FEASIBILITY AND ACCEPTABILITY OF PARENTING INTERVENTIONS DELIVERED IN SPANISH TO CAREGIVERS OF CHILDREN WITH AUTISM AND OTHER DEVELOPMENTAL DELAYS: A MIXED-METHODS DESIGN

by

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Title: Feasibility and Acceptability of Parenting Interventions Delivered in Spanish to Caregivers of Children with Autism and Other Developmental Delays: A Mixed-methods Design

Parents of children with autism spectrum disorder (ASD) or developmental delay (DD) experience increased stress due to raising a child with a disability, particularly if the child also presents with challenging behaviors. As such, there is benefit to developing evidence-based interventions that: 1) help parents cope with stress, and 2) manage the challenging behaviors of their children. This is particularly true for underserved groups, including Spanish-speaking Hispanic/Latinx populations, who are often underrepresented in intervention research. Two promising interventions in reducing caregiver stress are psychoeducation/support groups and mindfulness-based stress reduction (MBSR); an intervention effective in reducing child challenging behaviors is Behavioral Parent Training (BPT). This study piloted these three interventions for 60 Spanish-speaking Hispanic caregivers of children with ASD or DD as part of a larger, randomized-controlled trial. We sought to examine the feasibility and acceptability of these interventions both within this Spanish-speaking cohort, and compared to previously run English-speaking cohorts. Additionally, due to unforeseen circumstances of COVID-19, the BPT intervention was modified for telehealth delivery, allowing for initial exploration of the modality for this population. Results from attendance and satisfaction data, as well

as participant focus groups, showed that Spanish-speaking participants attended sessions at similar rates and demonstrated preference for psychoeducation/support groups over MBSR compared to English-speaking participants, while finding BPT strategies generally acceptable. Participants reported appreciating the knowledge gained and sense of community established in the psychoeducation/support groups. Implications and future directions, including potential cultural adaptation of materials to maximize participant engagement and buy-in, are discussed.

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I. INTRODUCTION

Recent prevalence estimates suggest that Hispanic/Latinx individuals represent the fastest growing population in autism spectrum disorder (ASD; Maenner et al., 2020). As such, there is an increasing need to identify and provide appropriate intervention services for Hispanic youth with ASD and other intellectual and developmental disabilities (IDDs). Unfortunately, research suggests that existing service systems often fail to meet the treatment needs of Hispanics with IDD (Liptak et al., 2008; Nguyen et al., 2016; Zuckerman et al., 2017). Non-English speaking families experience additional challenges including fewer intervention hours and more unmet intervention needs, with some studies showing language proficiency being the single most important factor in predicting access to services (Stahmer et al., 2019; Zuckerman et al., 2017). One way that such disparities could be attenuated is through research to test whether widely utilized, evidence-based, IDD intervention practices are feasible and acceptable when delivered in Spanish to Hispanic populations.

Interventions targeting parent mental health and well-being, including particularly stress reduction, are often the focus of interventions due to the heightened levels of psychological distress associated with parenting a child with a disability (Baker et al., 2003). Two interventions that target stress reduction and positive coping are mindfulness-based stress reduction (MBSR; Dykens et al., 2014; Neece et al., 2014) and psychoeducation/support groups (Bitsika & Sharpley, 2000). Although these interventions vary significantly in scope, philosophy, and approach, they both have promising outcomes for caregivers of children with IDD.

Additionally, children with IDD often have heightened behavioral challenges,

with some studies suggesting that, relative to children who are typically developing, children with IDD have three to four times the number of behavioral challenges (e.g., Baker et al., 2003). Given that child challenging behavior is a frequent concern of parents of children with IDD (Matson & Nebel-Schwalm, 2007), interventions targeting reducing behavior problems in children with IDD are common. An intervention that has shown promise in this area, and is considered relatively cost-effective and easy-to-implement is Behavior Parent Training (BPT) modified to meet the specific needs of children with IDD (McIntyre, 2013). Finally, there is a need to test the most cost-effective and feasible manner for delivering these types of interventions, with recent evidence supporting telehealth, or interventions delivered online (Corralejo & Rodriguez, 2018).

Representation of diverse populations in developmental disabilities research

On the whole, individuals from diverse backgrounds have been underrepresented in IDD treatment research (e.g., Safer-Lichtenstein et al., 2019). This limits the generalizability of findings from intervention research studies that are considered "evidence-based." Pierce and colleagues (2014) found that only 28% of published articles in prominent IDD journals reported on the ethnic background of their participants. Furthermore, fewer than half of these studies included race or ethnicity in their analyses. West et al. (2016) conducted a meta-analysis and found that the ethnicity was only provided for 31% of the 2,489 participants who took part in foundational ASD intervention research studies. Additionally, of those participants for whom ethnicity was provided, approximately 85% were considered White or multiracial, with Hispanics specifically comprising only 2.5% of the combined sample. This study also highlighted

that parent-led implementation studies had a particularly high concentration of White participants. Of the 279 caregivers who took part in parent-implemented ASD interventions, 51.6% identified as White and 48% identified as multiracial (West et al., 2016). These findings indicate the limited extent to which most ASD intervention research can be generalized to diverse, and particularly Hispanic, populations in the United States.

Mindfulness-Based Stress Reduction (MBSR)

MBSR is an empirically supported stress-reduction intervention that utilizes a combination of mindfulness meditation, body awareness, and exploration of thoughts and actions. The intervention aims to increase awareness that arises from paying attention, on purpose, in the present moment and without judgment (Kabat-Zinn, 2009). The intervention is typically delivered in a group format over eight weeks. There is a lot of evidence to document the efficacy of MBSR in reducing stress, anxiety, and depression in a wide variety of people (Grossman et al., 2004). There is also a growing body of research that MBSR interventions may be particularly beneficial for parents of children with ASD and other developmental delays (DD), as these individuals are at heightened risk for stress based on the additional caregiving challenges (Dykens et al., 2014; Neece, 2014). Neece (2014) randomly assigned 46 parents of children with DD to either an eight-week MBSR program or a waitlist control group. Neece (2014) found that those who participated in the MBSR intervention had significant improvements in terms of stress, depression, and overall life satisfaction compared to those in the control group. In another study, Dykens and colleagues (2014) utilized a randomized trial involving 243 mothers of children with ASD or other disabilities to compare MBSR with a control

condition of positive psychology practices. This study utilized six-week group-based interventions, and found that while participants in both interventions experienced reductions in stress, depression, and anxiety, those in the MBSR group had even greater improvements.

The above studies exemplify the potential benefits of MBSR for stress reduction, however the majority of MBSR research has been done with higher SES, primarily White, participants. There has been some MBSR research that has utilized more diverse samples and provided intervention in both English and Spanish (Kabat-Zinn et al., 2016; Roth & Robbins, 2004). These studies targeted medical patients seen for treatment at health centers, and found that positive effects of intervention were comparable across racial/ethnic and language groups. Castellanos and colleagues (2020) conducted a meta-analysis specifically looking at MBSR interventions that have been culturally adapted for Hispanic populations. They found similar impact for this population, with moderate to large effect sizes for reduced psychiatric distress compared to no-treatment controls. The studies in this meta-analysis varied greatly in the degree to which cultural adaptations were made.

In terms of MBSR research with diverse caregivers of children with DD, only two studies have attempted to incorporate more diverse participants into MBSR research (Bazzano et al., 2015; Neece et al., 2019). Both Bazzano et al. (2015) and Neece et al. (2019) delivered MBSR interventions in English but used live interpretation services during MBSR intervention sessions. The Bazzano and colleagues (2015) study included 66 diverse participants, with one-third of participants preferring Spanish. Findings suggest that regardless of demographic factors, participants experienced decreased stress

and increased mindfulness practices. Similarly, Neece and colleagues (2019) ran an MBSR intervention for 80 caregivers of children with DD, about half of whom identified as Hispanic. This study indicated that MBSR is similarly efficacious for Hispanic and non-Hispanic families in reducing stress, depression, and even parent-reported child problem behaviors. Qualitative analyses done in this study to assess acceptability found that many Hispanic families indicated the intervention could be further improved if it were to be offered directly in Spanish, rather than via interpreters (Neece et al., 2019).

Psychoeducation support groups

Psychoeducation is a practice that is used to teach parents knowledge-based content around the characteristics of a disorder or mental health condition. This content is generally broader (i.e., what defines the disorder and how to attain services) than more specific skills-based training (i.e. how to implement a behavior plan), and is often combined with support group elements, such as sharing of common experiences between parents (Steiner et al., 2012). There have been studies indicating that parents of children with IDD appreciate and benefit from group-based psychoeducation. McAleese and colleagues (2014) found that parents of children with ASD demonstrated improvements in knowledge about the presentation of the disorder and in reported parenting self-efficacy following participation in such a group. Additionally, other studies have shown that psychoeducation may improve parent well-being and mental health, including by reducing depressive symptoms (Bristol et al., 1993) and stress (Bitsika & Sharpley, 2000; Patra et al., 2015). There is also evidence of the utility of this type of intervention in different cultures (e.g., Mukhtar et al., 2018; Patra et al., 2015), although less work has been done with culturally diverse participants in the United States. Chlebowski and

colleagues (2018) ran focus groups with Hispanic parents of children with ASD about their perceptions of and needs for services. This study found that Hispanic parents expressed having limited overall knowledge about developmental disabilities prior to beginning services with their children, and felt that psychoeducation could be of great benefit.

One example of a psychoeducation program that has been developed for Hispanic parents of children with ASD is called Parents Taking Action (Lopez et al., 2019; Magaña et al., 2017). The researchers in these studies worked with a group of community-based partners and advisors to develop an intervention using a Community Health Worker Model, in which a Hispanic mother of a child with ASD worked as part of the research team to provide support and encourage uptake of strategies to participants (Magaña et al., 2017). Other strategies focused on fitting the program to the context of the family by including familiar, culturally meaningful, sayings and stories into lessons. Findings from initial studies on this program showed improved outcomes in several important domains compared to waitlist controls, including child behaviors and parent knowledge of rights, but not maternal depression (Lopez et al., 2019; Magaña et al., 2017). To date, there have not been any studies testing group-based psychoeducation methods with this population.

Behavioral Parent Training (BPT)

One important type of intervention that can be utilized to address the needs of underserved families through relatively cost- and time-efficient, easy-to-learn, and parent-friendly strategies is Behavioral Parent Training (BPT). Within the IDD research community, there is often an overall goal of improving child outcomes by reducing

"challenging behaviors," a heterogeneous class of behaviors that includes self-injury, aggression, and noncompliance (Matson & Nebel-Schwalm, 2007). Research indicates that early intervention implemented prior to kindergarten entry is critical in helping reduce these types of behaviors across the lifespan (National Research Council, 2001). Although there are many child-focused, clinician-led, interventions with strong evidence bases for reducing these behaviors (e.g., Applied Behavior Analysis, Early Start Denver Model, Pivotal Response Treatment, etc.), there is a lot of variability in the degree and nature to which parents are involved (Stahmer, 2007).

While it is impossible for any single intervention to target all possible skill deficits and behavioral excesses often associated with IDD, BPT has proven effective in reducing a wide range of challenging behaviors. BPT is derived from principles of behaviorism, and targets child problem behaviors by teaching strategies to parents for increasing positive interactions with their children and decreasing negative or coercive behaviors (McIntyre, 2013). Bagner and colleagues (2016) specifically recommend BPT in infancy for high-risk, ethnic minority, families, as this represents a critical window for maximizing long term outcomes. Techniques of BPT, including praise, sensitivity, and limit setting are associated with a wealth of positive child outcomes in typically developing children, and have been utilized in numerous manualized interventions, often as group-based programs. Some examples include the Incredible Years Parent Training (IYPT), Positive Parenting Program (Triple P), and Parent Child Interaction Therapy (PCIT).

There is also increasing evidence that these programs can be adapted and utilized specifically for children with IDD (McIntyre, 2013; Matson et al., 2009). McIntyre

(2013) identified 19 studies representing 11 different parent training programs that specifically looked at the effect of parent training, without other components, on children with IDD. The vast majority of these studies demonstrated reductions in child problem behaviors and increases in observed positive parenting behaviors. In one example of modifying a BPT program to meet the needs of these families, McIntyre (2008a, 2008b) adapted the IYPT intervention by incorporating aspects of the IDD literature into the standard curriculum. IYPT is a 12-session, 2.5 hour per session, BPT curriculum that was originally developed for parents of typically developing children. Adaptations made to meet the needs of families with IDD and ASD included modifying video vignettes to be more appropriate to children with delays, removing content around "time out" that has proven less effective with children with developmental disabilities, and adding additional content on predicting and responding to challenging behaviors (McIntyre, 2008b). These studies found that the children with IDD and their parents improved similarly to parents in studies of typically developing children, and that the parents were satisfied and engaged in the modified program.

Additionally, research indicates that Hispanic parents may benefit similarly from parent training interventions as do non-Hispanic White parents (Ramos et al., 2018). Calzada and colleagues (2013) conducted focus groups with Hispanic mothers around how they viewed different parenting strategies considered evidence based. These authors found that Hispanic mothers found some such strategies acceptable, including specifically the use of praise and social rewards. These mothers found some strategies (i.e. elimination of spanking) less acceptable, and were divided on others (i.e. time-out). Much of the implementation research with this population has been done utilizing Parent

Child Interaction Therapy (PCIT), which uses more individualized and tailored strategies than does IYPT or other group-based interventions, while still targeting very similar parenting behaviors and child outcomes (Zisser & Eyberg, 2010). Results have been promising, with multiple RCTs showing PCIT to be similarly effective in Spanish, although parents needed additional opportunities for practice to master certain skills, compared to when the intervention has been delivered in English (McCabe & Yeh, 2009; Ramos et al., 2018). Ogg and colleagues (2014) looked specifically at implementation and attendance with this population, and found no differences in attendance between those who received BPT groups in English and Spanish. To date, research with this population has only been done with parents of typically developing children, and has not been tested with Spanish-speaking parents of children with IDD. This is despite the fact that some research has indicated that certain parenting practices, such as improved scaffolding and sensitivity to child's cues, might be even more critical for Hispanic caregivers in reducing challenging behaviors of children with developmental delays (Marquis & Baker, 2014).

Telehealth

Although all of the above interventions are typically delivered via live, in-person, sessions, there have been increased attempts in recent years to test online delivery modalities, or telehealth. A recent review study identified 31 technology-based behavior parent training interventions, and found that they generally had positive effects in improving outcomes such as parent knowledge, behavior, and self-efficacy (Corralejo & Rodriguez, 2018). These interventions primarily consisted of websites, DVDs, or other technology-based sources of information, often accompanied with individual coaching,

rather than live online groups. Significant pre-post differences in reports of parenting behavior were found for the majority of these studies. One study did deliver a BPT intervention in an online group format, and found comparable effect sizes to groups delivered in person (Reese et al., 2015). However, the authors acknowledge a limitation of these studies being that they were validated with primarily higher SES, White caregivers, and may not be accessible to underserved populations (Corralejo & Rodriguez, 2018).

There is also some evidence supporting online BPT interventions for parents of children with development disabilities. A number of studies have found positive effects of different forms of internet-delivered BPT for children with ASD, including treatment acceptability, parent knowledge, and child behavior (Ingersoll et al., 2016; Vismara et al., 2013; Wainer & Ingersoll, 2015). These results have been replicated for parents of children with other disorders known to cause challenging behaviors, including ADHD (DuPaul, 2018; Xie et al., 2013). However, similar to the interventions used for typically developing children, these online BPT interventions have primarily been conducted in a format where caregivers access a website or other source of technology-based materials, and are either self-guided and self-paced, or individualized and include the assistance of a coach.

Finally, my literature search uncovered no attempts to deliver BPT or other parenting interventions in a telehealth format to Spanish-speaking Hispanic caregivers. One study described an exploratory process of developing a culturally adapted website of ASD-related information in Spanish (Buzhardt et al., 2015). This website, the Online and Applied System for Intervention Skills (OASIS) is a training program for parents

designed to increase their ability to teach new skills and manage challenging behaviors for their child with ASD. The authors of this study discussed their cultural adaptations to the English OASIS website based on recommendations developed through input from focus groups and an advisory board. Although the website was culturally adapted with information presented in Spanish, it does not appear that any studies have been conducted thus far to test the accessibility and efficacy of the program with Spanish-speaking Hispanic populations. There also do not appear to be any examples in the literature of online group-based parenting interventions delivered in Spanish.

Literature gap

While the aforementioned interventions (psychoeducation, MBSR, BPT) have been shown to be generally effective with White middle- to upper-socioeconomic status (SES) families, there is much less evidence of their effectiveness when delivered in Spanish to lower- SES Hispanic caregivers of children with IDD. Furthermore, no studies have looked at the efficacy of utilizing telehealth methodologies for any type of intervention with these families. In order to begin developing the evidence base for treatments with this population, an important first step is to examine acceptability and feasibility of intervention content, study design, and procedures (Gadke et al., 2021). Establishing initial acceptability and feasibility through investigating attendance, satisfaction, and alignment with cultural and familial values and norms, is essential to informing the next steps of this program of research. Once preliminary evidence of satisfaction and feasibility is established, efficacy of intervention on child and parent outcomes can be investigated. In this study the feasibility and acceptability of the psychoeducation, MBSR, and BPT interventions, as well as the telehealth delivery

modality, are investigated with Spanish-speaking Hispanic caregivers of children with IDD. The data gathered from this process can address the dearth of studies examining parenting interventions for Spanish-speaking caregivers of young children with IDD and inform the field about the types of interventions that can be feasibly delivered with this often underserved population.

Current study

The present study is part of a larger NIH-funded longitudinal, randomized control trial (RCT) examining differences in the efficacy between two interventions aimed at helping parents of young children with developmental delays cope with stress and manage child challenging behavior (McIntyre & Neece, 2018). This RCT is ongoing and is being conducted in the greater Portland metro area of Oregon and in Southern California in the Inland Empire region surrounding Loma Linda, California. The two interventions being compared in the larger RCT are BPT combined with MBSR (BPT-M) and BPT combined with psychoeducation/support (BPT-E). Participants are enrolled and randomized to either the BPT-M or BPT-E condition and receive their intervention in a group-delivered format. In BPT-M, participants receive six weeks of group-based MBSR intervention, followed by 10 weeks of group-based BPT. In BPT-E, participants receive six weeks of group-based psychoeducation, again followed by 10 weeks of the same group-based BPT intervention. Although BPT is delivered to both conditions, participants remain in their original group assignment. The reason for this treatment order in the larger RCT is to test the additive effects of a stress reduction component prior to BPT, with MBSR directly targeting stress and psychoeducation serving as an active control. The core BPT intervention for both groups was the IYPT program for children

with IDD (McIntyre, 2008b) described above. See the Method section for further description of all three interventions. Also of note, the content of all three of the above programs was directly translated to Spanish but was not further adapted or modified. Video examples that accompany the BPT curriculum were provided dubbed in Spanish by the Incredible Years publishing company.

By way of context, for the larger RCT study, 230 families will be recruited by the end of the full trial in 2023. The larger RCT to date includes two completed English-speaking cohorts (English $N = 80$) and one monolingual Spanish-speaking cohort (Spanish $N = 60$) in Loma Linda, California. The present study focused primarily on the Spanish-speaking cohort, with some comparisons made with the English-speaking cohorts. Additionally, because the English-speaking cohort at Loma Linda had a large proportion of Hispanic participants (based on self-reported ethnicity on a demographics form), the English-speaking group was analyzed as English-speaking Hispanic and English-speaking non-Hispanic participants. This allowed us to parse out differences brought on by participant ethnicity as opposed to just language of intervention delivery. Questions of feasibility and acceptability are especially relevant among these different groups given the relative dearth of intervention research, particularly for interventions delivered in Spanish. Specifically, there are three primary research questions:

1) Do attendance and ratings of intervention satisfaction differ between parents who participated in the psychoeducation intervention versus the MBSR intervention groups in Spanish?
2) Do attendance and ratings of intervention satisfaction differ between parents who participated in the psychoeducation intervention and MBSR intervention groups

in Spanish versus those who participated in English, and do those differences hold regardless of demographic factors?

3) Do attendance and ratings of intervention satisfaction differ between parents who participated in the BPT groups in Spanish versus those who participated in English, and do those differences hold regardless of demographic factors?

Although there are no studies explicitly focusing on the feasibility and acceptability of these types of interventions with Spanish-speaking Hispanic caregivers of children with IDD, there are studies that have examined outcomes of similar types of interventions that were either individualized (Lopez et al., 2019), run in English with interpreters (Neece et al., 2019), or completed with parents of typically developing children (McCabe & Yeh, 2009; Ogg et al., 2014; Ramos et al., 2018). Based on the generally promising results of these studies with Hispanic caregivers, several hypotheses were made about the outcomes of the research questions. Overall, it was hypothesized that the MBSR, psychoeducation, and BPT interventions would be perceived as equally as acceptable by Spanish-speaking participants as by English-speaking participants, with some potential for differences within the Spanish cohort specifically. This would provide support for the generalizability of these interventions, and further justification of their use with this population.

First, it is hypothesized that parents in both the MBSR and psychoeducation conditions in Spanish will express high acceptability (i.e., mean of 6 or higher on 7-point Likert scale) with those interventions, with the psychoeducation group potentially displaying even higher ratings as it may fill a specific knowledge gap for this population (Chlebowski et al., 2018) and may be less culturally dependent than MBSR. Second, it is

hypothesized that participants who complete the MBSR and psychoeducation groups in Spanish will have comparable acceptability to those who complete these groups in English, with non-significant overall differences of language group by intervention. Third, it is hypothesized that participants who complete the BPT groups in Spanish will have comparable acceptability to those who complete the groups in English.

II: METHOD

Interventions

Mindfulness-Based Stress Reduction (MBSR)

The MBSR intervention consisted of a combination of didactic training, practice exercises, and discussions about mindfulness delivered by a certified MBSR instructor. Specifically, the MBSR program included six weekly 2-hour group sessions, 30–45 minutes of daily home practice guided by instructional audio CDs, and an MBSR parent workbook. Participants were taught formal mindfulness exercises designed to increase mindful practices (i.e., nonjudgmental awareness of the present moment), including body scans, mindful yoga, and sitting meditation. The MBSR instructor also taught ways to informally practice mindfulness in daily life, and how to use the strategies specifically to combat stress. During intervention sessions, participants practiced formal mindfulness exercises and asked questions relating to the practice of mindfulness in everyday life. The MBSR component of BPT-M is pared down somewhat from standard MBSR intervention in that it includes six, rather than eight, sessions and does not include a daylong meditation retreat at the end. Abbreviated MBSR interventions are becoming increasingly common in both clinical and research settings to increase feasibility for participants, with research suggesting that similar gains can be made with less class time (Carmody & Baer, 2009).

Psychoeducation and support

The psychoeducation intervention was designed as a support group in which parents were provided with information and encouraged to discuss with one another relevant supports and resources for their children related to their development, disability,

education, therapies, and other services. The psychoeducation intervention similarly consisted of six weekly 2-hour sessions, daily homework that included monitoring progress on session goals, and a workbook for parents of children with special needs that provides information on child development, disability, and associated considerations. Each of the psychoeducation sessions centered around a specific topic/theme considered relevant and important for participants. These topics were: Preparing for Individualized Education Plan (IEP) meetings, Navigating Developmental Service Agencies, Communicating with Teachers, Advocacy, Sibling Issues, and Community Resources. Each psychoeducation session began with group leaders providing some didactic information on the topic, then breaking parents up into pairs for small-group discussion, and finishing with a larger group discussion based on what parents shared amongst one another.

Behavioral Parent Training (BPT)

As mentioned in the introduction, the 10-week BPT intervention that all participants received was the Incredible Years Parent Training modified for children with developmental delays (IYPT-DD). IYPT-DD sessions were led by a team of two group leaders/ co-therapists and were built around videotape vignettes (using Webster-Stratton's original content; see Webster-Stratton, 2006). Sessions included discussions, role-plays, modeling, and feedback techniques to achieve engagement with and mastery of the content. Parents were given weekly homework assignments that involved thinking about and practicing session content. In IYPT-DD, much of Webster-Stratton's original content is retained, including lessons on play, praise, rewards, limit setting, and handling challenging behaviors. Modifications in the adapted version included

expanding/adapting discussion questions and key points to those that best generalize for children with DD, having parents identify positives and challenges of raising a child with DD (Session 1), excluding content about time out, teaching parents how to predict and avoid problem behavior by tracking antecedents and consequences (Sessions 6-7), and providing informational handouts to parents about disability-related supports and kindergarten transition (Session 10; McIntyre, 2008a, 2008b).

Participants

Primary caregivers of preschool-aged children (3-5 years) with IDD were recruited to participate in this study. To be eligible, caregivers needed to report that they were their child's primary caregiver; their child had either a medical diagnosis or early childhood special education eligibility of ASD or developmental delay; and their child experienced elevated behavior problems. Further, parents needed to confirm that their child was in their custodial care and that they were interested in participating in a 16-week stress reduction and behavioral skills training intervention. For the Spanish-speaking cohort, all caregivers were Hispanic who identified Spanish as their primary and/or only language.

Recruitment took place through the distribution of informational flyers to doctor's offices, specialty clinics, and regional service centers in the greater Inland Empire region of Southern California (Riverside and San Bernardino counties). Potential participants were invited to call the PRO-Parenting project research office to express their interest in participating, and these caregivers were then contacted by a bilingual research assistant. In total, 207 Spanish-speaking caregivers expressed initial interest in this study. We were able to speak with and screen 158 of these individuals for inclusion. Of these, we

excluded 40 for not having a child between 3 and 5-years-old, three for not having a child identified with ASD or DD, and three for already being enrolled in a different type of parenting class or therapy. An additional 52 chose not to participate due to a lack of interest after hearing a further description of the study, its purpose, and what would be required of participating parents. Therefore, we ended up with a final sample size of 60, with 30 each being randomly assigned to BPT-E and BPT-M respectively. See Figure 1 for additional information. Randomization occurred at the baseline assessment (described below).

Primary caregivers for this cohort included 57 mothers, two grandmothers, and one grandfather. At enrollment, 34 of these caregivers reported their child as having ASD; four reported that their child was currently identified with a different developmental delay but that they were on the waitlist for an ASD evaluation; and 22 reported that their child had a developmental delay or disorder other than ASD, including speech delay or Down syndrome. Additionally, of note, participants were an average of 25.1 (and maximum of 76.3) miles away from Loma Linda University where the groups were to take place. See Tables 1 and 2 for additional demographic information.

Procedure

Eligible participants were assessed at baseline/pre-intervention in an initial home visit. During the home visit, participants completed informed consent, an interview to collect demographic information, and a 15-minute parent–child interaction play-based observation. Following these tasks, participants were then randomly assigned to either BPT-M or BPT-E, and completed a brief motivational interview as part of a Participant Enhancement Intervention (PEI; Nock & Kazdin, 2005), designed to improve parent

engagement in the interventions used in the study. The PEI is designed to elicit self-motivational statements from participants about desire to participate and their goals and hopes for intervention. Enrolled participants were also contacted by study staff and completed a second PEI the week before the intervention.

Intervention groups were run concurrently (i.e., BPT-E on Monday and BPT-M on Wednesdays) over the course of the 16 weeks. Each session was scheduled for two hours, and was intended to be run in-person at Loma Linda University. As recommended by Ratto et al. (2017), sessions were run in the evening so that parents were able to attend around their work schedules, snacks and childcare were provided to families at each session, and research staff communicated with families via text to check-in and provide reminders about group each week. After week six of the intervention, coincidentally falling immediately after parents had completed the first part of the intervention, groups were paused temporarily due to COVID-19 school closures and restrictions on public gatherings. Following a four-week pause, groups resumed with the BPT curriculum delivered in a synchronous, live telehealth format delivered via a HIPAA-protected and licensed Zoom platform. Prior to resuming the groups online, participants were surveyed by study staff about their willingness and technological capability to access groups in this manner, with the vast majority responding positively to this potential change (McIntyre et al., 2021).

As part of the larger RCT, participants in both groups will have post-treatment, 6-month, and 12-month follow up assessments that include a battery of the same questionnaires and play activity as at baseline. The post-treatment assessment included an additional measure of social validity/consumer satisfaction. The current study used

data from the baseline assessment and post-treatment consumer satisfaction survey.

Focus Groups

Participants in the Spanish cohort also took part in focus groups approximately five months after completion of the interventions, to gather additional, qualitative, information about how acceptable and relevant parents found the intervention groups. Focus groups were run five months after the intervention so that they did not overlap with post-intervention assessments, and to see what intervention strategies were still being used some time after the intervention ended. A total of four focus groups were run over Zoom in November, 2020. Two focus groups were conducted in the morning (Monday, Wednesday) and two focus groups were conducted in the evening (Monday, Wednesday). Participants from the BPT-E condition were invited to attend a morning or evening focus group session on Monday and participants from the BPT-M condition were invited to attend a morning or evening focus group session Wednesday. In order to be eligible to participate in the focus groups, participants needed to have attended at least one session of the first six weeks of intervention (MBSR or psychoeducation) and one session of the final 10 weeks of intervention (BPT), in order to have at least some knowledge of the content of the groups from which to base opinions. All 38 participants who met this qualification were contacted and asked if they wished to participate in the focus group, and were given their choice of time.

A total of 24 participants took part in the four focus groups (14 from BPT-E; 10 from BPT-M). These 24 participants had attended an average of 5.46 of the six initial psychoeducation or MBSR sessions, and an average of 8.29 of the 10 BPT sessions. Participants were compensated $25 to cover their time. Each group met for about an hour

and was facilitated by the first author and assisted by other graduate students. Focus groups utilized a semi-structured format to make sure specific areas were covered adequately at each group, but participants were encouraged to discuss and expand upon topics as they wished. All focus groups began with the moderator briefly reviewing the content of the interventions they had participated in (i.e., psychoeducation and BPT for Mondays, MBSR and BPT for Wednesdays). The remaining time of the focus groups was divided into three sections: 1) aspects of the interventions participants found most relevant/helpful and have continued using five months later; 2) aspects of the intervention they found least useful and barriers to implementing strategies; and 3) whether they felt the groups were well aligned with their individual/ familial/ cultural values, whether they thought other Hispanic families would feel comfortable using the strategies in the group, and how we could potentially adapt the content to be more relevant to Hispanic families.

Measures

For all measures utilized with the Spanish cohort, we either obtained a published copy of the measure in Spanish or translated the measure ourselves into Spanish using the forward-back translation method. This method involves having one bilingual staff member translate the

instrument from English to Spanish, and a different bilingual staff member translate the Spanish version back to English. The two versions are then compared and discrepancies resolved by the bilingual team with oversight by a bilingual psychologist.

Demographics

During the baseline appointment, all participants completed a demographic intake form with a member of the study staff to collect information such as caregiver and child

age, biological sex, race and ethnic background, language spoken at home, highest level of caregiver educational attainment, household income, and child diagnosis. Caregiver education level was dichotomized as above or below high school graduate, as that represents a base level of education often needed for employment and other opportunities in the United States. Income was dichotomized as above or below $30,000 because it roughly represents the federal poverty threshold for a family of four or five in the years the data were collected. Finally, caregivers reported on their service utilization, including any outside services the caregiver or child was currently accessing.

Acculturation

The Vancouver Index of Acculturation (VIA; Ryder et al., 2000), a 20-item scale measuring two domains: orientations towards heritage and towards mainstream cultural groups, was used to assess acculturation in the study sample. Items encompass an array of aspects related to the acculturation process, including values, social relationships, and adherence to cultural norms. The VIA can be utilized generally for any immigrant group, rather than targeted at a specific population. Items on the VIA do not target questions of language usage specifically. The 20 items are generated in pairs with regard to content area, with one item referring to the mainstream culture and the other mirror item referring to the heritage culture. Each item is answered on a 9-point Likert scale of agreement. Two separate scores are generated (Heritage Subscore and Mainstream Subscore), with higher score indicating a positive orientation toward the specific cultural group. Internal consistency reliability for the VIA in the present sample was Chronbach's α = .88 for the Heritage Subscore and Chronbach's α = .90 for the Mainstream Subscore, indicating that there was high internal consistency.

Parenting Stress

The Parenting Stress Index, Fourth Edition- Short Form (PSI-4-SF) is a self-report questionnaire that includes 36 items assessing parenting stress (Abidin, 2012). These items are broken into three domains: Parenting-Child Dysfunctional Interaction (9 items), Difficult Child (9 items), and Parental Distress (9 items), with the sum of these domains forming an overall Total Parenting Stress Score. Items are rated on a 5-point Likert scale with scores ranging from 1 (strongly agree) to 5 (strongly disagree). Research has supported similar alpha coefficients and factor structures for the Spanish version of the PSI used with Hispanic mothers and other high-risk samples, supporting the cross cultural utility of this measure with this population (Solis & Abidin, 1991; Barroso et al., 2016). Internal consistency reliability for the PSI in the present sample was Chronbach's α = .88 for the Total Parenting Stress score, indicating that there was high internal consistency.

Child Problem Behaviors

Child problem behaviors were measured in this study utilizing parent report on the Child Behavior Checklist for children 1.5 to 5 years old (CBCL; Achenbach & Rescorla, 2000). The CBCL is a 99-item standardized questionnaire designed to measure emotional and behavioral problems in young children and includes internalizing and externalizing items. The caregiver or adult who spends the most time with the child of interest completes the items based on whether each behavior is not true, somewhat/sometimes true, or very/often true. The items then load onto eight different domains of potential problem behaviors, which are: Emotionally Reactive, Anxious/Depressed, Somatic Complaints, Withdrawn, Attention Problems, Aggressive

Behavior, and Sleep Problems, with the sum of these domains forming an overall Total Problem Behaviors Score. The CBCL has strong psychometric properties, and research has supported the equivalence of the CBCL across different racial/ethnic and socioeconomic groups (Gross et al., 2006). Additionally, the CBCL has been translated and culturally adapted into Spanish for Hispanic caregivers in the United States, using a rigorous process that involved translation, back translation, and testing of psychometric properties (Rubio-Stipec et al., 1990; Wild et al., 2012). Internal consistency reliability for the CBCL in the present sample was Chronbach's α = .95 for the Total Problem Behaviors score, indicating that there was very high internal consistency.

Engagement

Participant engagement was designed to be measured in two ways. The first way that engagement was measured was simply by attendance at intervention sessions. The number of sessions attended by each participant was averaged to create a mean attendance score for each of the two intervention groups. See Figure 2 for attendance in the Spanish cohort and Figure 3 for attendance in the English cohorts. We had also planned to measure engagement of parents during the Spanish BPT sessions (i.e., how often caregivers talked or participated in role-play activities, as we had been done with the English-speaking cohorts), but this proved to be too difficult and unreliable to do for telehealth sessions. Given that parents were in their homes and faced with distractions that would not have occurred in a clinic setting (i.e., children, other family members, pets, environmental noise, etc.), and using a technology/platform with which they had little experience, it felt too difficult to accurately rate their engagement with the intervention, especially since cameras were turned on and off at times through the

session.

Acceptability

The acceptability, or social validity, of the intervention groups was measured at the end of the intervention phase (post-treatment) using the Parent Satisfaction Questionnaire, an adapted version of the Consumer Satisfaction Questionnaire (Forehand & McMahon, 1981). This measure has been adapted and utilized in numerous previous trials investigating versions of the Incredible Years (i.e., Webster-Stratton, 1994; Reid et al., 2001; McIntyre, 2008a). Parents complete this measure based on their satisfaction with the group leader, group dynamics, video vignettes, content covered, and methods utilized. Caregiver responses on 15 seven-point Likert scale items are summed to create an Overall Satisfaction score between 15 and 105, with higher scores indicating greater satisfaction (Reid et al., 2001). This tool has previously demonstrated adequate psychometric properties (McIntyre, 2008a). For the Spanish-speaking cohort, seven items selected from this measure that applied to the first portion of the intervention were administered to participants after week six, to get a gauge of treatment satisfaction for psychoeducation and MBSR before beginning the BPT portion. The full measure was then collected again during the final session, or week 16. Unfortunately, only about half of participants attended the week six session (n = 32) and week 16 session (n = 28), and thus we only have satisfaction data from these caregivers. This measure was also only collected for the English-speaking cohorts at week 16, or to assess the program overall, rather than for the six and ten week groups separately.

Analysis Plan

Quantitative Data

Data review and analyses were performed using Statistical Package for the Social Sciences (SPSS) Version 24 (IBM Corp, 2016) and R (R Core Team, 2015). Initially preliminary or exploratory analyses were run to better understand the data, including descriptive statistics for variables of interest, including acceptability, key demographics, parental stress, acculturation, and child challenging behaviors. Those who had completed the Parent Satisfaction Questionnaire were compared with those who had not, examining differences in key demographics, including caregiver educational attainment and family income, parenting stress, acculturation, and child challenging behavior. These groups were compared using chi-square tests for categorical variables (i.e., educational attainment and household income) and independent samples *t*-tests for continuous variables (i.e., parent stress, acculturation, and child challenging behavior). These same comparisons were run to distinguish the English-speaking and Spanish-speaking cohort participants.

To address each of the three main research questions, the following techniques were used for primary analyses:

1) BPT-E vs. BPT-M satisfaction and attendance for Spanish groups only: independent samples *t*-tests examining intervention group as independent variable, with satisfaction (and then attendance separately) as dependent variable. We have satisfaction and attendance data for the Spanish cohort both for part one (week six) and overall (week 16).
2) Psychoeducation vs. MBSR attendance for Spanish groups vs. English groups: Analysis of Covariance (ANCOVA) examining intervention type and delivery language as independent variables, with attendance as dependent variable, and

controlling for covariates of caregiver ethnicity, income/education, acculturation, stress, and child problem behaviors. We do not have data on English cohort satisfaction after week six, and thus can only compare these groups on attendance.

3) BPT-E vs. BPT-M satisfaction and attendance for Spanish vs. English groups: ANCOVA analysis examining delivery language and intervention group as independent variables, with satisfaction (and then attendance separately) as dependent variable, and controlling for covariates of caregiver ethnicity, income/education, acculturation, stress, and child problem behaviors.

In order to determine whether we have an adequate sample size to detect medium effects, an *a priori* power analysis was conducted using G*Power3 (Faul, Erdfelder, Lang, & Buchner, 2007) for an ANCOVA model with six predictors (two variables of interest and four covariates). Parameters were set for a medium effect size ($f^2 = 0.25$), and an alpha of .05. Results showed that to achieve a power of .80, there would need to be a total sample of 128 participants, less than the total sample of 140. This means the analyses will be underpowered for analyses involving satisfaction, which had fewer respondents, but will be sufficient for the analyses of attendance. Overall, the sample size reflects the exploratory/pilot nature of the research. As these analyses may be underpowered, it will be important to look at and report effect sizes rather than just statistical significances.

Qualitative Data

All focus group recordings were transcribed verbatim and anonymized. We used thematic analysis (Braun & Clarke, 2006) to analyze the data. As part of this process, data were initially coded separately by the first author, a bilingual graduate student, and

another bilingual/bicultural graduate student. During this phase, data were coded and initial discursive themes were identified. Coding involved reading through the data and re-watching the focus groups multiple times, then developing a set of broad descriptive codes based on the protocols. Coders then met together to reach consensus on these codes and to identify and interpret some of the broader themes into which these codes could be grouped. Codes were first collapsed within each intervention group (i.e., to establish a set of codes for BPT-E and BPT-M groups respectively), regardless of whether they had done the morning or evening focus group for that intervention. These codes were then compared against each other to identify which codes were intervention-specific, and which could apply to the overall trial. Codes were similar across groups, ultimately resulting in five themes that held across both intervention groups, and one each that was specific to BPT-E and BPT-M interventions respectively.

III. RESULTS

Quantitative Data

Prior to the analyses addressing the primary research questions, correlations were run between predictor variables. Unsurprisingly, VIA acculturation mainstream and heritage subscores were highly positively correlated with each other ($r = .53$, $p < .001$.). No other predictor variables correlated with one another at $r = .5$ or greater, the typical diagnostic cutoff for multicollinearity (Vatcheva et al., 2016), and thus all other predictors were included in subsequent analyses. For parsimony, it was determined that only VIA mainstream subscores would be included in the final model, as those are likely to more accurately represent willingness to buy-in and engage with an intervention delivered in the mainstream culture, as the one used in the present study.

Individuals who had completed the satisfaction measure were then compared with those who had not. There were no differences between responders and non-responders on baseline stress (PSI), challenging behavior (CBCL), or acculturation (VIA mainstream) scores, or on delivery language, intervention group, or income ($p < .05$). There were, however, statistically significant differences between responders and non-responders on ethnicity ($p = .038$) and education ($p = .029$), with Hispanic participants and those with lower levels of formal education being less likely to have completed the measure. This is discussed further in the limitations section of the Discussion.

BPT-E vs. BPT-M Satisfaction and Attendance for Spanish Groups

The first set of analyses involved comparisons between intervention groups within the Spanish-speaking cohort. In the larger study, participants were randomized to either the BPT-E or BPT-M condition. Thus, participants were well-matched across BPT-E and

BPT-M conditions in this cohort, and there were no significant differences in demographic variables (see Table 1). Distribution of satisfaction scores and attendance were unimodal and approximately normal with no severe skew or outliers, and thus the use of parametric testing methods was appropriate. For the Spanish-speaking cohort, after week six, ratings of satisfaction were high in both groups, with mean satisfaction scores of 42.81 and 44.31 (out of 49) for those who participated in psychoeducation and MBSR respectively. These equate to average item scores of 6.12 and 6.33 respectively (on a 7-point Likert scale) across the seven items that were used to assess satisfaction at this time point. These differences were not statistically significant, $t(30) = -0.97$, $p = .341$.

Similarly, after week 16, ratings of satisfaction were still high in both groups, with mean satisfaction scores of 95.21 and 90.31 (out of 105 maximum score) for those who participated in BPT-E and BPT-M respectively. These equate to average item scores of 6.35 and 6.02 respectively (on a 7-point Likert scale) across the 15 items that were used to measure overall intervention satisfaction. These were also not statistically significantly different from one another, $t(25) = 1.93$, $p = .065$. In examining specific satisfaction items, the highest-rated item for both BPT-E and BPT-M was "I would recommend the program to a friend or relative." The lowest-rated item for both intervention groups was "My child's problems which I have not tried to change using the methods presented in this program are greatly improved." We also ran analyses on intervention attendance for the Spanish cohort. There were no significant differences between BPT-E and BPT-M attendance for either the first six week, in-person, sessions, $t(58) = 0.41$, $p = .684$, or the latter 10 week, virtual BPT sessions, $t(58) = -0.06$, $p = .951$.

BPT-E vs. BPT-M Satisfaction and Attendance for Spanish vs. English Groups

The second set of analyses involved comparisons between the Spanish-speaking cohort and the previously completed English-speaking cohorts. There were several statistically significant differences between participants in the Spanish and English cohorts, even after breaking down the English-speaking participants by ethnicity; these differences include caregiver age, baseline stress, education, and income (see Table 2). Post-hoc comparisons revealed that all statistically significant differences between groups were between Spanish-speaking and English-speaking cohorts. There were no differences between the two subgroups (Hispanic, non-Hispanic) of the English-speaking cohorts.

Again, distribution of satisfaction scores and attendance were unimodal and approximately normal with no severe skew or outliers, and thus the use of parametric testing methods was appropriate. An ANCOVA was conducted examining attendance at the psychoeducation versus MBSR sessions. There was no significant overall effect of intervention and language on attendance through week six, after controlling for ethnicity, income, education, acculturation, stress, and child problem behavior, $F(9, 99) = 0.73$, $p = .677$. There was, however, a significant main effect of delivery language, $F(1, 99) = 5.05$, $p = .027$. This was a small to medium effect, partial $\eta^2 = .05$. No other predictors or covariates had significant effects on attendance through week six. See Table 3 for a summary of these results. Participants in the Spanish psychoeducation ($M = 4.50$, $SD = 2.09$) and Spanish MBSR ($M = 4.43$, $SD = 1.91$) groups had higher attendance than those in the English psychoeducation ($M = 3.77$, $SD = 2.16$) and English MBSR ($M = 3.89$, $SD = 1.95$) groups across the first six sessions.

The above ANCOVA was then run with the dependent variable of attendance at

the BPT sessions. There was again no significant overall effect of intervention and language on attendance, after controlling for ethnicity, income, education, acculturation, stress, and child problem behavior, $F(9, 99) = 0.81$, $p = .613$. No predictors or covariates had significant effects on attendance for weeks seven through 16. See Table 4 for a summary of these results. Participants in the Spanish BPT-E ($M = 6.27$, $SD = 3.82$) and Spanish BPT-M ($M = 6.14$, $SD = 3.86$) groups had comparable attendance to those in the English BPT-E ($M = 5.52$, $SD = 4.24$) and English BPT-M ($M = 5.14$, $SD = 4.10$) groups across the BPT sessions, which were the final 10 weeks of intervention. See Figure 3 for the visual representation of attendance across the study.

The same ANCOVA was then used to evaluate treatment satisfaction following completion of the entire 16-week intervention. There was a significant overall model effect of intervention and language on satisfaction, after controlling for ethnicity, income, education, acculturation, stress, and child problem behavior, $F(9, 56) = 2.31$, $p = .027$, accounting for 27.1% of the variance in total satisfaction. While neither intervention type nor language was significant on its own after controlling for the covariates, the interaction effect of intervention type by language was significant $F(1, 56) = 7.16$, $p = .010$. This was a medium to large effect, partial $\eta^2 = .11$. No other predictors or covariates had significant effects on overall treatment satisfaction. See Table 5 for a summary of these results. Participants who completed the BPT-E intervention in Spanish reported greater average satisfaction ($M = 95.17$, $SD = 7.41$) than those who completed the BPT-E intervention in English ($M = 87.48$, $SD = 8.09$). The reverse was true for BPT-M, in which those who completed the intervention in English ($M = 94.00$, $SD = 5.75$) reported greater satisfaction than those who completed it in Spanish ($M = 89.82$, SD

= 6.26). This pattern held even after breaking down the English-speaking participants by ethnicity. See Figure 4 for the visual representation of this effect.

Qualitative Data

Our thematic analysis revealed that participants found many aspects of the interventions beneficial, while other aspects of the groups created greater challenges or barriers in either their relatability to families or sustainable use. Seven themes emerged from focus group discussions of intervention strategies, two of which seemed unique to their specific intervention, and five of which appeared to cut across intervention condition. The seven themes were: (1) BPT-M: inconsistent use of MBSR strategies; (2) BPT-E: great value in discussions around school advocacy and their child's Individual Education Program (IEP)/; (3) Both conditions: enjoyed learning from other parents and feeling less isolated, peer-to-peer, other parents as models; (4) Both conditions: most felt behavioral strategies were useful (i.e., praise, rewards, focus on positive/ ignoring negative behaviors, strategies for virtual school during COVID); (5) Both conditions: experienced successes and challenges getting other family members on board; (6) Both conditions: found content culturally acceptable, other than video examples; appreciated groups being delivered in Spanish; (7) Both conditions: mixed on delivery modality of in-person versus via telehealth. As a note, all parent quotations provided in this section have been translated to English. See Appendix B for the original Spanish quotations. Additionally, any names used in quotations are pseudonyms to avoid identifying any participating family.

Theme 1: Inconsistent Use of MBSR Strategies

Participants in BPT-M reported rather differing opinions about the extent to which they continued to use MBSR strategies, such as meditation, visualization, and breathing, in the five months following the completion of intervention.

Successes with MBSR Strategies. There were several parents who reported that they had been able to continue using MBSR strategies and found them helpful in both everyday life and in moments when they were feeling particularly stressed. One mother who felt strongly that these techniques had been useful for her reported:

> What I really liked was the mindfulness, and I have tried to do it. I don't do it daily, but it does help me a lot with stress, feeling relaxed and I think that for me it was the best of everything.

Challenges with MBSR Strategies. In contrast, other parents described challenges they had with maintaining use of the MBSR practices beyond the intervention sessions. While even those parents who were not still using the MBSR strategies reported finding benefit in them at the time of the groups, they detailed a number of logistical barriers to the ongoing practice, including having trouble finding the time/space to do it, and struggling to engage in meditation without the group leader to guide them. One parent summarized these challenges:

> Honestly, I have not used the breathing much. At first when I was practicing it, I did feel that it helped me a lot. I was helped by what I learned about not worrying about things that will happen. It has helped me a little to [have] less stress, but honestly I have not practiced it. I forget, I don't have the time, I always have many things to do and I end up forgetting about it.

Theme 2: Helpfulness of Psychoeducation

Participants in BPT-E reported great benefit, including increased self-efficacy, from the discussions around school advocacy and developing their child's IEP. These participants detailed how their increased knowledge in these service systems increased their confidence in working with school teams and even changed some immediate outcomes for their children. One caregiver provided a very specific and timely example of how she had used the information from the groups to feel confident protecting her rights in a school team meeting:

> It helped me from the beginning, since I started with you with my son. It has changed a lot. In fact, we are going to have my son's IEP on Thursday. I asked the teacher, because she sent me a message saying, "On Wednesday I will send you the IEP papers"; I said, "No, I need you to send them before because I need to review them, see that everything is okay and also I need to tell you that my son's coordinator from the regional center will be at the meeting, [his] ABA [team] will also be at the meeting, the supervisor and the one who comes to my house for therapy as well." I didn't ask her, rather I said, "I hope that's okay" because I know it's going to be okay.

Another mother shared how her increased knowledge in these areas changed how her child's school viewed her and even resulted in an improvement in her child's education placement:

> With the information that you gave us, I have been able to discern and adjust these two legal documents that are very important... Effectively, it changed the posture of the IEP team. They had to change my daughter from where she was. She was in a harsh system, [but] now she is in an autism group, completely.

Theme 3: Sense of Community

Participants in both intervention conditions reported learning a lot from the other parents in their group, and seeing the other parents as role models who they hoped to emulate with their own parenting practices. Participants also reported feeling less isolated as a result of the groups, and appreciated being able to meet and talk to other parents of children with developmental disabilities.

Learning from Other Parents. Many of the caregivers felt that they learned a lot of strategies from the other participants in the group, and found it particularly useful to hear that things worked for those with similar lived experiences to themselves. One mother shared:

> Hearing experiences from others helps you, what didn't work for me, maybe it worked for others. You take in all these experiences, because it is very varied, learning is without limit. There is no child that's the same [as yours], what works for another doesn't always work for you, but sometimes it is good to know different techniques. Especially if it comes from another parent's experience.

Similarly, other caregivers reported learning about the character and strength of other parents in the group from hearing their stories, in addition to just strategies they have used. One participant disclosed that learning from other parents had changed her outlook in important ways:

> I learned to appreciate, and the truth is that you all are like heroes, because I don't know how you do it with two children, with more children. I imagine it must be very difficult, but I learned to value everything, and I learned a lot about how you all are fighters and how you are-- that you are not ashamed of your children--

> because before I was ashamed. But in therapy with you all, in the classes, I learned a lot of things and I learned to have more love for my son, more dedication, more time, everything. I especially learned a lot from those of you that have more than one child. It's amazing how strong you all are, truly.

Feeling Less Isolated. The parents in both intervention conditions, although slightly more in the BPT-E group where this was an explicit focus of the first six weeks of intervention, also noted the importance of just knowing there were so many people near them with similar stories. A participant shared that:

> The part that I liked the most was the beginning, where I met other parents, where I listened to the stories, where I felt understood, knowing that I am not alone, that I am not the only mother or father in this city, in this world.

One father who regularly attended the BPT-E groups added that he felt this reduction of isolation was particularly important for Hispanic families:

> Culturally, obviously we are like-- from Mexico to Chile we are more passionate and a little more sociable. What got us involved was during the first six weeks of getting to know each other, understanding one another and saying, “Okay, I'm not a unicorn and we all have the same difficulties.”

Another participant also felt that seeing others parents of children with similar challenges had allowed her to value and appreciate her own situation more:

> Before, I felt blind. I didn't know where to start, what to do. Even though from the age of three she was with the regional center, therapies and all this. But it wasn't until we got to this group that I felt like I could see... I look at my daughter and say, "my girl is fine," she has her moments, but I say, "okay." And as Lucia said,

> if they [other moms] can do it, why can't we? They are the example that we must see and follow.

Theme 4: Utility of Behavioral Strategies

The majority of participants across both intervention conditions reported that the behavioral strategies learned during the final 10 weeks of intervention (BPT) were useful and that they continued to use them. The most commonly reported strategies that parents were using were praise and rewards systems:

> I think that praise-- praise has worked very well for me. They, I have two that are twins, they get very frustrated, and to help them do something, and so that they are not so frustrated when they are doing it, I always tell them, "You are doing very well," or "good job" … I see that they get motivated, and that helps a lot. Also, another thing is the rewards. It is also something that works well for me for all their behaviors.

Other behavioral strategies that participants reported continuing to use included understanding and intervening based on functions of behavior, following the child's lead during play, and having more patience/ giving fewer commands. One parent reported understanding functions of challenging behavior:

> In general, for me it was a very good experience, we learned a lot. Quite simply it has simplified many things that we had mental barriers about, now [the strategies] allow us to handle a situation a little more calmly and understand why the behavior is happening and what we need to do to help it. The truth is that we have seen a great difference, there was a great 'before and after.'

Theme 5: Incorporating Other Family Members

Participants across the groups reported both successes and challenges integrating other family members into using the strategies. Although participants were allowed to bring one other caregiver with them to the groups, many came by themselves and had to determine how and whether they would disseminate the information to their families.

Successes. Several participants discussed the benefits they had seen in being able to teach strategies from the groups to other members of their family (e.g., spouses, parents, older children) who regularly took care of the child with a developmental disability. One participant who did regularly attend the intervention together with her husband commented:

> In general, I think it helped me, at least me and my family a lot, especially [in helping] my husband to understand. He understood a lot more, because he is working all day, he has not been able to be like me in therapies with our child.

Another participant, whose family members did not attend sessions with her, added:

> It is very helpful, both for us as parents and the family, because we are-- at least on my end-- I am one of those people who shares with the whole family. I try to share everything I learned, so that tomorrow if they are with my son alone…they have the knowledge to take care of him. They know that they have to have a requirement or a path, I form a path for them to follow forward. I see that it has helped me a lot with the family.

Challenges. On the other hand, there were also participants who reported difficulties implementing strategies from the interventions because other family members who did not attend the groups did not understand or know how to use the same strategies. One participant detailed the challenges of this:

> I also try to ignore the things that I don't want him to do. Sometimes it is a bit difficult because my husband is here right now and he pays attention to him. [My son] wants to get his attention and we are not on the same page, thinking the same. Because sometimes I tell him, “Don't even turn to look at him, because that's already getting your attention. Don't say anything to him.” It's a little difficult because I want to do it one way and he does something else.

Suggestions. One participant suggested that it may be beneficial in future iterations of these interventions to make a more conscious effort to invite and encourage other family members to attend sessions, rather than just one primary caregiver. This mother reasoned:

> Offer the invitation to the child's family so that they can also help the child, rather than just having the support of us mothers, who in reality are the ones who have the responsibility and duty as good mothers to be there for our children, but also you could involve the families in the groups so that they realize what we are learning.

Theme 6: Cultural Acceptability

Participants in both groups generally found the content culturally acceptable, and appreciated having groups in Spanish. Video examples that came as part of the IYPT curriculum were the only element reported to be culturally unaligned.

Overall Interventions. In general, participants did not feel that group strategies had any culturally specific leanings toward them, and appreciated what they saw as ‘neutrality’ in how different ideas were presented. Others also noted that it would be

unfair to group all Hispanic parents under one umbrella set of beliefs, particularly since multiple nationalities were represented:

> It would be very difficult, I imagine, to understand all the cultures that were there. I really liked the way it was handled because it was not just, "Okay, Mexicans educate their children doing this and this," but rather it was universal for everyone. In fact, I liked that because I did not feel discrimination towards any type of race that was there. That is my opinion.

Many participants noted that having the groups delivered in their native language of Spanish were particularly meaningful, and hoped that such opportunities would continue for other Hispanic parents. One participant summarized:

> I think that, speaking for everyone, that you should continue with this project, that you don't let it end here, and that you continue to include us. If we were the ones who inaugurated the class in Spanish, then you should continue because, really, us parents of this diverse group of children need that help.

Video Examples. The IYPT video examples were the only aspect of any of the interventions that participants across focus groups felt were inappropriate, both in terms of culture and content. These videos were over 20 years old, featured predominantly children without disabilities, and included mostly White families, who were dubbed over in Spanish. Participants struggled to relate to the videos:

> About the videos, in my opinion, they seem to me to be very bland. For my thinking they required sincerer people, because it was as if they did not take into account if they could really be used with people who are Latino. They were videos of people who speak English, with an intermediary to tell us in our

> language. To do these groups for Latino people it would be better to use parents who are really Latino and could personalize it more, in my point of view.

Another participant added that the video examples were really the only place that they felt the groups were culturally misaligned:

> In the videos I would say, "You can tell the culture or form is different," but the strategies I think that no, the strategies would be the same if it is for Americans or for Latinos or any other it would be the same. The strategies for me I do not think they should change, for me they are good no matter what race we may be, I think that the strategies work the same.

Theme 7: Delivery Modality

Participants across groups had mixed feelings with regard to intervention delivery modality of in-person versus via telehealth. Although the program was never intended to be delivered remotely, all of the BPT intervention for both groups was delivered as such due to COVID-19. While some participants appreciated not having to travel to the university for sessions, others found it difficult to engage in telehealth learning.

Support for In-person Delivery. Participants who expressed preference for in-person delivery of groups identified several advantages to this style of learning, while noting additional barriers to doing them virtually. The most commonly endorsed advantages were the ability to meet people in person and establish better connections, and because the in-person groups provided childcare to take that burden away from parents during sessions. One participant summarized:

> Doing it through Zoom is the only option right now but when times are better it would be better in person, because you learn, you meet people in person, you

become familiar, you give your points of view, yes, I prefer a thousand times in person than by Zoom. There are like the children, we are [in group] but suddenly someone passes by, we get distracted and we forget what we learned.

Support for Telehealth Delivery. In general, the caregivers who preferred the telehealth delivery noted the convenience of being in one's own home and not having to travel to the university to receive services. As noted in the methods section, participants were traveling from an average of 25.1 miles away, and required significant time commitment for those coming from further away.

> Everything you have developed now in this approach that you came up with on the Zoom platform, it became much better for me. The reason is that I was at home, more comfortable, I was seeing my daughters, you don't have to travel. I feel that there was much better absorption of all the information. It was perfect for me.

IV. DISCUSSION

We delivered a series of evidence-based parenting interventions to Hispanic caregivers of children with IDD, the group least often included in intervention studies (West et al., 2016). These groups were delivered entirely in Spanish, consistent with caregiver input that this would be of greater benefit than interventions delivered in English with live interpreters (Neece et al., 2019). Furthermore, due to the unfortunate circumstances brought on by COVID-19, intervention groups for Spanish-speaking caregivers of children with IDD were delivered via telehealth for the first time (McIntyre et al., 2021). Despite the uncertainty of both running such interventions for the first time, and the impact of the COVID-19 pandemic (Neece et al., 2020), Spanish-speaking participants engaged in the interventions similarly to those who had participated in the previous English-speaking cohorts. This was demonstrated by the fact that the Spanish-speaking groups had slightly higher attendance than the English-speaking groups for the first six weeks and non-significantly different attendance for the latter 10 weeks, after controlling for key demographic variables. This was consistent with the findings of Ogg and colleagues (2014) and McCabe and Yeh (2009), that parent training groups could draw comparable attendance in either language.

In examining intervention satisfaction, there was a very interesting crossover effect wherein neither intervention type (MBSR vs. psychoeducation) nor language of cohort (English vs. Spanish) predicted treatment satisfaction on their own, but the interaction of the conditions (intervention x language) did, even after controlling for key demographic variables. This indicated that, in general, those in the Spanish-speaking cohort had a relative preference for BPT-E over BPT-M, while those in the English-

speaking cohorts preferred the reverse. Interestingly, this effect held even after accounting for the fact that approximately half of the participants in the English-speaking groups identified their ethnicity as Hispanic. As was noted in the demographics section and Table 2, the Hispanic and non-Hispanic participants in the English cohort were much more similar in demographics/SES to each other than they were to the individuals in the Spanish cohort. This likely means that language of participation is serving as a proxy for SES and acculturation among the Hispanic participants, even beyond attempts to measure and quantify these factors. Thus, the satisfaction differences may reflect these factors in addition to just language itself. These differences are often noted in the extant literature, with language preference (Spanish vs. English) being highly associated with level of acculturation (Calzada et al. 2012), and demonstrated to predict differences between Hispanic families in treatment (Kim et al., 2015). In fact, Kim and colleagues (2015) found that predominantly Spanish-speaking, less acculturated, Hispanic parents had greater satisfaction and were less likely to prematurely dropout of community-based parent and child treatments than were their more acculturated peers. Less acculturation in Hispanic parents may serve as a protective factor for engaging in certain types of interventions even as factors such as immigration status serve as significant barriers to accessing more traditional mental health treatment services (Finno-Velasquez et al., 2016).

There are several other potential reasons why this crossover interaction occurred. It may be that those in the English-speaking psychoeducation groups did not find the same benefit from connecting with others, did not feel the same sense of community meeting other parents of children with ASD or DD, or did not find the information

presented in the groups to be as novel or relevant to them or their families as it was for those in the Spanish group. Qualitative data gathered from the focus groups also corroborate these findings. Participants in the Spanish language BPT-E group reported that they felt increased parenting self-efficacy and knowledge of their parental rights stemming from implementing the information they had learned in this group, consistent with the existing literature on psychoeducation groups with this population (Lopez et al., 2019; Magaña et al., 2017). These findings indicate the importance of providing underserved parent groups, such as Spanish-speaking Hispanics, the information to be able to feel confident in advocating for their child, as they may be less likely to gain that knowledge from other sources (Chlebowski et al., 2018). In terms of specific psychoeducation topics that may be particularly valuable for this population, focus group participants repeatedly referenced the importance of being able to advocate for their child in school via the IEP process. A literature review by Wolfe and Duran (2013) highlighted the complexities of the IEP process as being especially difficult for culturally and linguistically diverse families, in part due to insufficient information on how to become involved and advocate. Therefore, it makes sense that school advocacy would be a highly desired, and often overlooked, area of knowledge for these families.

Conversely, participants in the English-speaking groups may have found the techniques taught in MBSR to be more promising, as well as more acceptable or feasible within their value systems, beliefs, or lifestyles. This would make sense given that many of the existing findings of MBSR for parents of children with IDD have been found with majority White, middle-income families (e.g. Dykens et al., 2014). Focus group data also indicate why MBSR may have been rated as less satisfying for the Spanish-speaking

parents in the present study, despite some prior studies finding comparable effects for this population (Castellanos et al., 2020). Participants in this study were mixed in the degree to which they continued to use MBSR strategies several months after the intervention, with multiple caregivers expressing they did not have time in their daily lives to carve out for such self-care activities, or were not able to do the activities without the group leader to guide them. Although it is unclear if the barriers to implementing MBSR practice were related to the impact the COVID-19 pandemic had on family daily life, future iterations of MBSR for this population could be enhanced. For example, more information about the importance of establishing a self-care routine could be added, as well as building in more scaffolded practice opportunities so parents could feel more comfortable using the strategies at home without the group leader present.

Other major takeaways from this study stem from the qualitative data gathered from the participant focus groups. Participants in both intervention groups reported appreciating and getting a lot of benefit from meeting other parents with similar stories to their own (i.e., other Spanish-speaking Hispanic caregivers of a child with a disability), learning what strategies other parents had found effective, and viewing fellow participants as role models from which to base their own parenting behaviors and attitudes. Taken together, these principles can be viewed under the common umbrella of learning through community or collective experience, referred to in the literature as *convivencia*. While the term *convivencia* does not translate directly to any one word in English, Jasis and Ordonez-Jasis (2004) define it as "the flowing moments of collective creation and solidarity, the bonding that developed from a joint, emerging moral quest against the backdrop of experiential learning" (p. 35). This ability to come together as a

group and learn from one another speaks to the importance of group-based intervention for Hispanic, Spanish-speaking populations. It also highlights the value of allowing participants to share their own stories and experiences as part of the intervention process, rather than simply treating an intervention as passing along information.

Overall, behavioral strategies were rated favorably both with the satisfaction data and in the focus groups. This was generally aligned with the literature on how Hispanic caregivers view common, "evidence-based," parenting strategies. Consistent with the findings of Calzada and colleagues (2013), the majority of caregivers in the present study found the use of praise and rewards to be acceptable and beneficial. Strategies that mothers in the Calzada et al. (2013) study found less acceptable, such as using time-out and eliminating spanking, were not explicitly addressed as part of the adapted IYPT curriculum (McIntyre, 2008a) used in this trial. Our promising findings on the acceptability of BPT strategies with this population correspond with what prior studies have found. Although they utilized a different behaviorally-based parenting intervention, PCIT, separate studies by McCabe and Yeh (2009) and Ramos and colleagues (2018) both found Hispanic caregivers demonstrated high levels of satisfaction and buy-in with the strategies presented. DuBay and colleagues (2018) similarly found that Hispanic caregivers of children with ASD considered the majority of behaviorally-based strategies to be acceptable.

Another important takeaway from the present study is around the importance of family, or *familismo*, in these interventions. *Familismo*, or strong bonds among the nuclear and extended family members, is a commonly identified value reported in the Hispanic parenting literature (e.g., Ramos et al., 2018). Estrada and Deris (2014) found

that Hispanic families with a child with ASD relied on more members of the family than just the parents as caregivers, including grandparents, aunts/uncles, and older siblings of the child. During the focus groups, participants reported both successes and challenges with incorporating other members of the family in using the strategies that they had learned during the groups. One participant suggested that future iterations of this work make it a greater priority to invite the whole family to take part in interventions. While the study did allow primary caregivers to bring one alternative caregiver with them to the groups, this consideration of the importance of the whole family, and how to best convey information and get extended family members more involved, could be of significance for maximizing the effectiveness of these programs.

Additionally, although the current study did not make any explicit cultural adaptations beyond the direct translation of the interventions and program materials, the majority of participants reported that the program was well aligned with their cultural and familial values. It is often assumed that interventions that have been primarily developed and utilized with one population (i.e., higher SES and White) inherently will not work as well with other groups (Lau, 2006; Parra Cardona et al., 2012). While there is evidence that parent training programs culturally adapted for ethnic minority parents are effective at improving parenting behavior (van Mourik et al., 2017), they may not necessarily be better than directly translated evidence-based interventions (McCabe & Yeh, 2009). As predicted, participants in the present study greatly appreciated being able to receive this intervention in their native language (Neece et al., 2019), and felt the interventions had generally been appropriate for them despite no other tailoring. Some participants even noted that they appreciated that the content was not specifically culturally targeted to

Hispanic populations. While intervention strategies have been developed primarily from one cultural lens, they may be more generalizable than believed. Participants did specifically note that video examples used in the intervention could be made to be more representative and relevant for Hispanic populations. This may point to a need to increase representation in examples, if not necessarily the need to overhaul content, to improve buy-in.

Finally, there remain a lot of unknowns with regard to delivery modality of interventions for this population. Participants had mixed reactions to the intervention delivery via telehealth, with several notable pros (i.e., not having to drive to intervention sessions, more comfortable at home) and cons (i.e., increased distractibility at home, lack of child care, difficulty with technology). Telehealth may reduce barriers to intervention access particularly for those living in more rural areas (Bearss et al., 2018). Participants in this cohort were traveling in from an average of 25 miles away, which likely added to the perceived benefits of telehealth for those individuals. Also of note is that the participants in the present trial did not originally sign up for treatment to be delivered remotely via telehealth, but were rather thrust into it as necessitated by COVID-19. Therefore, their opinions may differ from individuals who originally agree to be included in a telehealth study, and must be treated with caution. McIntyre et al. (2021) provides a much deeper, and more specific, look into the adaptations that were made to move this intervention to telehealth, the technology support provided to participants, and the reactions of participants to these changes.

Limitations

There are several limitations to the present study, many of which relate to

attendance/response rates of participants within the study and challenges comparing the Spanish-speaking and English-speaking cohorts. Attendance was less than desired with all of the intervention groups and cohorts, averaging about 50% across the study, despite efforts to increase buy-in and engagement through the motivational interview PEI enhancement. This included several participants who were randomized to a condition but never attended a session. Furthermore, overall intervention satisfaction data were collected only at the week 16 (final) session from those who were in attendance, and thus we only have that data from 71 of the 140 (51%) participants to have completed the intervention thus far. We also did have notable demographic differences between those who completed the satisfaction survey and those who did not, which may impact the generalization of these results. Similarly, with the focus groups, the participant pool was only those who attended at least one session from the first six 6 weeks, at least one session from the latter 10 weeks, and were willing to do a focus group. Thus, these data may be an unfair representation of the overall recruited participants, as we may have an inadvertent sampling bias for those who were most enthusiastic or bought-in to the groups. Additionally, in comparing the English and Spanish cohorts on BPT, we have an inherent major difference in delivery modality, given that the intervention had to be delivered online for the latter group. We may have seen different levels of attendance or satisfaction with BPT components if they had been delivered in the same way across cohorts. Finally, the present study does not examine any intervention outcomes or effects. These types of data, including changes in parent stress and child behavioral measures, are aims of the larger NIH-funded grant (McIntyre & Neece, 2018), and thus will not be analyzed until all cohorts are completed. Therefore, while this study is able to

describe satisfaction and attendance of participants across interventions, we cannot yet determine whether either group had greater impact on these key outcomes. Despite these limitations, this study makes a valuable contribution to the literature by piloting several parenting interventions for the first time with Spanish-speaking Hispanic parents of preschool-aged children with DD and ASD, thus laying the groundwork for future research in these important areas.

Future Directions

The future directions of this study will involve completing analyses of key outcomes (parent stress, parenting behavior, and child behavior), and using this in conjunction with the satisfaction and focus group results to further develop and adapt these interventions for this population. This study further illuminated the value that Spanish-speaking Hispanic caregivers of children with IDD place on being able to meet and learn from others like them, and thus this format should be retained in future iterations. Similarly, incorporating psychoeducation or knowledge of how best to advocate for the rights of their children may be of greater benefit for these families, and should continue to be interwoven within intervention work. While there remain more unanswered questions about other aspects of these groups (e.g., MBSR, delivery modality) these core elements of community, psychoeducation, and support are not necessarily unique to caregivers of children ages three to five, and could serve as a foundation for any future work done with Hispanic caregivers of children with IDD. Educational and medical professionals in other settings may also benefit from enhanced training in service delivery for Hispanic, Spanish-speaking children and families so that there are fewer knowledge gaps needing to be closed with outside psychoeducation.

Additionally, future iterations of these interventions with this population should consider the use of greater cultural adaptation of program materials and strategies, such as the adaptations proposed by Kuhn et al. (2020). Based on the high levels of satisfaction and positive feedback from those who participated in the present study, it is unclear whether it is necessary to undergo a complete 'cultural adaptation' of the content of these interventions. One specific idea would be to incorporate video vignettes that are better tailored to the participants, include Hispanic caregivers and children with IDD, and are set within a few years of the intervention being delivered. Unfortunately, the production of such materials are costly and quickly get outdated. Apart from holding groups in Spanish, more relatable videos, and other such adaptations can only add to the inclusivity in which these groups were intended. In their present forms, the interventions used in this study would be considered a surface level cultural adaptation, as they are matched to "superficial" characteristics of the target population such as names and languages (Resnicow et al., 1999). In order to achieve a deeper, structural, adaptation the interventions will need to more consciously target the values, beliefs, context, etc., of the population being intervened on. Researchers have proposed an ecological validity framework that details the iterative process of taking an existing intervention and going from a surface level adaptation to a deeper level adaptation (Kuhn et al., 2020). This process involves developing, piloting, and receiving feedback on a surface level adaptation, which we have now done with the focus groups in the present study, and using that information to inform a second iteration that attempts deep structure adaptation. Furthermore, there are increasing calls in the field to directly test the effectiveness of surface level and deep level adaptations against one another (Ortiz & Del

Vecchio, 2013). A critical future study could involve examining the additive benefits of a deep structure cultural adaptation of BPT-E and BPT-M compared to the surface level/ directly translated programs in both satisfaction and outcomes. This proposed study would greatly inform future directions for the field of culturally diverse IDD research as a whole.

Conclusion

The current study piloted three interventions (MBSR, psychoeducation, and modified IYPT) with a relatively large sample of lower-income, Spanish-speaking Hispanic caregivers of children with IDD. The primary goal was to determine whether these interventions could feasibly be used with this population, as measured by their engagement (attendance) in and acceptability (satisfaction) of the groups. Overall, the Spanish-speaking participants were comparable to their English-speaking counterparts in attendance, and even slightly higher after controlling for demographic factors. The Spanish-speaking participants demonstrated high levels of satisfaction with the interventions in general, with preference for BPT combined with psychoeducation compared to English speakers' preference for BPT combined with MBSR. Qualitative focus groups revealed that there may be cultural values, including communal learning, and societal factors, such as reduced access to psychoeducation from other sources, explaining such differences. In sum, this study adds to the literature by providing much needed child behavioral and caregiver mental health services to an often underserved population in their own language. The data gathered from this study will lay the groundwork for important future work on how to best adapt these interventions to meet the needs of these families.

APPENDIX A: TABLES AND FIGURES

Table 1

Descriptive Statistics for Spanish-speaking Cohort Participants (N = 60)

Demographic	BPT-E (n = 30)	BPT-M (n = 30)		
	M (SD) or %	*M (SD) or %*	*t*	*p*
Target Child Age in Years	3.90 (0.71)	3.87 (0.90)	0.16	.874
Primary Caregiver (PC) Age	39.83 (7.12)	38.83 (8.89)	0.48	.633
PC Baseline Stress (PSI)	113.23 (22.34)	118.28 (18.87)	-0.94	.354
Child Total Problems Raw Score (CBCL)	73.89 (31.55)	86.66 (34.98)	-1.45	.154
PC Acculturation (VIA Mainstream Subscore)	64.67 (21.22)	61.62 (14.09)	0.56	.579
			χ^2	
Household Income (< $30,000)	53.3%	63.3%	0.62	.432
PC Education (No HS Diploma)	50.0%	66.7%	1.71	.190
PC Sex (female)	100.0%	96.7%	1.02	.313
TC Sex (male)	63.3%	76.7%	1.28	.260
PC Race/ethnicity Hispanic	100%	100%		

Note. There were no significant between-group differences on any demographic variables.

Table 2

Descriptive Statistics for Spanish-speaking vs. English-speaking Cohort Participants (N = 140)

Demographic	Spanish, Hispanic (n = 60)	English, Hispanic (n = 36)	English, non-Hispanic (n = 44)		
	M (SD) or %	*M (SD) or %*	*M (SD) or %*	*F*	*p*
Target Child (TC) Age	3.88 (0.80)[a]	3.81 (0.86)[a]	3.80 (0.90)[a]	0.17	.847
Primary Caregiver (PC) Age	39.33 (8.00)[a]	33.83 (6.92)[b]	36.41 (8.51)[ab]	5.62	.004
PC Baseline Stress (PSI)	115.71 (20.69)[a]	103.21 (23.87)[b]	110.00 (21.84)[ab]	3.56	.031
Child Total Problems Raw Score (CBCL)	80.39 (33.66)[a]	72.03 (21.46)[a]	81.88 (23.71)[a]	1.29	.279
PC Acculturation (VIA Mainstream Subscore)	63.24 (18.11)[a]	69.69 (18.290)[ab]	72.95 (15.82)[b]	3.30	.041
				χ^2	
TC Sex (male)	70.0%	61.1%	68.2%	0.84	.658
Household Income (< $30,000)	58.3%	22.2%	11.4%	27.99	<.001
PC Education (No HS Diploma)	58.3%	11.1%	0.0%	49.74	<.001

Note. Means sharing a letter in their superscript in each row are not significantly different at the .05 level according to Tukey post-hoc comparisons.

Table 3

ANCOVA Results with Psychoeducation/ MBSR Attendance as Dependent Variable

Source	*df*	*SS*	*MS*	*F*	*p*
Ethnicity	1	5.93	5.93	1.41	.238
Household Income (< $30,000)	1	0.58	0.58	0.14	.711
PC Education (No HS Diploma)	1	3.12	3.12	0.74	.391
PC Baseline Stress (PSI)	1	6.71	6.71	1.60	.210
Child Total Problems (CBCL)	1	1.11	1.11	0.26	.609
Acculturation (VIA)	1	1.15	1.15	0.27	.603
Group	1	< 0.01	< 0.01	< 0.01	.994
Language	1	21.23	21.23	5.05	.027
Group x Language	1	0.06	0.06	0.01	.906
Error	99	416.47	4.21		
Total	109	2261.00			

Note. The model accounted for approximately 6% of the total variability in psychoeducation/MBSR attendance, which was not significant, $F(9, 99) = 0.73$, $p = .677$. The magnitude of the significant Language effect was partial $\eta^2 = .05$.

Table 4

ANCOVA Results with BPT Attendance as Dependent Variable

Source	*df*	*SS*	*MS*	*F*	*p*
Ethnicity	1	12.46	12.46	0.76	.385
Household Income (< $30,000)	1	3.87	3.87	0.24	.628
PC Education (No HS Diploma)	1	3.51	3.51	0.21	.645
PC Baseline Stress (PSI)	1	4.03	4.03	0.25	.621
Child Total Problems (CBCL)	1	62.68	62.68	3.83	.053
Acculturation (VIA)	1	0.21	0.21	0.01	.911
Group	1	7.33	7.33	0.45	.505
Language	1	43.42	43.42	2.65	.107
Group x Language	1	3.64	3.64	0.22	.638
Error	99	1621.47	16.38		
Total	109	5244.00			

Note. The model accounted for approximately 7% of the total variability in BPT attendance, which was not significant, $F(9, 99) = 0.81$, $p = .613$.

Table 5

ANCOVA Results with Total Satisfaction as Dependent Variable

Source	*df*	*SS*	*MS*	*F*	*p*
Ethnicity	1	7.92	7.92	0.17	.685
Household Income (< $30,000)	1	1.03	1.03	0.02	.884
PC Education (No HS Diploma)	1	90.87	90.87	1.90	.173
PC Baseline Stress (PSI)	1	99.55	99.55	2.08	.154
Child Total Problems (CBCL)	1	61.93	61.93	1.30	.260
Acculturation (VIA)	1	17.14	17.14	0.36	.552
Group	1	9.94	9.94	0.21	.650
Language	1	97.41	97.41	2.04	.159
Group x Language	1	342.00	342.00	7.16	.010
Error	56	2675.11	47.77		
Total	66	555505.00			

Note. The model accounted for approximately 27% of the total variability in Satisfaction, which was significant, $F(9, 56) = 2.31$, $p = .027$. The magnitude of the significant Group by Language effect was partial $\eta^2 = .11$.

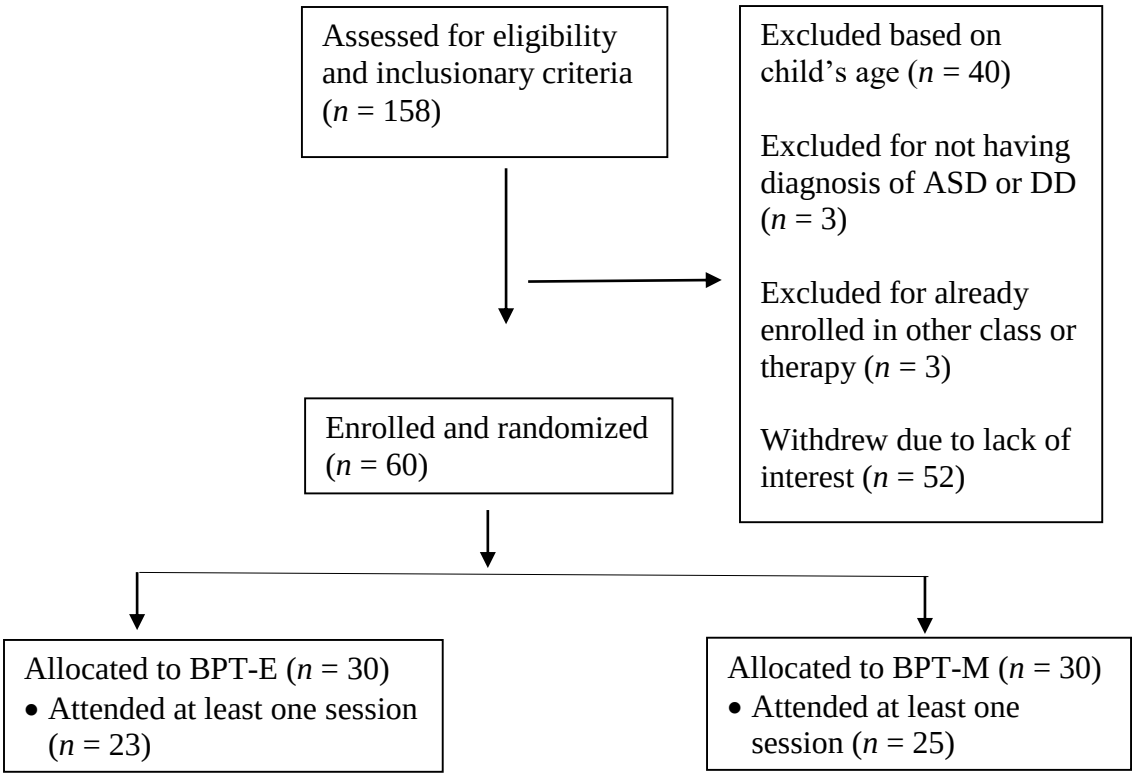

Figure 1. CONSORT diagram of participant inclusion.

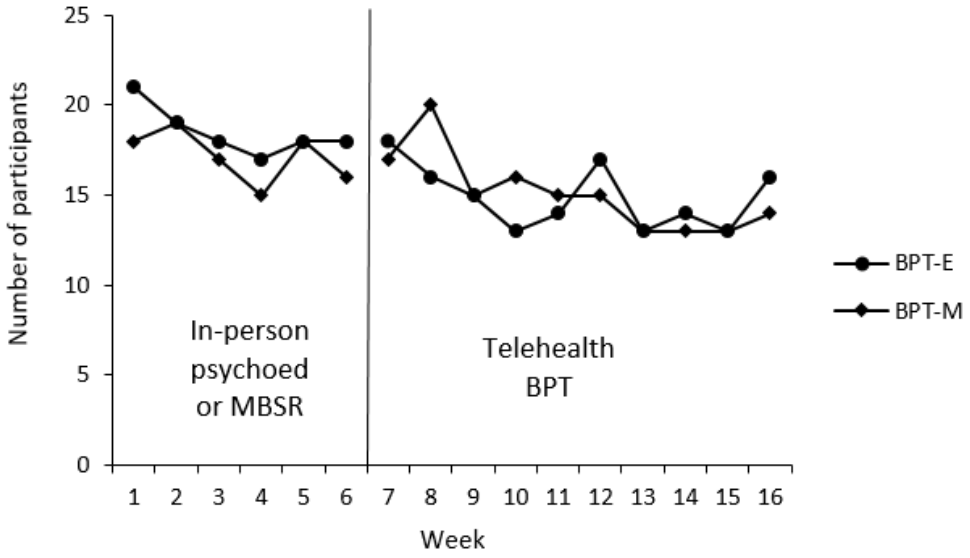

Figure 2. Attendance at Spanish cohort intervention sessions.

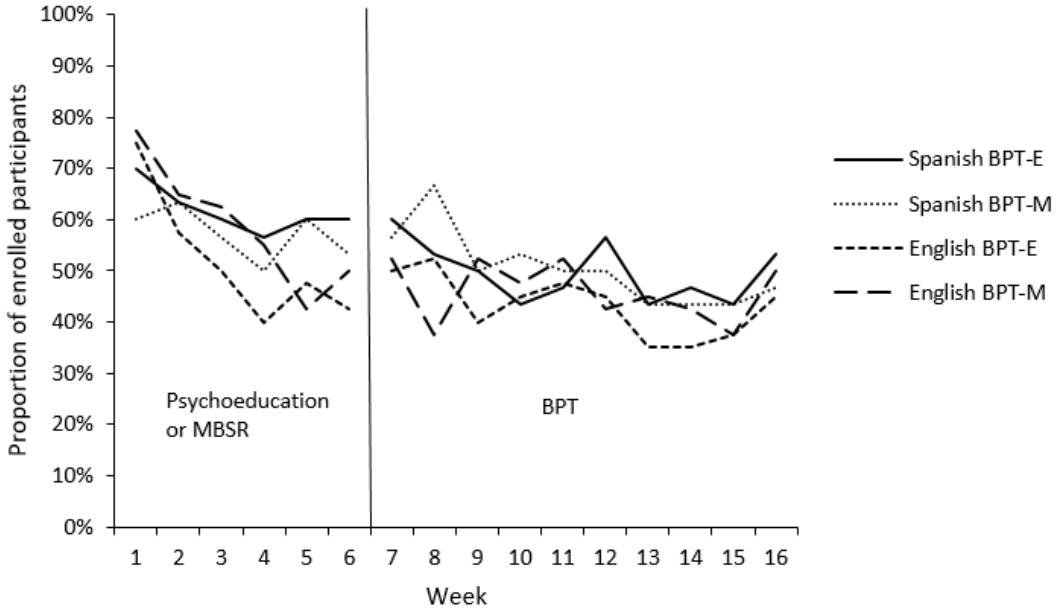

Figure 3. Attendance at intervention sessions across cohorts.

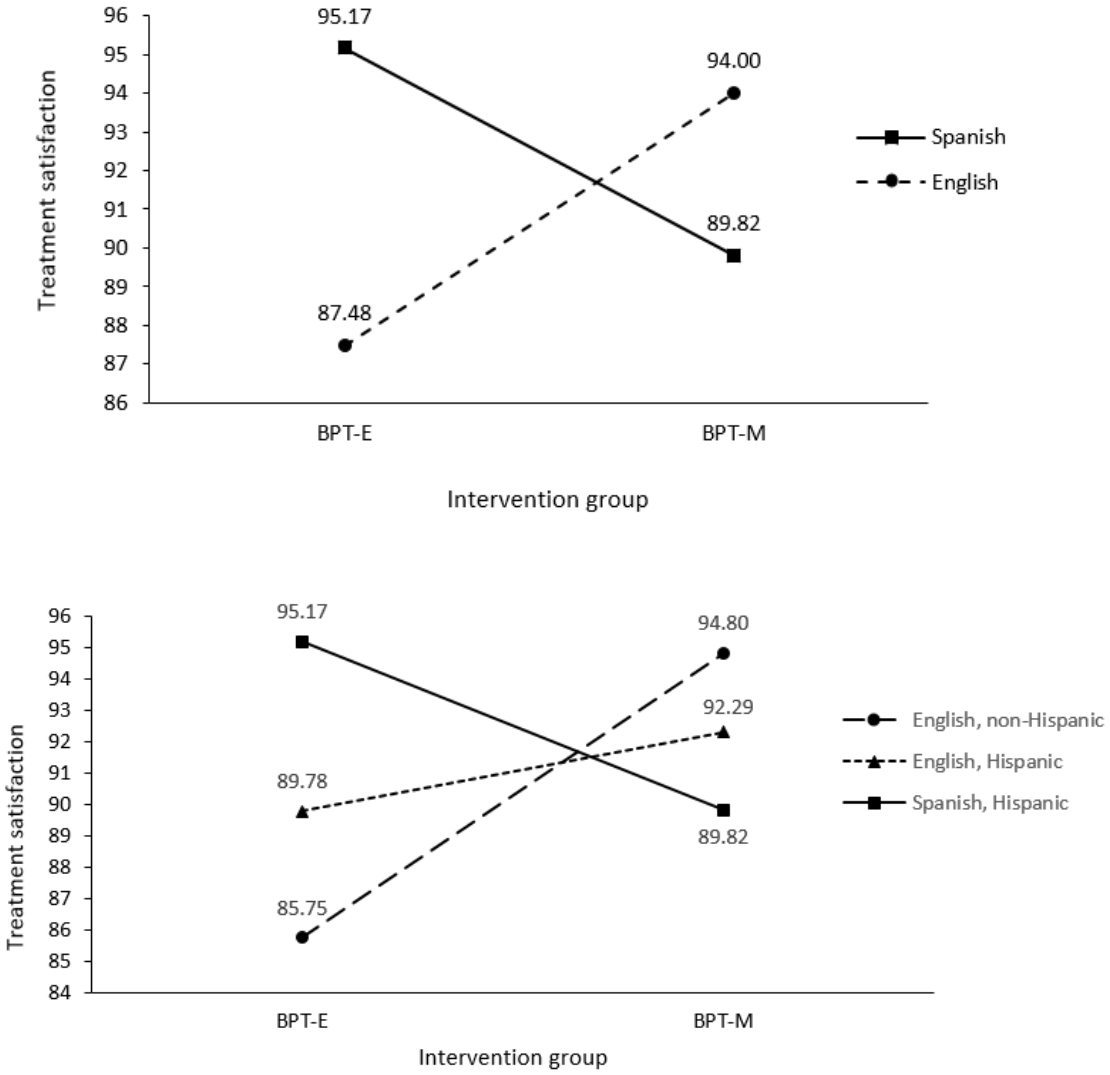

Figure 4. Treatment satisfaction by intervention group and language of delivery.

APPENDIX B: FOCUS GROUP QUOTES IN SPANISH

Theme 1:

A mí lo que me gustó mucho fue la atención plena y lo he intentado hacer. No lo hago diario, pero sí me ayuda mucho con el estrés, de sentirme relajada y yo creo que para mí fue lo mejor de todo.

Sinceramente yo no he practicado mucho la respiración. Al principio cuando lo practicaba, sí sentí que me ayudó bastante. Me sirvió lo que aprendí de no estarme preocupando por las cosas que van a pasar. Sí me ha servido un poco para menos estrés, pero sinceramente no lo he practicado. Se me olvida, no tengo el tiempo, siempre tengo muchas cosas qué hacer y termina olvidándoseme.

Theme 2:

A mí me sirvió desde el principio, desde que empecé con ustedes con mi hijo. Ha cambiado mucho, de hecho vamos a tener el IEP de mi hijo el jueves. También le pedí a la maestra, porque ella me mandó un mensaje diciendo, "El miércoles yo te mando los papeles del IEP", le dije, "No, necesito que los mandes antes porque yo necesito revisarlos, ver que todo esté bien y también necesito decirte que la coordinadora de mi hijo de regional center va a estar en la junta, también ABA va a estar en la junta, la supervisora y la que viene a la terapia a mi casa también". No le pregunté, más bien le dije, "Espero que esté bien", porque yo sé que va a estar bien.

Con la información que se nos dio, yo lo he podido discernir y poder ajustar a estos dos documentos legales que son muy importantes… Efectivamente, le cambió la postura en el equipo del IEP. A mi hija la tuvieron que cambiar de lo que estaba. Estaba en un sistema severo, ahorita está en un grupo de autismo, completamente.

Theme 3:

Oír experiencias de otros te sirve, lo que no me funcionó a mí a lo mejor a ellos les funcionó. Agarras experiencia, porque es muy variado, el aprendizaje es sin límite. No hay un niño igual, lo que le sirve a uno a otro no, pero a veces es bueno saber diferentes técnicas. Especialmente si viene de la experiencia de otro papá.

Yo aprendí a apreciar y la verdad son como unos héroes ustedes, porque no sé cómo le hacen ustedes con dos niños, con más niños. Me imagino que debe ser muy difícil, pero aprendí a valorar todo, y aprendí muchísimo de cómo son luchadoras y cómo son-- Que no se avergüenzan de sus hijos, porque yo antes me avergonzaba. Pero en la terapia con ustedes, en las clases yo aprendí muchísimas cosas y aprendí a tenerle más amor a mi hijo, más dedicación, más tiempo, de todo. En especial aprendí mucho de ustedes que tienen más de un niño. Es *amazing* cómo ustedes son tan fuertes, la verdad.

La parte que a mí más me gustó fue la primera, donde conocí a otros papás, donde escuché las historias, donde me sentí entendida, saber que no estoy sola, que no soy la única mamá o papá en esta ciudad, en este mundo.

Culturalmente, obviamente somos como-- Desde México hasta Chile somos más pasionales y un poco más sociables, lo que nos lidió fueron las seis primeras semanas de conocernos, entendernos unos a otros y decir, "Okay, no soy un unicornio y todos tenemos las mismas dificultades".

Yo me sentía ciega, no sabía por dónde empezar, qué hacer. Aunque desde los tres años estuvo con el centro regional, terapias y todo esto. Pero no fue hasta que llegamos a este grupo que yo sentí que pude ver… Yo veo la mía y digo, "Mi niña está bien", tiene sus ratos, pero digo, "Está bien", y como dijo Lucia, si ellas pueden, ¿por qué nosotros no? Ellos son el ejemplo con lo que nosotros debemos de seguir y ver.

Theme 4:

Pienso que los elogios -- Para mí ha funcionado muchísimo los elogios. Ellos, yo tengo dos que son gemelos, se frustran mucho, y para ayudarlos a hacer alguna cosa, y que no se estén frustrando tanto cuando están haciendo siempre les digo, "Estás haciendo muy bien, o good job." A veces, hasta digo, "Sueno como mucho," pero yo veo que se motivan, y les ayuda bastante eso. También otra de las cosas es las recompensas , también es algo que me funciona mucho para todos sus comportamientos.

En general para mí fue una muy buena experiencia, aprendimos muchísimo, simplemente ha simplificado muchas cosas de las que teníamos barreras mentales, ahora nos permiten llevar con un poco más de calma la situación y entender por qué el comportamiento y qué necesitamos hacer para ayudarlo. La verdad nosotros sí hemos visto una gran diferencia, hubo un gran antes y un después.

Theme 5:

En general creo que a mí me sirvió, al menos a mí y a mi familia muchísimo, especialmente que mi esposo entendiera, entendió muchísimo más, porque él está trabajando todo el día, no ha podido estar como yo en las terapias con el niño.

Es de mucha ayuda, tanto para nosotros como padres y la familia, porque somos al menos de mi parte, soy de las personas que comparten con toda la familia, trato de compartir todo lo que aprendí, para que así el día de mañana si ven a mi hijo solo…tienen el pensamiento de educarlo. Saben que tienen que tener un requisito o un camino, yo les formo un camino para que ellos puedan seguir adelante, eso veo que me ha ayudado bastante con la familia.

También trato de ignorar las cosas que no quiero que haga. A veces es un poco difícil porque mi esposo ahorita está aquí y él le hace caso, quiere llamarle la atención y no estamos en lo mismo, pensando igual. Porque a veces le digo, "Ni siquiera voltees a

mirarlo, porque eso ya está llamando tu atención. No le digas nada". Es un poquito difícil porque yo lo quiero hacer de una forma y él hace otra cosa.

Hacerle la invitación a la familia del niño para que ellos puedan ayudar también al niño, no nada más el soporte de nosotras las mamás, que en realidad somos las que tenemos la responsabilidad y el deber como buenas mamás, estar ahí por nuestros hijos, pero también que involucraran a las familias en los grupos para que se den cuenta de lo que nosotros estamos aprendiendo.

Theme 6:

Sería muy difícil me imagino, entender a todas las culturas que estábamos ahí. La verdad me gustó la manera que se tocó porque no fue nomás, "Okay, los mexicanos educan a sus hijos haciendo esto y esto", sino que fue universal para todos. De hecho me gustó eso porque no sentí discriminación hacia ningún tipo de raza que estábamos ahí, esa es mi opinión.

Yo pienso que a voz de todas, que sigan con este proyecto, que no se acabe aquí, que nos sigan incluyendo, si fuimos las que inauguramos esa clase en español, que sigan porque realmente nuestros papás de esta diversidad de niños necesitamos esa ayuda.

Acerca de los videos, a mi parecer, se me hacen como que estaban muy acartonados, para mi pensamiento se requería de unas personas más sinceras, porque como que no tomamos en cuenta si se podrían utilizar con personas que realmente son latinas, eran videos de personas que hablan inglés, había un intermediario para que nos lo dijera en nuestro idioma y para hacer esos grupos para personas latinas sería mejor utilizar padres que realmente son latinos y pudieran personalizarlo más en mi punto de vista.

En los videos yo diría, "Se nota la cultura es diferente o la forma", pero las estrategias yo pienso que no, las estrategias serían igual si es para americanos o para latinos o de cualquier otra sería igual. Las estrategias para mí no creo que deberían cambiarlas, para mí están buenas siendo de la raza que seamos o lo que sea, pienso que las estrategias funcionan igual.

Theme 7:

Hacerlo por Zoom es la única opción ahorita pero cuando sea el mejor tiempo estaría mejor en persona, porque se aprende, conoces a la gente en persona, te vas familiarizando, vas dando tus puntos de vista, eso sí, prefiero yo mil veces en persona que por Zoom. Son como los niños, estamos pero de repente pasa alguien, ya nos distrajimos y lo que aprendimos se nos olvida.

Todo el desarrollo de lo que tuvieron ahora ustedes en este planteamiento que dieron con la plataforma Zoom, a mí se me hizo mucho mejor. La razón es que estaba en casa, más cómoda, estaba viendo a mis hijas, no tienes que trasladarte. Yo siento que hubo mucho mejor absorción de toda la información. A mí se me hizo perfecto.

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