both practical barriers (e.g., transportation, insurance, waitlists) and cultural barriers (e.g., stigma, acculturation, discrimination) to accessing mental health services (McCabe et al., 2005). As a result, they often do not seek out or gain access to quality treatment services and are at greater risk for terminating prematurely (Becerra et al., 2015; Berdahl & Stone, 2009; de Haan et al., 2013; Kapke & Gerdes, 2016; McCabe et al., 2005). For example, Latino parents have been found to exhibit fewer engagement behaviors during treatment sessions compared to non-Latino families, which may affect their outcomes or retention (Stadnick, Haine-Schlagel, & Martinez,

2006). The growing population of Latino families living in the US as well as the prevalence of mental health problems in this ethnic group necessitates empirical investigation into factors, like readiness, that affect treatment attendance, adherence, and outcomes (Gonzales et al., 2009; U.S. Census Bureau 2015; U.S. DHHS, 2001). Second, researchers and clinicians have identified a gap in the dissemination of evidence-based treatments in more "real-world" environments, such as community-based mental health centers (Weisz, Donenberg, Han, & Weiss, 1995; Whitaker, Lutzker, & Shelley, 2005). In these settings, families who present for treatment often have more co-morbidity, complex household situations, and ethnic diversity compared to those originally included in efficacy studies for treatment protocols (Lyon & Budd, 2010; Weisz, Jensen-Doss, & Hawley, 2006). Studies examining evidence-based treatments, such as PCIT, within community settings have consistently found higher rates of attrition, resulting in decreased treatment benefits for families who dropout (e.g., Danko, Garbacz, & Budd, 2016; Lanier et al., 2011; Lyon & Budd, 2010; Pearl et al., 2012). To date, the current study is the first to investigate the READI-SF within a sample of Latino families as well as a community-based treatment setting, both characteristics that indicate greater likelihood for treatment dropout and, thus, greater importance of understanding the influence of parent RFC and readiness for treatment.

Moreover, several other factors make this study unique and relevant to research literature and clinical practice. Families within our study spoke either English or Spanish and, thus, were able to choose the preferred language in which their assessment and treatment services were provided. Language often serves as a barrier to mental health services for Latino families due to the limited availability of translated materials and interpretive services (e.g., Becerra et al., 2015; Fawley-King, et al., 2013; McCabe et al., 2005). In fact, a nationwide survey conducted by the American Psychological Association found that only 5.5% of clinicians reported that they were

able to provide services in Spanish (Smith, 2018). As such, the clinicians at Mary's Center represent an exclusive group who are able to provide PCIT services in English and Spanish, allowing for the exploration of assessment and treatment factors that differ based on language. In addition, the current study utilized observational and behavioral measures to examine family characteristics and treatment engagement. Previous research investigating parental readiness has relied almost exclusively on parent-report measures, which are susceptible to response biases and demand characteristics (Gardner, 2000; Wade & Andrade, 2015). Addressing these limitations, our study incorporated the DPICS, an established observational measure of parent behavior, to examine the pretreatment relationship with parental readiness for and importance of treatment. The current project also included behavior-based measures of both treatment attendance (e.g., the number of treatment sessions attended) and treatment adherence (e.g., percentage of homework completed throughout treatment), which are distinct yet related constructs that are important for understanding parental engagement in treatment (Gopalan et al., 2010; Nock & Ferriter, 2005). Finally, the only other study of the READI-SF utilized a non-clinical community-based sample, so this study is the first to examine the measure within a treatment-seeking sample (Proctor et al., 2018). While exploring parent treatment readiness among non-clinical families in the community may provide information about parents' willingness to initially seek out treatment, understanding treatment readiness for families who have already initiated services could inform clinicians about how to keep families in treatment and how to encourage optimal outcomes, which is equally as important. Thus, our findings advance areas where research is lacking and provide additional clinical support for the READI-SF as well as important directions for future research.

Description of the READI-SF

In general, families within our sample reported high levels of parental readiness across all tested factor structures of the READI-SF (Table 3). As expected, average parent ratings for the total Readiness score in this sample ($M = 65.6$, $SE = .76$) were higher compared to the previously examined community-based sample ($M = 41.5$, $SD = 14.74$; Procter, 2016). Families who are initiating mental health services have likely invested time and resources as well as overcome pretreatment barriers (e.g., stigma) to attend an intake session, so it is reasonable that they would endorse more RFC and importance of treatment compared to families who have not yet initiated treatment or identified their children as having clinical problems in need of services (Nock & Photos, 2006; Proctor, 2016; Wade & Andrade, 2015). These findings are particularly promising for our sample because some research has suggested that Latino families tend to report negative attitudes and expectations for therapy, such as thinking that services will not be effective or helpful, feeling concerned about the characteristics of mental health providers, and fearing that treatment services will negatively affect relationships with friends and family upon discovery (Yeh, McCabe, Hough, Huff, & Hazen, 2003). It should be noted that some factors related to our treatment setting may have uniquely affected parent responding in our sample of families, such as the availability of treatment within the parent's preferred language. Also, Mary's Center offers a range of medical, educational, and supportive services to their families, meaning that families seeking PCIT treatment may already have positive experiences associated with the clinic setting and staff ("Services," 2010). Still, it is encouraging that families from this ethnic background reported high RFC and perceived importance of treatment, which aligns with previous research for non-Latino Caucasian parents seeking PMT (Nock & Photos, 2006; Wade & Andrade, 2015).

The high level of endorsement of the READI-SF items and scales suggests that a ceiling effect may have occurred in that parents were not able to appear "more ready," which has been

shown in other studies examining readiness among clinic-referred families (Nock & Photos, 2006; Wade & Andrade, 2015). Without the inclusion of validity indices or measures of social desirability, it is difficult to determine whether families were rating items based on their genuine beliefs or engaging in biased responding, especially given values related to respect for authority within Latino culture (McCabe et al., 2005). Despite these ceiling effects, all scales and items except Item 1 ("I'm ready to start working on my parenting") for the READI-SF were within acceptable limits for skew and kurtosis (Table 3). Consistent with previous studies, our results demonstrated adequate internal consistency for most READI-SF factor structures except the Readiness scale for the three-factor model (average α = .534; Jones et al., 2017; Proctor et al., 2018). Even though Proctor and colleagues (2018) demonstrated adequate internal consistency for this Readiness scale within a community-based sample, our findings may be related to the ceiling effect and limited variability in responses observed for items 7 and 17, both of which loaded onto this factor (Proctor et al., 2018).

Factor Structure of the READI-SF

Within our sample, a two-factor structure was supported for the READI-SF using 13 of the 17 available items, representing parents' readiness to put effort into changing their behavior (RFC, 6 items) and parents' perceived importance of receiving treatment (Importance, 7 items). Even though this factor structure was similar to the two subscales derived from the original READI, model comparison for CFAs demonstrated improved model fit when the two reverse-scored items were removed from the Importance scale ("I will work on my child's behavior problems later" and "I have problems that are more important than my child's behavior right now"; Brestan et al., 1999a). Consistent with findings from Proctor and colleagues (2018), reverse-scored items negatively affected model fit and scale internal consistency as they were

mostly unrelated to other items on the READI-SF (Table 6). Even though reverse-scored items are intended to reduce response biases, like responding in agreement to all items or responding based on expectations rather than specific item content, they are often found to detract from the reliability and validity of self-report measures (e.g., Swain, Weathers, & Niedrich, 2008; Woods, 2006). Researchers have hypothesized that careless responding or respondent acquiescence contributes to this effect for reverse-scored items; however, empirical investigation supports item verification difficulty as an underlying cause of misresponding for reverse-scored items (Swain et al., 2008; Woods, 2006). As such, individuals may have difficulty understanding or processing reverse-scored items, leading to more inaccurate responses (Swain et al., 2008).

Within our sample, a higher percentage of individuals were missing responses for item 15 on the READI-SF compared to other items (16% vs. 1 to 3%), which aligns with the notion that parents may have had more difficulty understanding reverse-scored items and, thus, chose not to respond. Moreover, 10 of the 16 families (62.5%) with missing data for this item completed the READI-SF in Spanish, suggesting that language may have influenced difficulty in understanding reverse-scored items. These findings indicated that reverse-scored items may not represent the best option for ensuring validity of responding with this measure, particularly given the limited number of reverse-scored items and lack of clarity about reasons for misresponding. In addition, both reverse-scored items load onto the Importance scale, meaning that individuals scoring the READI-SF may not know if biased responding influenced the RFC scale. Another possible method for ensuring parents are responding appropriately on the READI-SF would be integrating items that test an individual's willingness to endorse valued attributes that are not seen in most individuals (e.g., always telling the truth), which would measure a parent's tendency to give an extremely positive picture of themselves (Robertson & Milner, 1985). In fact, the long version of

the READI has a supplemental "Lie" validity scale that could be incorporated into the short form for this purpose (Brestan et al., 1999b). Alternatively, research has suggested that switching the scaling (e.g., 1=strongly disagree to 1=strongly agree) for a portion of items may serve a similar function to reverse-scored items without the verification difficulties (Swain et al., 2008).

The READI-SF factor structure that provided the best fit for our data differed from the three-factor model supported in a previous study (Proctor et al., 2018). Additionally, participants within our sample only endorsed ratings of "4" or "5" when responding to item 7 ("I'm eager to learn any skills the therapist can teach me") and item 17 ("I'd like to learn what will work to change my child's behavior"), demonstrating a strong ceiling effect for these indicators. These items were removed from our analyses to allow the model to run, which deviates from previous models for the READI-SF (Brestan et al., 1999a; Proctor et al., 2018). However, differences in sample characteristics may have contributed to these divergent findings as the only previously published study investigated the READI-SF in a community sample of predominately African American families. Given that the two samples were similar for some characteristics (e.g., ethnic minority status, low income, region of the country), the divergent factor structure may indicate that families who are already seeking psychological services perceive and respond to items differently compared to those that are not. For example, the previously-supported three-factor structure suggests that nontreatment-seeking families separate desire for behavior change (e.g., parenting, discipline, consistency) from desire for treatment, a distinction that may be less relevant for families who have already initiated services (Proctor et al., 2018). Thus, it might be expected that items like 7 and 17, which differentiate readiness in community families, are rated highly by all treatment-seeking families given that their behavior (i.e., entering treatment) aligns with the construct being measured (i.e., treatment readiness). Alternatively, cultural differences

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between African American and Latino families may provide different contexts through which parents interpret and respond to the READI-SF items, highlighting unique aspects of parental readiness between the two samples (Proctor et al., 2018). For instance, African American individuals have been shown to report the highest levels of perceived discrimination for health care providers, while Latino individuals reported significantly more unsatisfying interactions with doctors compared to other ethnic groups (Lee et al., 2009). Culturally-specific values, such as *respeto* within Latino families, may also influence views about parenting and child behavior among ethnic minority groups (Calzada, Fernandez, & Cortes, 2010). Such factors may influence how Latino and African American families perceive mental health treatment and behavioral components assessed by the READI-SF, contributing to the different factor structure supported in our sample. Ultimately, Proctor and colleagues (2018) recommended that the overall Readiness scale was the most useful scoring method; however, chi-square difference tests in this study suggested that the one-factor model was significantly worse compared to the two-factor model, representing another point of divergence (Proctor et al., 2018).

For the 13-item two-factor READI-SF structure, modification indices showed that allowing error variances for items 2 and 10 to correlate would improve model fit, which was supported by CFA model comparison. Error variances for these items were strongly correlated, and visual inspection of item content indicated that they both dealt with negative consequences for inaction in changing child behavior. The occurrence of correlated error variances for these indicators suggests that some of the covariance between indicators is not due to the latent factor but rather "to another exogenous common cause" (Brown, 2015, p. 157). This relationship may account for the low factor loading and communality observed for item 2 due to multicollinearity between these two items. Still, it should be noted that this relationship may be unique to our

sample as the modification was not tested within an independent sample, increasing the risk for capitalizing on chance (Brown, 2015). It is also possible that item 2 ("Bad things could happen if my child's behavior doesn't get better") is not strongly related to the latent factors captured in the READI-SF given that the modification indices did not suggest that the model could be improved by allowing item 2 to load onto the RFC factor (Brown, 2015). As such, item 2 may need to be reworded or removed to ensure that it relates to intended constructs and does not overlap with other indicators on the READI-SF.

Approximately half of families in our sample were Spanish-speaking and completed the translated version of the READI-SF. Consequently, a MIMIC model was run to determine the effects of language on the two-factor model. Results showed that the Spanish-speaking parents were more likely to endorse items related to RFC and Importance compared to English-speaking parents, supporting population heterogeneity in latent factor means (Brown, 2015). These group differences may be related to the translated version of the READI-SF in that Spanish wording or phrasing led to divergent interpretations of the constructs. Mary's Center staff used the back-translation procedure to translate the measure; however, there are dialect differences in spoken and written Spanish based on geographic region, which affect the ability to communicate across Spanish-speaking families from different areas (Berdahl & Stone, 2009; Brislin, 1970; Bryan, 2009; Cha et al., 2007; Shi & Canizales, 2013). Utilizing Mary's Center staff in the translation process was meant to ensure that the reading level and wording of the Spanish version was reflective of the population seen at the mental health clinic. Still, it is possible that clinicians conducting the translation utilized a certain dialect, affecting the context and interpretation for items compared to the English version of the READI-SF.

Alternatively, the observed effect of language may be representative of cultural differences between Spanish-speaking and English-speaking Latino families. Research has shown a relationship between preferred language use and level of acculturation among Latino families such that language has even been used as a proxy for level of acculturation (Calzada, Huang, Anicama, Fernandez, & Brotman, 2012; Ceballo & Hurd, 2008). Within our sample, mean differences in length of US residency were observed based on preferred language, with English-speaking parents having lived longer in the US compared to Spanish-speaking parents. As a result, Spanish-speaking families may adhere more strongly to traditional values compared to English-speaking families, which influenced their response patterns on the READI-SF. For example, the values of *respeto* (i.e., courtesy and consideration when interacting with people in positions of authority) and *simpatia* (i.e., desire to avoid conflict to maintain kindness) could relate to greater endorsement of parental RFC and treatment importance if parents want to appear more aligned with the clinic staff (Arredondo et al., 1996; Kim, Lau, & Chorpita, 2016; Marin & Marin, 1991). Explanations for the factor mean differences could not be empirically evaluated because information about cultural values was not available for these families. Beyond factor means, there was significant differential item responding based on language for item 4 ("It's worth it to spend money to help my child with his/her behavior"), and the factor loading became nonsignificant after accounting for language. Interestingly, item 4 is the only one on the READI-SF that references financial costs associated with treatment. Given that Mary's Center serves clients with a range of insurance options, including Medicaid, as well as self-pay, it is unclear what percentage of families in our sample was paying for their treatment services. Even though family insurance or payment data were not available, it may be that differential responding was related to financial differences across Spanish- and English-speaking families. Parents who are

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not paying for their services may respond differently to item 4 compared to those who are. Still, the MIMIC model only accounted for a small percentage of variance in the Importance and RFC latent factors, with large residual variances suggesting that the effect of language was small.

Although the two-factor structure demonstrated the best fit for the data, there were some fit indices that suggested further improvement is still needed. Specifically, the χ^2 difference test, the TLI, and the upper bound for the RMSEA 90% confidence interval suggested a mediocre fit for the data. Several factors may have contributed to this finding. For example, the χ^2 difference test has underlying assumptions regarding data distribution and is considered an "absolute fit index," meaning it does not account for parsimony or allow for reasonable rather than perfect fit. Given the observed ceiling effect in our data and relatively small sample size, these assumptions may not hold, and the statistical significance for this test may be compromised (Brown, 2015). Additionally, the restricted range observed in parent READI-SF responses may have limited variability, potentially affecting model fit. Both TLI and RMSEA account for parsimony such that models with more freely estimated parameters would have less favorable indicators. This facet explains the more favorable fit observed for the two-factor model compared to the three-factor model. Still, constraining items to load onto two factors may have worsened the fit if there are items that do not align with the latent factor, which may be observed given the low factor loadings for items 2 and 4. The correlation between error variances for items 2 and 10 and the low communalities for certain items (e.g., item 5, item 10) also suggest that there may be other latent factors that were not included in our structure, which may have affected the model fit.

Moreover, our sample size was relatively small. Recommendations have been suggested for sample size when conducting factor analysis, but there is not agreement in the literature about applying these "rules of thumb." For example, it has been suggested that researchers should have

10 participants per item or 50 participants per factor for exploratory factor analyses (Costello & Osborne, 2005; Pedhazur & Schmelkin, 1991). More recently, simulations have been run that incorporate the number of factors, the number of items, and the magnitude of factor loadings for the population to provide more nuanced recommendations for sample size (Gagne & Hancock, 2006; Jackson, Voth, & Frey, 2013). Though our sample size was deemed sufficient to provide proper solutions, reasonable parameter estimates, and acceptable model fit for CFA based on previous findings for the READI-SF (Gagne & Hancock, 2006; Jackson et al., 2013; Proctor, 2016; Proctor et al., 2018), sample size affects "the statistical power and precision of the model's parameter estimates" (Brown, 2015, p. 381). For example, an underlying assumption of ML is sufficient sample size to reduce the likelihood of distorted solutions or Heywood cases, so our relatively small sample size may have worsened the observed model fit (Brown, 2015). Thus, replication of findings within a larger sample of families is necessary to support a definitive factor structure for the READI-SF. Notably, modifications were made to the READI-SF structure without verification in an independent sample, including the removal of items and the allowance of correlated error variances, which increases the risk for capitalizing on chance.

Reliability and Validity of the READI-SF

Contrary to our hypotheses, results demonstrated that Spanish-speaking parents in our sample had higher scores on the RFC scale, but not the Importance scale, compared to English-speaking parents. We expected that Spanish-speaking parents would report lower treatment readiness based on research that suggested a relationship between language status, lower levels of engagement in public health services, and poorer perceptions of health services (Becerra et al., 2015; Fawley-King et al., 2013). However, it is also possible that cultural values affected parent ratings on the READI-SF, as described above, with Spanish-speaking families being less

acculturated compared to English-speaking families (Calzada et al., 2012; Ceballo & Hurd, 2008). In fact, one study found that Latino families who were less acculturated had lower rates of "no shows" to planned mental health appointments, demonstrating the complexity of how culture relates to mental health services utilization and engagement (Kim et al., 2016). Mental health use has even been shown to differ depending on Latino subgroup (e.g., Mexican, Puerto Rican; Berdahl & Stone, 2009). Regrettably, this information was not available for our sample. Still, the limited availability of mental health resources for Spanish-speaking families may also relate to parents reporting greater treatment readiness when they are able to find and receive services in their preferred language (Becerra et al., 2015; Fawley-King et al., 2013; Flores, 2010).

Regarding convergent validity, findings demonstrated that parent-reported child behavior problems were related to ratings on the READI-SF, with more frequent and problematic child behaviors predicting greater parental readiness to change behavior and importance of receiving treatment. Notably, the ECBI Problem scale was significantly associated with both READI-SF scales, whereas the Intensity scale was only associated with the Importance scale. These results are partly consistent with previous research, and differences may be due to unique components of readiness captured using the two-factor structure for the READI-SF compared to an overall readiness score (Jones et al., 2017; Proctor et al., 2018; Wade & Andrade, 2015). Our findings suggest that parents who report more frequent child behavior problems may feel that they are not able to manage their child's behavior independently and, thus, recognize the importance of seeking help. However, they may not fully understand the relationship between their child's behavior problems and their own parenting behavior, which may explain why the ECBI Intensity Scale did not significantly predict parents' readiness to change their behavior. For example, these parents may attribute their child's conduct problems to internal attributes rather than their own

parenting behaviors, which is more likely for families of children referred for conduct problems (Dix & Lochman, 1990; Johnson, Reynolds, Freeman, & Geller, 1998).

While the ECBI Intensity Scale measures the frequency of child behavior problems, the ECBI Problem Scale is often considered an indirect measure of parents' tolerance of misbehavior (e.g., are the behaviors a problem for the parent) or stress (e.g., parents who are more stressed tend to report behaviors as more problematic; Boggs et al., 1990; Butler, Brestan, & Eyberg, 2008). Prior research has shown that parental stress moderates the relationship between parent ratings on the READI Readiness scale and their reports of child behavior problems such that parents with high levels of stress report higher levels of parental readiness regardless of child behavior (Jones et al., 2017). As such, parents with higher ratings on the ECBI Problem Scale may be experiencing particularly high levels of stress, which makes them more willing to endorse readiness for behavior change as well as importance of seeking treatment (Jones et al., 2017). Still, similar to other studies of parental readiness involving clinical samples, families in our sample exhibited ceiling effects when rating their RFC and treatment importance on the READI-SF, which may represent another explanation for our results (Jones et al., 2017; Nock & Photos, 2006; Wade & Andrade, 2015). Though not beyond the limits of acceptability, the RFC scale had more negative skew and kurtosis compared to the Importance scale. This lack of variability may have inhibited the ability to detect relationships with other measures in our sample, including the ECBI Intensity Scale.

Contrary to our hypotheses, there were no significant relationships between the READI-SF scales and parent behaviors coded using the DPICS. Previous research suggests that parent reports of certain parenting behaviors, including inconsistent discipline, positive parenting, and supervision, are related to their readiness for treatment (Andrade et al., 2015; Wade & Andrade,

2015). Moreover, observed parenting behaviors have been shown to relate to treatment dropout, suggesting that parents who exhibit these behaviors may be less ready for treatment (Fernandez & Eyberg, 2009; Werba et al., 2006). Although our results do not support this association, it may be that the DPICS categories included in this study did not capture the parenting behaviors that are influential for parental readiness. For example, the DPICS directiveness composite category measures the percentage of direct commands out of total commands given during an observation; however, it does not provide information about parent behaviors after a command is given (e.g., did the parent follow through discipline for noncompliance), which may be more indicative of consistent discipline use (Eyberg et al., 2013). Also, the DPICS was originally developed as an assessment for PCIT and measures parent and child behaviors that are relevant for this treatment (e.g., labeled praise, behavior description; Eyberg et al., 2013). As such, certain DPICS codes are often observed at a low rate at pretreatment because they are play therapy skills, which are not commonly utilized in "typical" parent-child interactions (Cotter, 2016). Thus, examining the READI-SF with another observational measure may yield different results. Alternatively, parents' perceptions about their parenting may be more important than their actual behavior in determining treatment readiness. Parents who believe that their parenting behavior could be improved (e.g., endorsing inconsistent discipline use, poor supervision) may be more likely to endorse high ratings on readiness to change their behavior and importance of receiving treatment independent of their actual behaviors (Andrade et al., 2015; Wade & Andrade, 2015).

Most of the parent and family characteristics examined were not significantly associated with parental RFC or perceived treatment importance, contrary to our hypotheses. Research has shown that certain demographic factors, such as parent age and level of acculturation, are related to treatment engagement (Becerra et al., 2015; de Haan et al., 2013; Fawley-King et al., 2013).

Our findings suggest that these relationships may operate through different mechanisms beyond parental readiness for treatment, which aligns with some previous findings in the literature (Nock & Photos, 2006; Proctor, 2016). For instance, parent age may be associated with other barriers to treatment (e.g., transportation, child care), stress level, or social support, which may impact their ability to initiate and actively participate in their child's treatment (de Haan et al., 2013; Littell & Girvin, 2005). Still, these variables exhibited higher levels of missing data within our sample, which may have influenced our power to detect significant relationships. Household status (e.g., single parent household or not) was the only significant predictor of parent readiness to change behavior although it did not predict perceived importance of treatment. Consistent with our hypothesis, single parents tended to report lower levels of RFC compared to parents who had another caregiver living in the household. Given that single parent status has been linked to treatment dropout, our results suggest that readiness to change behavior may partially account for this relationship (de Haan et al., 2013). However, findings should be interpreted with caution because data on household status were only available for half of our sample and families with two parents participating in PCIT may have been less likely to consent to participate in this project. For instance, one study showed that parents who endorsed higher problem recognition tended to have smaller social networks and less social support, which suggests that single parents may be more likely to report high levels of RFC (Littell & Girvin, 2005). Level of financial stress has also been shown to relate to parental endorsement of RFC (Proctor, 2016). Thus, it will be important to replicate these findings accounting for other potential predictors in order to determine what parent and family characteristics are most relevant for treatment readiness.

Regarding predictive validity, our results did not support a relationship between READI-SF scales and treatment engagement behaviors (e.g., attendance and adherence). Although one

previous study found that overall readiness scores predicted attendance to a one-time parenting group within a community-based sample, others have demonstrated similar difficulties with using parental readiness to predict treatment attendance and engagement (Nock & Photos, 2006; Proctor, 2016; Stadnick et al., 2016; Wade & Andrade, 2015). Ceiling effects among treatment-seeking families appear to limit variance and inhibit the ability to detect relationships between variables (Nock & Photos, 2006). Interestingly, one study suggested a mediational model where parental readiness for treatment was related to fewer perceived treatment barriers, which then predicted treatment attendance; however, this relationship has not yet been empirically examined for the READI or other measures of parental RFC (Nock & Photos, 2006). Demonstrating that parental readiness predicts treatment attendance may be difficult due to the tendency for families to report high levels of readiness at pretreatment. One possible alternative would be to measure changes in parental readiness over time (e.g., at beginning of CDI vs. PDI), which may better identify families whose readiness has declined and may be more likely to drop out later in treatment (Nock & Photos, 2006; Proctor, 2016).

For PCIT, treatment length depends on parents' mastery of skills such that parents who have greater difficulty learning and applying the concepts need to remain in treatment longer (Eyberg & Funderburk, 2011). As such, using the number of sessions attended as a measure of treatment attendance may not exclusively capture the intended construct because families may be attending more sessions due to difficulty mastering skills, more severe child problem behaviors, or lack of confidence in applying therapy techniques, which all factor into the PCIT graduation criteria (Eyberg & Funderburk, 2011; Nock & Ferriter, 2005). This idea was somewhat supported because parents' responses on the RFC scale predicted whether they met mastery criteria for the first phase of treatment, which was a marginally significant finding. Parents who

reported that they were "more ready" to put effort into changing their behaviors were more likely to stay in treatment long enough to complete the CDI phase of treatment even after accounting for parent language. This finding is promising, particularly given the low percentage of families who met CDI mastery (37.1%) but should be replicated within an independent sample to verify the relationship. One unanticipated factor that was found to significantly predict both parent mastery of CDI skills and graduation from treatment in this study was the length of time that clinicians had been conducting PCIT, which is likely reflective of their PCIT expertise. These results highlight the importance of considering both family and therapist characteristics when examining treatment retention given that relatively few studies include therapist factors (de Haan et al., 2013; Herschell, Capage, Bahl, & McNeil, 2008). Clinicians who have more experience conducting a manualized treatment, such as PCIT, may be better able to tailor treatment to client needs, implement treatment components, and problem-solve challenges that arise. This factor could be particularly relevant within community-based mental health settings given the greater level of complexity seen in families seeking treatment and the limited resources in comparison to university and research-based institutions (e.g., Lyon & Budd, 2010; Stokes, Wallace, & McNeil, 2018; Weisz et al., 2006).

Overall, only 16 families (18%) met graduation criteria for PCIT, for an attrition rate of 82%. This level of dropout is higher than previous PCIT studies with Latino families (10-43%) but is closer to rates found for PCIT implemented in community mental health settings (67-69%; Lanier et al., 2011; Lyon & Budd, 2010; Matos et al., 2006, 2009; McCabe & Yeh, 2009; Pearl et al., 2012). Consistent with previous research, a larger percentage of families dropped out early in treatment (38.2% before CDI coaching sessions) and during CDI (24.7%) compared to those that dropped out during PDI (19.1%; Lanier et al., 2011; Pearl et al., 2012). Families within our

sample appeared to be in a lower socioeconomic status, which may account for the higher rate of treatment dropout observed (Lavigne, LeBailly, Gouze, Binns, Keller, & Pate, 2010; Leijten, Raaijmakers, de Castro, & Matthys, 2013; Werba et al., 2006). Data regarding discharge reasons were not available for our sample. However, it may be that families who did not graduate from PCIT had to terminate for unavoidable reasons (e.g., moving out of state) or received sufficient clinical benefits without reaching true graduation mastery criteria (Eyberg & Funderburk, 2011). The attrition rate may also conflate families who terminated PCIT services prematurely (e.g., stopped attending sessions, were not responsive to clinician follow up) with families who were referred for other services within Mary's Center after intake evaluation (e.g., individual therapy for parent, treatment with different modality). Interestingly, parents' preferred language was not significantly related to whether parents met mastery criteria or reached PCIT graduation criteria. Research suggests that Latino families tend to have less access to quality mental health services; however, it appears that when evidence-based treatments are available and provided using their preferred language, Spanish- and English-speaking Latino families are equally likely to remain in treatment (Lee et al., 2009; Shavers et al., 2012; US DHHS, 2001).

Parent-reported treatment readiness and importance was also found not to be significantly related to parents' homework completion across PCIT treatment, which served as a measure of treatment adherence (Nock & Ferriter, 2005). However, the sample size for these analyses was relatively small given the large percentage of families without homework data (39%) or who were still ongoing treatment (12%). As such, it appears that our analyses were underpowered to detect meaningful differences (Power = .27 and .19 for RFC and Importance). It should be noted that the majority of families who were missing data had not yet passed the benchmark in therapy upon which homework is assigned (87.2%; CDI coach sessions). Still, most families were

missing some amount of homework data (*M*=69.61% of homework data available), which may have been due to family factors (e.g., parents did not bring in or complete homework sheets) or therapist factors (e.g., therapists did not record the amount of homework completed for every session in EMR). Only 13 families (26%) had homework data for every treatment session. We were also not able to differentiate CDI versus PDI homework completion due to the therapists' recording method. Missing data could not be imputed because treatment length for each family varied, which may have influenced our results. On average, parents reported that they completed homework approximately half of the days of the week (M=55.21%, range: 0-100%), which is comparable to other PCIT studies (Berkovits, O'Brien, Carter, & Eyberg, 2010; Danko et al., 2016; Huber et al., 2019; Lyon & Budd, 2010). Previous research has shown that homework completion is related to treatment outcomes, attrition, and satisfaction; however, other factors may moderate this relationship (e.g., treatment knowledge; Danko et al., 2016; Lyon & Budd, 2010; Ros, Garziano, & Hart, 2017). As such, it will be important to continue to examine the effect of parental readiness on homework completion when a larger sample size is available or more stringent data collection procedures are used.

Theoretical and Clinical Implications

Overall, the current findings support a multidimensional conceptualization of parental readiness for treatment given the superiority of the two-factor structure compared to the one-factor model. The limited research examining parental readiness has shown conflicting results, supporting either one composite scale of overall readiness or different subscales capturing unique aspects of readiness (Littell & Girvin, 2005; Niec et al., 2015; Nock & Photos, 2006; Wade & Andrade, 2015; Proctor et al., 2018). Within our sample, it appears that parents' willingness to put effort into changing their behavior as well as their perceptions of the importance of seeking

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treatment represent two distinct yet linked constructs that factor into their treatment readiness. These scales demonstrated good internal consistency and associations with parent endorsement of the problematic nature of their child's behaviors. Still, differential relationships were observed for certain variables, such as parent-reported frequency of child behavior problems and retention of families through the first phase of PCIT. For the READI-SF, parent-reported RFC appears to predict preventative parent engagement in services and, to a lesser extent, retention in treatment services, while perceived treatment importance does not (Proctor, 2016). Given that PMT often relies on altering parent behaviors to affect child functioning, it may be that parents' intent and willingness to change their behavior serves as a greater indicator of whether they are ready to initiate and engage in their child's treatment (Littell & Girvin, 2005; Nock & Ferriter, 2005).

When measuring parental readiness for treatment, different conceptualizations may be necessary depending on respondent characteristics, such as ethnic background or involvement in mental health services. Different factor structures have been supported for the PRFCS and the READI-SF across studies, suggesting that certain aspects of treatment readiness may be more or less relevant depending on family context (Littell & Girvin, 2005; Proctor et al., 2018; Wade & Andrade, 2015). Alternatively, it may be that the READI-SF captures some aspects of readiness but does not include all factors that determine parent treatment engagement. Pereira and Barros (2018) recently conducted a systematic review that suggested parents' motivation to engage in treatment was comprised of two dimensions: their need or desire to change and their perception of the possibility of change. Based on this conceptualization, the READI-SF captures the first component of treatment readiness because items ask parents to rate whether they need to change their behavior and whether they believe there will be consequences for not seeking help for their child's behavior (i.e., recognizing that either their parenting or their child's behavior is a problem

that needs to be addressed; Pereira & Barros, 2018). However, unlike the full version of the READI, the short version does not incorporate items about parents' belief in their ability to change (i.e., self-efficacy) or attributions about the source of the problem (Brestan et al., 1999b; Pereira & Barros, 2018). It may be that problem recognition or RFC, which the READI-SF does measure, is predictive of whether parents seek treatment services, whereas perceptions related to the possibility for change, which the READI-SF does not measure, affect whether parents remain in treatment following initiation. These hypothesized relationships could explain the different factor structures and predictive findings observed with the READI-SF across treatment-seeking and nontreatment-seeking families though empirical evidence is needed (Proctor et al., 2018).

The current study also has implications for the utilization of the READI-SF within a clinical setting as well as the implementation of PCIT among diverse families in a community-based mental health clinic. Both English- and Spanish-speaking families reported high levels of RFC and perceived treatment importance during their intake evaluations. Their ratings were higher compared to a nontreatment-seeking, community-based sample of families, suggesting that the READI-SF can differentiate between parents who are likely to initiate treatment services from those who are not (Proctor et al., 2018). This normative information indicates that parents who endorse low ratings on the READI-SF at the beginning of treatment are at a higher risk for dropping out and may require additional services to maintain engagement (e.g., assessment of barriers, motivation enhancement, psychoeducation). Additionally, parents who do not report that their child's behavior is problematic or who report less frequent conduct problems are likely to feel that treatment is less important and to be less ready to change their behavior. Single parents entering treatment may also be less ready to put effort into changing their parenting, requiring greater attention to treatment barriers and more support from their therapist. Given the

ceiling effect observed within our sample, it may be important to explain to parents about the purpose of the READI-SF, such as gathering information to tailor treatment and to make it more relevant to the family's needs, to promote honest responding and avoid impression management. For clinicians scoring the READI-SF at intake, it appears that 13 items adequately capture the intended constructs and demonstrate appropriate reliability and validity, which can be combined to derive the RFC and Importance scales.

Given the gap often observed between implementation of evidence-based treatments in efficacy studies and in community-based settings, this study enhances current understanding of the use of PCIT with diverse families in a community mental health center (Weisz et al., 1995; Whitaker et al., 2005). Within our sample, parents reported mean ECBI Intensity and Problems scores that were above the clinical cutoff, with no significant mean differences across English- and Spanish-speaking parents. During the pretreatment DPICS observation, parents exhibited less prosocial behavior and more inappropriate behavior. When giving their child a command, parents utilized a direct (e.g., "please put on your shoes") rather than indirect (e.g., "will you hand me your shoes?") format approximately 59% of the time during the DPICS observation. Throughout PCIT, clinician reported that parents completed assigned homework approximately four days out of seven. Parents who completed treatment attended about 17 sessions, whereas parents who dropped out attended 7 sessions on average. Overall, even though our sample had characteristics that were associated with treatment disengagement and dropout such as lower socioeconomic status and Latino ethnic identity, they appeared to exhibit similar pretreatment characteristics, treatment adherence, and treatment attendance compared to previous PCIT studies (e.g., Cotter, 2016; Danko et al., 2016; Lanier et al., 2011; Lyon & Budd, 2010; McCabe, Yeh, Lau, Argote, & Liang, 2010; Pearl et al., 2012; Ramos, Blizzard, Barroso, & Bagner, 2018).

Importantly, these findings offer support for the implementation of the standard PCIT protocol conducted in Spanish, which is a relatively underexplored circumstance (Ramos et al., 2018).

Compared to the number of parents who participated in the Mary's Center intake process, a relatively small percentage remained in treatment long enough to demonstrate mastery of skills for the first phase of treatment, with even fewer meeting the requirements to graduate from PCIT. Studies examining community-based implementation of PCIT appear to have some of the highest dropout rates, with more families dropping out during the first phase of treatment than the second phase (Lanier et al., 2011; Lyon & Budd, 2010; Pearl et al., 2012). Certain factors have been shown to relate to dropout within these settings, including referral source, family income, ethnicity, and parent age (Lanier et al., 2011; Lyon & Budd, 2010). In our sample, the length of time a family's clinician had been conducting PCIT was related to whether or not that family met CDI mastery and graduation criteria. Though dissemination efforts are increasing to train and implement PCIT in community-based settings, research has shown that some clinicians do not remain in the training process long enough to reach certification or do not remain at their agency after being trained (Beveridge et al., 2015; Timmer et al., 2016). As such, mental health clinics may need to focus not only on training clinicians in PCIT but also on retaining them, as having more experience implementing PCIT appears to improve family retention and optimize clinical resources. Within our sample, it was difficult to distinguish parents who dropped out of services entirely (e.g., stopped seeking any services at Mary's Center) from those who switched to different treatment services that better fit their needs. Particularly in community mental health centers where multiple service options are available, this information should be recorded and examined to obtain more accurate estimates of dropout. It may be that families who terminate all

services have lower levels of readiness compared to families who are transferred to a different treatment modality, which would be important for mental health providers to know.

Limitations

The current study has some limitations that may affect generalizability and interpretation of results. Though our sample size was equivalent to other published studies examining parental readiness within community and clinical samples, it constituted the minimum sample based on recommended standards when running CFAs (Gagne & Hancock, 2006; Jackson et al., 2013; Nock & Photos, 2006; Proctor et al., 2018, Wade & Andrade, 2015). This small sample size was partially due to unanticipated difficulty in recruiting families to allow researchers to use their data. Only approximately half of families who initiated PCIT services at Mary's Center signed consent for the research project. Unfortunately, demographic data were unavailable to examine differences in those who participated in research compared to those who did not; however, anecdotal reports suggested literacy, family hierarchy, and insurance type may have affected recruitment. Thus, self-selection bias may have influenced our results and their generalizability (Braver & Bay, 1992). Missing data also contributed to low power for certain analyses (e.g., homework completion, demographic characteristics). Though multiple imputation was utilized to maximize power and interpretability, it did not make sense to impute some variables (e.g., parent age, homework data). Additionally, ceiling effects were observed for the RFC and Importance scales with mean item and scale scores close to the maximum possible option, which may have censored parents' responses such that only partial information was available (McBee, 2010). As such, certain analyses were underpowered to detect significant relationships between variables.

Although the collaboration with Mary's Center enabled the project to collect data within a unique and relevant setting, there were some limitations in data entry and acquisition. Session

data for each family required their clinicians to accurately enter information into structured data fields, which was time and labor intensive. In reviewing data entry, certain clinicians were more conscientious and thorough when entering data. Research assistants were able to check and enter data for the READI-SF with approximately 80% of families; however, time constraints and practical limitations prevented these procedures from being performed for all variables. For example, when a family's case was closed, the procedure was for relevant treatment documents to be scanned into the EMR, but this information was not always available. In addition, the child was considered the client at Mary's Center, so parent demographic information was not always collected or entered (e.g., parent date of birth), which contributed to missing data for this study. Pulling information from the EMR was also more challenging than originally anticipated due to staff turnover and the high volume of data required. In community-based mental health settings, clinicians often have higher caseloads, fewer resources, and less contact with PCIT-specific supervision (Stokes et al., 2018). These factors yielded information about mental health services and the implementation of PCIT services in the "real world" yet also contributed to difficulties related to research activities as data entry and management required time and effort beyond clinicians' paid duties. Similar difficulties with missing data have been documented in other community-based studies of PCIT (Lanier et al., 2011). Moreover, no data for treatment fidelity or DPICS coding reliability were available within the Mary's Center setting. Although research suggests that clinicians within community mental health settings are able to implement PCIT with relatively high fidelity, we were not able to examine this aspect of implementation for our study, which may be relevant given the higher dropout rate and range in clinicians' experience level in providing PCIT services (Travis & Brestan-Knight, 2013).

Our results should be interpreted within the context of our sample and treatment setting. Families appeared to be representative of the population seen at Mary's Center, with the majority being Latino and lower income. Thus, our findings may not generalize to other populations, such as families from different ethnic groups and socioeconomic statuses as well as nontreatment-seeking families. In particular, it is possible that some of our divergent findings may be due to level of acculturation and endorsement of Latino cultural values (Calzada et al., 2012; Ceballo & Hurd, 2008). However, we did not have this information for our families and were not able to test these theory-based explanations. Additionally, we were not able to separate the influence of socioeconomic status from ethnic minority status because most families in our sample were low income and Latino. Some research suggests that socioeconomic variables account for differences observed across ethnic groups or vice versa, indicating that both variables should be considered when examining diverse populations to tease apart their effects (Chen, Martin, & Matthews, 2006; Cooper 2002; Stronks and Kunst 2009). Given our sample composition, we are unable to determine the relationship between these demographic characteristics and certain findings (e.g., percentage of treatment dropout, high parental readiness). Finally, some families in our sample were undergoing PCIT for multiple children (e.g., siblings with behavior problems) at the same time. Though data were collected for one "target" child for the purposes on our study, these families may have had greater exposure to the PCIT concepts (e.g., attending session multiple times a week, having longer sessions), which could have influenced their treatment length and, subsequently, our findings.

Future Research

Despite these limitations, our study provides insight into the measurement and utilization of parental readiness as a construct among treatment-seeking Latino families, highlighting areas

upon which future research could expand. First, although the READI-SF represents a promising screening tool for clinical settings, further revisions may be necessary to ensure that the measure captures all relevant constructs related to parental readiness. Based on current and prior findings, some items on the READI-SF could be revised or removed to ensure that each one contributes significant yet unique measurement variance for the intended constructs. Notably, the reverse-scored items appear to detract from the reliability and validity of the measure, suggesting that other methods could be utilized to ensure unbiased responding. Incorporating a "Lie" scale or switching the rating scale for selected items may allow clinicians to evaluate responding while ensuring appropriate psychometric performance. Future studies should also examine whether items from the original READI's self-efficacy and attributions scales enable the READI-SF to better predict treatment engagement and retention as these constructs have been theorized to relate to parent motivation for treatment engagement (Pereira & Barros, 2018). To date, both the two-factor and three-factor model have been empirically supported within certain populations, so further clarification regarding the optimal READI-SF factor structure is needed based on the less than optimal fit for some model indices (Proctor et al., 2018). Specifically, it will be important for future research to determine whether the READI-SF performs differently based on treatment-seeking status or ethnic identity, ensuring accurate interpretation of ratings. For Latino families, understanding how endorsement of cultural beliefs influences ratings on self-report measures could inform assessment methods in future research studies and clinical practice. Greater inclusion of and emphasis on culturally diverse families is very important to better understand factors that affect treatment engagement, retention, and outcomes.

Some research has shown that examining change in parental readiness across treatment is important to predict barriers to treatment and engagement behaviors (Nock & Photos, 2006).

Given the influence of ceiling effects in detecting predictive validity for the READI-SF, future studies should explore whether administering the measure at different timepoints in treatment would provide more informative responding. For example, incorporating the READI-SF into telephone screening for potential clients might detect greater variability in parents' readiness to begin treatment given that clients have not yet invested time and resources to meet in person with a clinician. Alternatively, it may be important to assess readiness at intake and after several treatment sessions to better understand how parents respond to therapy techniques (Nock & Photos, 2006). For PCIT, parents may experience decreased motivation during CDI if they believe that it is not relevant to their problems (e.g., it does not address discipline directly) or if they have difficulty mastering the skills. Moreover, families generally experience reductions of behavior problems during CDI, which could either increase treatment readiness (e.g., they see the effects and are motivated to continue improving) or decrease treatment readiness through the "CDI cure" (e.g., they believe their problems are solved so continued treatment is not necessary; Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993; Lanier et al., 2011). Thus, future research should focus on understanding how parental readiness changes across treatment and how this relates to treatment retention. This information would help clinicians know when to assess using the READI-SF and how to interpret parents' responses.

Still, it may be that parental readiness does not directly relate to treatment engagement but rather influences other factors that motivate families to remain in treatment. One study has suggested that parent-reported treatment readiness affects parents' perceptions of barriers to treatment, which relates to treatment attendance (Nock & Photos, 2006). Thus, parents' level of readiness when entering treatment may influence their perceptions of the treatment process (e.g., barriers, difficulty in skill acquisition, alliance with therapist) or their participation in treatment-

related activities (e.g., homework completion, utilization/generalization of skills), which in turn may lead to greater treatment attendance and outcomes. Alternatively, some factors, like parent stress level or therapist level of experience, may moderate the effect of parental readiness (Jones et al., 2017). This study found that therapist level of experience with PCIT was related to parent mastery of skills. It may be that therapists who are more adept at implementing therapy practices are able to engage families even if they report low levels of treatment readiness compared to less experienced therapists, for whom parental readiness is more impactful. Potential mediational and moderated models should be explored in future studies to illuminate the relationships between such variables and to better understand what role parent RFC and motivation for treatment plays.

Conclusion

Overall, the READI-SF has the potential to serve as a brief screening measure of parental readiness, helping clinicians decide whether additional rapport-building activities, motivation-enhancement techniques, or less intensive treatment programs are needed for families to remain engaged in treatment. The current study is the first to provide initial psychometric support for the use of this measure among treatment-seeking Latino families within a community mental health clinic. Uniquely, families in this sample were able to receive assessment and treatment services in their preferred language, eliminating one influential treatment barrier. Evidence of reliability, convergent validity, and predictive validity was found for the RFC and Importance scales. Still, our project highlighted several difficulties with conducting research and implementing evidence-based treatments in community-based mental health settings. These results aid the interpretation of the READI-SF as well as provide valuable areas upon which future research can build.

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Table 1

Demographic characteristics for parent-child dyads

Demographics			
	M/SD	*N*	*%*
Parent Age	32.41/8.53	75	
Missing		25	
Parent Gender			
Female		96	96.0
Male		4	4.0
Child Age	4.70/1.37	100	
Child Gender*			
Male		67	67.0
Female		33	33.0
Ethnicity			
Caucasian		5	6.3
African American		5	6.3
Latino		68	85.0
Asian		2	2.5
Missing		20	
Family Annual Income			
< $20,000		15	28.8
$20,000-$40,000		34	65.4
>$40,000		3	5.8
Missing		48	
Single Parent Household*			
Yes		26	47.3
No		29	52.7
Missing		45	
Parent Length of Residence in US*	17.14/13.02	36	
Missing		64	
Parent Language			
English		46	46.0
Spanish		54	54.0

Note: *=significant difference based on preferred language; M=mean; SD=Standard Deviation; N=Number of families; % = Percentage of families; Percentages were calculated based on the information available (excluding missing cases).

Table 2

Parent Behaviors and Respective DPICS-IV Codes

Parent Behavior (Code)
Negative Talk (NTA)
Direct Command (DC)
Indirect Command (IC)
Labeled Praise (LP)
Unlabeled Praise (UP)
Behavior Description (BD)
Reflection (RF)
Question (Q)
Neutral Talk (TA)

Note: Eyberg, Nelson, Ginn, Bhuiyan, & Boggs, 2013

Table 3

Descriptive Statistics for the READI-SF items and scales

	Mean (M)	Standard Error (SE)	Skew[b]	Kurtosis[b]
READI-SF Item 1	4.67	.078	-3.14*	10.78*
READI-SF Item 2	3.68	.13	-.77	-0.47
READI-SF Item 3	4.45	.084	-2.10	5.38
READI-SF Item 4	4.57	.088	-2.40	5.72
READI-SF Item 5	4.70	.052	-1.94	5.52
READI-SF Item 6	4.30	.093	-1.85	3.93
READI-SF Item 7	4.79	.041	-1.45	0.092
READI-SF Item 8	4.29	.094	-1.38	1.39
READI-SF Item 9	3.98	.13	-1.17	.22
READI-SF Item 10	3.79	.13	-.89	-.25
READI-SF Item 11[a]	3.71	.14	-.89	-.46
READI-SF Item 12	4.26	.089	-1.08	.40
READI-SF Item 13	4.49	.068	-1.40	2.28
READI-SF Item 14	4.63	.060	-1.68	3.21
READI-SF Item 15[a]	4.29	.096	-1.64	2.91
READI-SF Item 16	4.35	.083	-1.81	4.45
READI-SF Item 17	4.64	.048	-.58	-1.70
Scale (number of items)				
Overall Readiness (17)	73.58	.78	-.48	-0.44
Overall Readiness (13)	56.15	.71	-1.04	1.066
Readiness (8)	35.47	.47	-1.54	3.42
Readiness (6)	**26.04**	**.44**	**-2.02**	**5.81**
Importance (9)	38.11	.45	-.34	-0.55
Importance (7)	**30.12**	**.40**	**-.72**	**-.011**
Readiness for Change (6)	26.69	.37	-1.81	4.93
Readiness (4)	18.70	.16	-.89	-0.28
Importance (5)	19.62	.42	-.85	0.42

Note: [a] = items were reverse scored; [b] = pooled data not available so information is based on original data; * = exceeded acceptable normality limits; **bold** = scales utilized in future analyses

Table 4

Reliability for READI-SF scales

Scale	Items	Original α	Minimum α	Maximum α	Average α
One Factor					
Overall Readiness	17	.820	.804	.819	.813
Overall Readiness*	15	.859	.844	.849	.846
Two Factor					
Readiness	8	.850	.835	.839	.838
Readiness**	**6**	**.871**	**.862**	**.866**	**.865**
Importance	9	*.689*	*.629*	*.671*	*.656*
Importance*	**7**	**.750**	**.730**	**.737**	**.734**
Three Factor					
Readiness for Change	6	.842	.834	.838	.836
Readiness	4	*.528*	*.527*	*.535*	*.534*
Importance	5	.717	.701	.715	.710

Note: * = items 11 and 15 were removed; ** = items 7 and 17 removed; *italics* = values below the guidelines for adequate internal consistency; **bold** = scales utilized in future analyses

Table 5

Results for model fit indices for one-factor, two-factor, and three-factor CFAs

Model	Number of Items	Estimator	X^2	df	p-value	RMSEA (90% CI)	CFI	TLI	AIC/BIC
3	13	ML	223.10	62	<.05	.16 (.14, .18)	.71	.64	2943.32/ 3052.74
3	13	MLR	191.43	62	<.05	.14 (.12, .17)	.66	.57	
2	15	ML	195.05	89	<.05	.11 (.088, .13)	.82	.78	3428.57/ 3548.41
2	15	MLR	165.88	89	<.05	.093 (.071, .12)	.82	.78	
2	13	ML	151.63	64	<.05	.12 (.097, .15)	.83	.80	2873.86/ 2978.065
2	13	MLR	124.42	64	<.05	.097 (.071, .12)	.84	.80	
1	15	ML	285.73	90	<.05	.15 (.13, .17)	.66	.60	3517.25/ 3634.49
1	15	MLR	261.21	90	<.05	.14 (.12, .16)	.59	.53	
1	13	ML	248.90	65	<.05	.17 (.15, .19)	.67	.61	2963.13/ 3064.73
1	13	MLR	216.63	65	<.05	.15 (.13, .18)	.60	.52	

Note: X^2 = chi-square test of model fit; df = degrees of freedom; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; AIC = Akaike Information Criteria; BIC = Bayesian Information Criteria; ML = Maximum Likelihood estimator; MLR = Robust Maximum Likelihood Estimator

Table 6

Pooled Correlation Matrix for READI-SF items (n=100)

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	Item 17
Item 1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 2	-.10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 3	.53**	.097	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 4	.31**	.13	.35**	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 5	.18	.020	.21*	.18	1	-	-	-	-	-	-	-	-	-	-	-	-
Item 6	.46**	-.025	.53**	.28**	.062	1	-	-	-	-	-	-	-	-	-	-	-
Item 7	.16	.15	.24*	.28**	.32**	.17	1	-	-	-	-	-	-	-	-	-	-
Item 8	.52**	.005	.64**	.42**	.18	.51**	.16	1	-	-	-	-	-	-	-	-	-
Item 9	.41**	.043	.54**	.28**	.19	.34**	.13	.64**	1	-	-	-	-	-	-	-	-
Item 10	.063	.62**	.25*	.28**	.12	.16	.13	.23*	.29**	1	-	-	-	-	-	-	-
Item 11	.022	.12	-.087	-.030	.003	-.036	.22*	-.034	-.20	.009	1	-	-	-	-	-	-
Item 12	-.022	.26*	.26**	.13	.39**	.12	.13	.35**	.39**	.39**	-.16	1	-	-	-	-	-
Item 13	.23*	.16	.39**	.19	.36**	.18	.23*	.54**	.50**	.41**	-.042	.65**	1	-	-	-	-
Item 14	.13	.19	.15	.23*	.38**	.073	.46**	.28**	.28**	.39**	.015	.47**	.70**	1	-	-	-
Item 15	.28*	.011	.20	.23	.21*	.14	.27**	.13	.093	.044	.28*	.092	.17	.16	1	-	-
Item 16	.52**	.084	.67**	.30**	.20	.55**	22*	.68**	.58**	.35**	-.14	.31**	.59**	.43**	.13	1	-
Item 17	.22*	.18	.17	.16	.37**	.11	.38**	.21*	.15	.31**	-.025	.51**	.45**	.55**	.20	.34**	1

Note: * = p < .05, ** = p < .01

Table 7

READI-SF factor loadings for the CFA and MIMIC models

Item	Two-Factor Model			MIMIC Model		
	RFC	Importance	Communalities	RFC	Importance	Communalities
1. I'm ready to start working on my parenting	.62	-	.38	.62	-	.38
3. I'm ready to change my parenting	.78	-	.61	.77	-	.61
6. I need to learn to be more consistent	.61	-	.37	.57	-	.38
8. I want to change the way I discipline my child	.84	-	.70	.81	-	.70
9. It's time to change the way my child and I get along	.71	-	.50	.67	-	.50
16. It might be hard, but I'm ready to parent differently	.85	-	.72	.86	-	.74
2. Bad things could happen if my child's behavior doesn't get better	-	.19*	.040	-	.19*	.036
4. It's worth it to spend money to help my child with his/her behavior	-	.26	.066	-	.17*	.17
5. It is very important that my child's behavior problems are fixed	-	.42	.17	-	.41	.17
10. If things don't change, my child's future could be hurt	-	.47	.22	-	.46	.21
12. Things with my child's behavior have to change very soon	-	.69	.47	-	.69	.47
13. It's very important that my child and/or I get help	-	.94	.88	-	.94	.88
14. I am willing to do whatever it takes to be sure that we get help	-	.74	.55	-	.74	.55

Notes: *=nonsignificant parameter; RFC = Readiness for Change scale; MIMIC = Multiple Indicators, Multiple Causes model

Table 8

Means and Standard Deviations for Outcome Variables

Variable	Mean (M)	Standard Error (SE)	Skew[a]	Kurtosis[a]	Percent Missing
ECBI Intensity	142.57	4.56	0.11	-0.63	14
ECBI Problem	18.33	0.94	-0.14	-0.57	22
DPICS Prosocial Behavior	10.36	1.08	1.27	1.17	20
DPICS Directiveness Percentage	58.95	3.03	0.029	-0.58	24
DPICS Inappropriate Behavior	64.77	4.00	0.65	0.44	22
Treatment Attendance	9.12	0.86	1.32	1.31	0
Average Percentage of Homework Completion	55.21	3.73	-0.29	-0.64	50

Note: [a] = pooled data not available so information is based on original data; No significant differences based on language; ECBI = Eyberg Child Behavior Inventory; DPICS = Dyadic Parent-Child Interaction Coding System

Table 9

Results from Linear Regression Analyses for ECBI Scales and DPICS Codes with Language as Covariate

Dependent Variable	Independent Variables	Unstandardized B	Standard Error	t	p
RFC					
	ECBI Intensity	0.013	.012	1.06	.29
	Language	2.71	.86	3.16	**.002**
RFC					
	ECBI Problem	0.16	.057	2.83	**.005**
	Language	2.52	.81	3.12	**.002**
RFC					
	DPICS Prosocial	0.005	.053	0.095	.93
	Language	2.55	.86	2.97	**.003**
RFC					
	DPICS Directiveness	-2.23	1.93	-1.16	.25
	Language	2.71	.86	3.15	**.002**
RFC					
	DPICS Inappropriate	-0.008	.014	-0.57	.57
	Language	2.51	.85	2.94	**.003**
Importance					
	ECBI Intensity	0.043	.009	4.67	**.0001**
	Language	2.033	.72	2.84	**.005**
Importance					
	ECBI Problem	0.19	.045	4.30	**.0001**
	Language	1.44	.72	1.99	**.046**
Importance					
	DPICS Prosocial	0.003	.049	0.061	.95
	Language	1.48	.80	1.85	.064
Importance					
	DPICS Directiveness	-1.70	1.84	-0.93	.35
	Language	1.60	.80	2.00	**.046**
Importance					
	DPICS Inappropriate	-0.016	.013	-1.20	.23
	Language	1.38	.79	1.74	.081

Note: **Bold** = p <.05; RFC = Readiness for Change scale; ECBI = Eyberg Child Behavior Inventory; DPICS = Dyadic Parent-Child Interaction Coding System

Table 10

Results from Linear Regression Analyses for Demographic Variables with Language as Covariate

Dependent Variable	Independent Variables	Unstandardized B	Standard Error	t	p
RFC					
	Parent Age	0.025	.045	0.57	.57
	Language	1.34	.77	1.74	.082
RFC					
	Parent Years in US	0.052	.062	0.84	.40
	Language	3.08	1.63	1.89	.059
RFC					
	Single Parent Household	-2.48	1.13	-2.21	**.027**
	Language	2.49	1.13	2.20	**.028**
Importance					
	Parent Age	0.034	.054	0.64	.53
	Language	1.82	.94	1.95	.052
Importance					
	Parent Years in US	0.001	.080	0.017	.99
	Language	2.14	2.10	1.02	.31
Importance					
	Single Parent Household	0.70	1.11	0.63	.53
	Language	2.59	1.11	2.33	**.020**

Note: **Bold** = p < .05; RFC = Readiness for Change scale

Table 11

Results from Linear and Binary Logistic Regression Analyses for Treatment Engagement Variables with Language as Covariate

Dependent Variable	Independent Variables	Unstandardized B	Standard Error	t	p
Treatment Attendance[a]					
	RFC	0.22	0.23	1.00	.32
	Language	-2.93	1.80	-1.63	.10
Treatment Attendance[a]					
	Importance	-0.099	0.22	-0.45	.65
	Language	-2.26	1.77	-1.28	.20
Average Homework Completion[a]					
	RFC	.50	0.96	.52	.60
	Language	-10.21	7.96	-1.28	.20
Average Homework Completion[a]					
	Importance	0.34	0.93	0.37	.71
	Language	-9.32	7.63	-1.22	.22
CDI Mastery[b]					
	RFC	.12	.069		.085
	Language	.32	.47		.50
CDI Mastery[b]					
	Importance	.040	.057		.49
	Language	.14	.45		.76

Note: [a]=linear regression analyses; [b]=binary logistic regression analyses; RFC = Readiness for Change scale

READI-SF

Your Name:	Today's Date:
Child's Name:	Child's Gender:
Child's Date of Birth:	Your Relationship to Child:

For each question, please circle the number that best describes your parenting views.

Questions	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. I'm ready to start working on my parenting	1	2	3	4	5
2. Bad things could happen if my child's behavior doesn't get better	1	2	3	4	5
3. I'm ready to change my parenting	1	2	3	4	5
4. It's worth it to spend money to help my child with his/her behavior	1	2	3	4	5
5. It is very important that my child's behavior problems are fixed	1	2	3	4	5
6. I need to learn to be more consistent	1	2	3	4	5
7. I'm eager to learn any skills the therapist can teach me	1	2	3	4	5
8. I want to change the way I discipline my child	1	2	3	4	5
9. It's time to change the way my child and I get along	1	2	3	4	5
10. If things don't change, my child's future could be hurt	1	2	3	4	5
11. I will work on my child's behavior problems later	1	2	3	4	5
12. Things with my child's behavior have to change very soon	1	2	3	4	5
13. It's very important that my child and/or I get help	1	2	3	4	5
14. I am willing to do whatever it takes to be sure that we get help	1	2	3	4	5
15. I have problems that are more important than my child's behavior right now	1	2	3	4	5
16. It might be hard, but I'm ready to parent differently	1	2	3	4	5
17. I'd like to learn what will work to change my child's behavior	1	2	3	4	5

The READI-SF Scale Scoring

<u>Total Score</u> (High score = Readiness for change, readiness for treatment, and perceived importance)

Sum of all items, including reverse-scored items 11 and 15
>   **Note:** Items 11 and 15 must be reverse scored

<u>Readiness for Change Scale</u> (High Score = Readiness to change parenting behaviors)

Sum of items: 1, 3, 6, 8, 14, 16

<u>Treatment Readiness</u> (High Score = Readiness for treatment)

Sum of items: 4, 5, 7, 17

<u>Importance Scale</u> (High Score = Belief in the importance of treatment at this time)

Sum of items: 2, 9, 10, 12, 13

Figure 2
READI-SF

Tu Nombre:	Fecha de Hoy:
El nombre del Nino(a):	Sexo del Nino:
Fecha de Nacimiento del Nino(a):	Su relación con el niño(a):

Para cada pregunta, marque con un círculo el número que más describa sus opiniones.

Preguntas	Muy en Desacuerdo	Desacuerdo	Indeciso	De Acuerdo	Totalmente de acuerdo
1. Estoy listo para empezar a trabajar en la crianza de mi hijo(a)	1	2	3	4	5
2. Cosas malas pueden suceder si el comportamiento de mi hijo(a) no mejora	1	2	3	4	5
3. Estoy listo para cambiar en la crianza de mi hijo(a)	1	2	3	4	5
4. Vale la pena gastar tiempo y dinero para ayudar a mi hijo(a) con su comportamiento	1	2	3	4	5
5. Es muy importante que los problemas de comportamiento de mi hijo(a) se arreglan	1	2	3	4	5
6. Tengo que aprender a ser más consistente	1	2	3	4	5
7. Estoy listo(a) para aprender habilidades	1	2	3	4	5
8. Quiero cambiar la forma en que disciplino a mi hijo(a)	1	2	3	4	5
9. Es hora de cambiar la forma en que mi hijo(a) y yo nos llevemos	1	2	3	4	5
10. Si las cosas no cambian, el futuro de mi hijo(a) podría estar herido	1	2	3	4	5
11. Voy a trabajar en los problemas de comportamiento de mi hijo(a) más tarde	1	2	3	4	5
12. Las cosas con el comportamiento de mi hijo tienen que cambiar muy pronto	1	2	3	4	5
13. Es muy importante que mi hijo(a) y/o yo recibamos ayuda	1	2	3	4	5
14. Estoy dispuesto a hacer todo lo posible para asegurarme de que obtengamos ayuda	1	2	3	4	5
15. Tengo problemas que son más importantes que el comportamiento de mi hijo(a) en este momento	1	2	3	4	5
16. Puede ser difícil, pero estoy listo(a) para tratar de criar de manera diferente	1	2	3	4	5
17. Me gustaría saber lo que va a funcionar para cambiar el comportamiento de mi hijo(a)	1	2	3	4	5