

Cultural Adaptation of Prevent-Teach-Reinforce for Families: A Single Case Evaluation with

Hispanic/Latine Children with Autism

by

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A dissertation accepted and approved in partial fulfillment of the

requirements for the degree of

Doctor of Philosophy

in Special Education

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Fall 2025

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Dissertation Abstract

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Doctor of Philosophy in Special Education

Title: Cultural Adaptation of Prevent-Teach-Reinforce For Families: A Single Case Evaluation with Hispanic/Latine Children with Autism

Autism spectrum disorder (ASD), a pervasive developmental disorder, has risen in prevalence in recent years. Although ASD affects children irrespective of age, gender, race, or ethnicity, racial/ethnic discrepancies exist regarding the age of diagnosis and access to available and quality autism services. The prevalence of ASD in the Hispanic/Latine community is growing (Maenner et al., 2023); however, Hispanic/Latine children are often under identified, underserved, and diagnosed at a later age than their white peers (Travers et al., 2014; Morrier & Gallagher, 2012; Valicenti-McDermott et al., 2012). Additionally, there are relatively few interventions specific for culturally and linguistically diverse individuals that focus on autism and co-occurring challenging behavior (Ratto et al., 2016; Safer-Lichtenstein et al., 2019). The current single-case multiple-probe design study examined the efficacy of a culturally adapted positive behavior intervention, Prevent-Teach-Reinforce for Families (PTR-F; Dunlap, 2017) in reducing challenging behaviors and promoting alternative behaviors among Hispanic/Latine children with autism. An additional objective was to evaluate caregiver satisfaction and acceptability of the culturally adapted interventions. Analysis included visual analysis and Tau-U statistics to assess behavior change across baseline and intervention phases. The results of the current study were mixed across families. A single family demonstrated evidence of a basic effect while subsequent

two families presented mixed results. While the results were mixed, this study provides insight to guide future research on developing and implementing family mediated intervention with Hispanic/Latine autistic individuals and their families. Furthermore, findings related to factors influencing recruitment, retention, and attrition among Hispanic/Latine families may inform the design and implementation of subsequent studies involving culturally and linguistically diverse populations.

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Machalicek, W., Erturk, B., Gulgatch, L., Wei, Q., Alvarez, K., & St. Joseph, S. (2022). Family Interventions. Handbook of Autism and Pervasive Developmental Disorder Published in book series Autism and Child Psychopathology Series. (Editors J. Matson & P. Sturmey) Springer Nature.

ACKNOWLEDGMENTS

I would like to express my most sincere appreciation to Dr. Wendy Machalicek for supporting me through the preparation of this manuscript and her unwavering support during my doctoral training. I thank the feedback and support my committee members have provided over the past year. This project was financially supported in part by the Organization for Autism Research Graduate Student Research Grant and by a grant supporting my graduate training by the United States Department of Education, Office of Special Education Programs, Project CO-LEAD Fellowship (Grant #H325D190063).

DEDICATION

This dissertation is dedicated to all those who started my graduate school journey with me but were not able to see it to its end. Para mi grandma y grandpa, espero que les haga sentir orgullosos de mí, y sé que han estado a mi lado incluso después de que se fueron. To my Phoebe: thank you for being with me and helping me in ways you never knew. To Forest, who have seen me, worked with me, and supported me over the past 3 years. To A.S., who has helped me grow as a researcher, scholar, and a person. And finally, to my family, who have been my rock through everything. I would not be here, nor would I be the person I am without your love, compassion, and support.

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CHAPTER I: INTRODUCTION AND LITERATURE REVIEW

The purpose of this chapter is to a) describe the importance of the current study, b) review existing literature on the target population, including relevant intersecting identities, c) discuss the conceptual model guiding the study, and d) state the purpose and research questions. First, an overview of autism spectrum disorder (ASD; “autism” used interchangeably) and co-occurring challenging behavior is provided. Second, evidence-based practices for behavioral intervention targeting reduction in challenging behavior are reviewed. Third, characteristics of the target population is provided with particular attention to the intersection of autism and cultural identity. Next, the focal intervention is introduced alongside supporting literature, current gaps, and limitations. The chapter concludes with a summary, statement of purpose, research questions, and the conceptual framework guiding the study.

Autism Spectrum Disorder and Challenging Behavior

Estimated prevalence of ASD has increased in recent years in part due to broadening diagnostic characteristics, increased surveillance, and public awareness (Croen et al., 2002; Worley & Matson, 2011; Zeidan et al., 2022). The Centers for Disease Control and Prevention (2023) reported prevalence of ASD among 8-year-olds in the United States is 1 in every 36 children. According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed; DSM-5; American Psychiatric Association, 2013), ASD is characterized by persistent deficits in social communication across multiple settings and restricted, repetitive behaviors by repetitive movements, specific interests, insistence on sameness, and/or hyper- or hyporeactivity to sensory stimuli. Additionally, these characteristics must be present in the developmental period, must not be better explained by other disabilities, and must cause clinically significant impairment to

one's daily functioning (American Psychiatric Association, 2013). Additionally, individuals with ASD are at an increased risk for a number of co-occurring conditions including attention deficit/hyperactivity disorder, anxiety disorders, depression (Micai et al., 2023), and externalizing challenging behavior such as aggression, prolonged tantrums, and self-injury (Hendrix and O'Brien, 2022; Horner et al., 2002; Machalicek et al., 2016; Reyes-Martín et al., 2022). Among individuals with intellectual and developmental disabilities (IDD), prevalence rates of challenging behavior range from 40-60%; when assessing prevalence for only autistic individuals in these samples, prevalence rates increase up to 90% (Reyes-Martín et al., 2022; Simó-Pinatella et al., 2019).

Challenging behavior, sometimes referred to as disruptive, problem, or externalizing behavior, has been defined as behavior that may result in exclusion from community settings or increased risk of serious or life-threatening harm (Emerson and Bromley, 1995; Emerson et al., 2001). While this definition provides a foundational framework, determining whether a behavior is “challenging” requires consideration of the individual's developmental levels as well as their personal and familial cultural values, beliefs, and biases (Adams et al., 2024; Division for Early Childhood, 2017; Machalicek et al., 2016; McGuire et al., 2022). For example, Latin American families may hold different culturally rooted expectations regarding which child behaviors are considered problematic compared to Western cultural contexts (McGuire et al., 2021). Moreover, a behavior that is developmentally typical in early childhood may be regarded as challenging when displayed by an adolescent. Nevertheless, the overlapping criterion across definitions of challenging behavior is the degree to which the behavior contributes to risk of exclusion or harm for the individuals or others in the community.

Impact of Challenging Behavior on Self

Challenging behavior, if left unaddressed, may directly or indirectly affect the individual engaging in the behavior. Research shows the longer these behaviors occur, the greater the impact on the child's developmental trajectory. This may include impacts on physical, mental, and social wellbeing (Adams et al., 2024; Conroy et al., 2005; Hendrix and O'Brien, 2022; Machalicek et al., 2016; Reid and Patterson, 199). In a study completed by Mandell (2008), a survey of 760 families of autistic children reported more than 10% of children had been hospitalized; those who were hospitalized were more likely to have engaged in self-injurious or aggressive behavior. Additionally, Schott and colleagues (2022) found among children who had emergency hospital visits, autistic children more often presented for psychiatric conditions with older children with autism having higher presentations of intentional self-harm compared to a random sample.

In addition to increased risk of inpatient hospitalizations, autistic children and their families experience higher healthcare costs associated with challenging behavior (Carbone et al., 2015; McMaughan et al., 2022). When comparing costs among autistic patients, patients with chronic conditions, and patients without chronic conditions, average weighted total charges per stay of \$17,015—approximately \$2,000 more than children with chronic conditions (\$14,962) and \$3,000 greater than children without chronic conditions (\$13,959; Carbone et al., 2015).

Beyond healthcare utilization, challenging behavior may impact one's social and academic trajectory. Research has reported that children with autism who exhibit challenging behavior have a higher rate of school suspension, expulsion, and academic exclusion than their peers without disabilities (Hendrix and O'Brien, 2022; Krezmien et al., 2006; Meek et al., 2020;

Stanforth and Rose, 2018). These exclusionary practices implemented in response to challenging behaviors increase the risk of academic failure, social exclusion, police contact, and further involvement with the criminal justice system (Christiani et al., 2015; Liston, 2022; Hendrix and O'Brien, 2022; Tint et al., 2017; Turcotte et al., 2018). Without appropriate intervention, these developmental and behavioral health challenges can persist and worsen over time, presenting barriers to a child's progress across developmental domains (Landa, 2018; Fuller, 2019; MacNaul and Neely, 2017; Reid and Patterson, 1991).

Impact of Challenging Behavior on Family

Challenging behavior may affect not only the individual, but also the immediate and extended family/community members (Adams et al., 2024; Argumedes et al., 2018; Doubet and Ostrosky, 2015; Hendrix and O'Brien, 2022; Iadarola et al., 2018; Korbut et al., 2020; McGuire et al., 2022; Scherer et al., 2019; Vasilopoulou & Nisbet, 2016). When comparing stress levels between parents of autistic children to parents of non-autistic children and children without disabilities, parents of autistic children reported higher levels of stress than the other two parental groups (Blacher and McIntyre, 2006; Estes et al., 2013; Hendrix and O'Brien, 2022).

In a qualitative study, Doubet and Ostrosky (2015) interviewed families of children with persistent challenging behavior. Parents discussed having increased levels of global stress (i.e., stress related to home, childcare, work, and other environments), reduced self-efficacy regarding their parenting skills, heightened social isolation, and feelings of inadequacy exacerbated by comments made by other parents, family members, and childcare providers (Adams et al., 2024; McGuire et al., 2022). Multiple studies have mirrored these notions with family members

commonly reporting higher levels of stress, depression, and dysfunction (Argumedes et al., 2018; Scherer et al., 2019; Sikora et al., 2013; Vasilopoulou and Nisbet, 2016).

These detrimental effects of challenging behavior are cyclical and bidirectional: caregiver stress and depression contribute to increased levels of child challenging behavior, which in turn heightens caregiver strain (Karst and Van Hecke, 2012; Rezendes and Scarpa, 2011). When considering the complex relationship challenging behavior has with the individual, their family, and community, it is imperative that efforts to disrupt the deleterious cycle include a view of the individual exhibiting challenging behavior in a holistic manner. Interventions aimed at addressing challenging behavior should carefully consider the communicative function of the behavior while also providing natural change agents (e.g., caregivers) with effective strategies to decrease these behaviors. Additionally, it is important to emphasize ecological factors and ensure that intervention approaches are culturally aligned with the priorities of the family.

Evidence-Based Practices for Behavior Intervention

Numerous evidence-based strategies are available to effectively address challenging behavior (Chung et al., 2024; Matson et al., 2011; Monaco and Wolfe, 2018; Randall et al., 2017). Currently, evidence-based practices most often recommended for the treatment of challenging behavior include the use of positive behavior intervention, utilizing strategies rooted in applied behavior analysis to focus on teaching alternative behaviors that serve the same function as the current challenging behavior (Machalicek et al., 2016; Matson et al., 2011). The goal of behavioral interventions is to increase the use of alternative, alternative behaviors while reducing the use of challenging behavior (Matson et al., 2011). The behavior interventions are designed using a functional behavior assessment where direct or indirect (sometimes both)

methods of observation of the target behavior occur to inform the development of a behavior hypothesis. The behavioral hypothesis, guided by observational data, delineates the function of the target behavior (e.g., access, avoidance, attention, automatic reinforcement).

The “gold standard” of assessing challenging behavior includes implementation of an experimental functional analysis prior to intervention to experimentally prove the operant function of the targeted challenging behavior. Experimental functional analyses include multiple trials in which professionals systematically arrange and manipulate environmental variables (establishing operations, discriminative stimuli, consequences) within a single case multielement design in attempts to elucidate the communicative function(s) of the child’s target challenging behavior. Depending on the rate or latency to child behaviors occurring during each trial and across social conditions associated with the occurrence of challenging behavior in natural settings, the operant function of the behavior can be deduced through visual analysis of the magnitude and consistency of separation between each condition’s series on a line graph. Experimental functional analysis conditions seek to model the naturally occurring social conditions during which the child engages in challenging behavior; thus, conditions vary in their design (i.e., establishing operation, discriminative stimuli, consequences) as do the condition related stimuli designed to assist the client in discriminating between conditions. However, traditionally, the trials have commonly included tangible, attention, demand, minimal attention (or alone supervised through a one-way mirror), and play conditions (a control condition during which we would not expect to observe target challenging behavior; Iwata et al., 1982). Each of the test conditions corresponds to the operant functions of positive reinforcement in the form of access to tangible items contingent on target challenging behavior or adult attention contingent

on target challenging behavior (tangible and attention conditions, respectively), negative reinforcement in the form of escape from demands the child finds difficult or undesired contingent on target challenging behavior (demand conditions), and automatic reinforcement (minimal attention or alone condition) (Iwata et al., 1982).

In multiple meta-analyses of behavior intervention for target challenging behavior, authors found that the effect size for interventions that were function-based (i.e., preceded intervention with a functional analysis) was greater than the interventions that did not assess intervention prior to starting services (Campbell, 2003; Harvey et al., 2009; Heyvaert et al., 2014); behavioral interventions, regardless of inclusion of pretreatment functional analyses, were on average effective in reducing challenging behavior for autistic individuals (Heyvaert et al., 2014; Lory et al., 2020). However, the specialized knowledge, and time and resource cost required to complete an experimental functional analysis can be prohibitive in community settings.

Indirect functional behavior assessments are also indicated and considered effective in determining the function of a behavior, particularly for mild to moderate challenging behavior where potential mistakes in hypotheses regarding the operant function(s) of the target challenging behavior can be tolerated. In these indirect functional behavior assessments, the behavior is observed, and semi-structured interviews or assessment scales are completed with individuals who are most familiar with the child and their behavior (Healy et al., 2013).

In recent years, pretreatment functional behavior assessment, sometimes including experimental functional analysis, is the standard practice in selecting and individualizing intervention to decrease challenging behavior and increase alternative behavior (Iwata et al.,

1982; Heyvaert et al., 2014; Matson et al., 2011). Once the function(s) of the target behavior is determined, intervention strategies corresponding with the function of the behavior is selected. In addition to considering behavior function, intervention strategies may be selected to consider available resources and client preference. A growing list of intervention strategies have been recognized as evidence-based practices to support autistic children with challenging behavior including but not limited to antecedent-based intervention, prompting, social narratives, modeling (face-to-face or video delivery), direct instruction, differential reinforcement, and functional communication training (FCT; David et al., 2016; Steinbrenner et al., 2020). While these are a selected few strategies that have been indicated as effective and appropriate through experimental analysis and replication, they are often delivered in conjunction as a treatment package, which has the potential for compounded positive effects. For example, the Pyramid Model is a conceptual framework commonly used in early childhood settings to guide teaching children social, social-emotional, and behavior skills (Hemmeter et al., 2021). The Pyramid Model takes multiple evidence-based practices and combines them to implement using a tiered approach with universal supports being at the foundation of the framework and increasing levels of support as the pyramid becomes more individualized based on needs. In a study completed by Hemmeter and colleagues (2016), a randomized control trial (RCT) of 40 teachers and 104 focal children at elevated risk for behavioral challenges showed that teachers who were trained in the Pyramid Model practices had students with fewer challenging behaviors and better social skills compared to the treatment as usual group. Spanning several decades of research and with the creation of quality standards (What Works Clearinghouse; National Clearinghouse on Autism Evidence and Practice; Council for Exceptional Children standards) for studies determining

intervention efficacy, several evidence-based practices have been identified with several practices regularly informed by and used in behavior intervention.

At the advent of behavior interventions to support challenging behavior for children with autism and other developmental disabilities, professionals such as therapists and behavior analysts were most often delivering intervention considering the level of training required to reach fidelity. However, a large and growing body of literature spanning the last few decades suggests that intervention can be equally effective when delivered by a trained family member (Chung et al., 2024; Conrad et al., 2021; Machalicek et al., 2022; Oono et al., 2013; Reichler, 1971; Schopler and Tarver et al., 2019) while also decreasing parent stress and improving family quality of life (Chung et al., 2024; Jones et al., 2017). Using family-mediated behavior intervention, targeted behavior outcomes can be achieved across domains while also teaching caregivers skills that promote long term acceptance and use of positive behavior strategies (Conrad et al., 2021; Denusik et al., 2024; Shalev et al., 2020).

Family-Mediated Behavior Interventions

Given the pivotal role that caregivers serve in the daily activities of children, family-mediated interventions (FMI) have become a vital extension of function-based approaches for children with ASD. The current study uses the term “family-mediated” to refer broadly to interventions in which caregivers implement behavior support strategies with the assistance of a professional. FMI involve a trained professional (e.g., therapist, Board Certified Behavior Analyst [BCBA]) serving as a coach to teach a member of the target child’s family how to implement various strategies that are selected to support the needs of the child. While the behavior strategies selected for the child remain the same (with minor changes in some cases),

additional approaches are used to train family members. This may include: a) behavior skills training where the coach shows family members how they can engage in strategies to support their child with included coach-family role plays and feedback, b) active coaching where feedback is provided synchronously on targeted skills, and/or c) the use of a manualized training package. Coaching may occur face-to-face or, more commonly, via telehealth; telehealth strategies have gained substantial evidence as its use was initially developed for families in rural areas with few resources and increased during the COVID pandemic (Machalicek et al., 2015; Machalicek et al., 2022; Ralston et al., 2020; Sato et al. 2022; Tsami et al., 2019).

A number of meta-analyses have tested the efficacy of studies using FMI (also described as parent-mediated intervention, parent training, behavioral parent training) to decrease challenging behavior. Specifically, Conrad and colleagues (2021) reviewed studies that used FMI to reduce parent-rated disruptive behavior. In 30 relevant RCTs including 1,934 participants, researchers calculated a moderate effect size ($d = 0.55$, 95% CI [0.36, 0.74]) for the effect of FMIs on parent-reported disruptive behavior. In a similar vein, Tarver et al. (2019) and Cheng et al. (2023) found moderately strong effect sizes ($d = 0.67$ 95% CI [0.49, 0.85], $g = 0.52$ 95% CI [0.45, 0.65], respectively) among 11 and 51 RCTs, respectively. When considering acceptability of FMIs, one study (Denusik et al., 2024) completed interviews with 21 caregivers who had recently completed an FMI on communication skills in children with autism to collect perspectives on the intervention. Caregivers reported that compared to decreased stress and increased knowledge on special education vocabulary, the most important outcome was the positive impact the intervention had was the gains in caregiver skills to support their child (Denusik et al., 2024).

While the acceptance of FMIs has been reported extensively in the literature, adherence barriers persist for families involved in behavioral intervention. In reviews of behavior parent training, a core approach to FMI, researchers reported caregiver engagement as a significant barrier to intervention (Bajewa et al., 2021; Chacko et al., 2016). Numerous scholars have repeatedly noted families of children who engage in challenging behavior have lower rates of enrollment in FMI, enroll in treatment but never attend, or do not engage in within-session or between-session activities (i.e., homework, practice). These barriers are emphasized in families who have greater levels of adversity (i.e., parental conflict, low self-efficacy, stigma related to disability and treatment, caregiver mental health/high caregiver stress; Baweja et al., 2021; Chacko et al., 2008; 2009; 2016; Fernandez et al., 2011; Jukes et al., 2024; Peters et al., 2005) and families who have competing demands (i.e., work, schedules, childcare responsibilities, illness, caregiving for other relatives; Jukes et al., 2024). While cultural adaptations of FMI may help mitigate engagement barriers related to coach and intervention characteristics, it is important to also consider the challenges that extend beyond cultural factors.

In testing the effect of FMIs on the reduction of challenging behavior, two studies (Bearss et al., 2018; Kuravackel et al., 2018) used a manualized training package to work with families. Kuravackel and colleagues (2018) tested the delivery of a parent-mediated intervention focused on challenging behavior. C-HOPE alternated between individual and group sessions utilizing parent-to-parent communication and direct instruction from professionals to teach behavior intervention strategies and reduce caregiver stress levels. Using a pre/posttest control group design, investigators used C-HOPE, a face-to-face or telehealth 8-week behavior intervention program for families in rural communities, to train 33 caregivers to reduce their

child's challenging behavior. Following intervention, parents who were in the C-HOPE condition reported a reduction in parenting stress, an increase in self-identified competence, and a significant reduction in child challenging behavior compared the control group ($d = 0.71$, 95% CI [-30.36, -3.82]; Kuravackel et al. 2018). This was also observed with a large effect size for child challenging behavior when comparing those who received the intervention via telehealth compared to caregivers in the waitlist condition ($d = 0.99$, 95% CI [-42.66, -7.45]). Using a different intervention, Bearss and colleagues (2018) used RUBI, a manualized parent training package delivered via telehealth to 13 families with children 3-8 years old in rural communities. The intervention used in this study includes 13 core sessions focusing on teaching caregivers behavior strategies (e.g., antecedent interventions, consequence strategies, teaching alternative behaviors) to reduce challenging behavior and two optional supplemental sessions (selection from toileting, feeding, sleep, time out, imitation, and point charts; Bearss et al., 2018). Strategies used to teach caregivers the required skills included using a mix of direct instruction, video modeling, and practice activities. Using these strategies, caregivers achieved 98% fidelity by the end of the study (24 weeks) and there were statistically significant reductions on the irritability subscore of the Aberrant Behavior Checklist (ABC; Aman and Singh, 1985) and improvements on parent-reported noncompliance in the home (Home Situations Questionnaire – ASD; Chowdhury et al., 2016) with large effect sizes (1.25, 0.86, respectively) Other subscales of the ABC ranged from medium (0.49, ABC Stereotypies) to large (0.76, ABC Withdrawal). These two studies tested the efficacy of FMI with rural populations and mirrored results of various studies observing FMI and child challenging behavior.

Targeting family members as the change agents in behavioral intervention has numerous benefits to child and caregiver outcomes. The implementation of FMI holds the benefit of having generalization and maintenance strategies baked into them; the intervention agent (i.e., family member) spends the most time with the individual and therefore the child is given access to practicing/learning the skill in multiple settings with different family members (Estes et al., 2014; Machalicek et al., 2022). FMI offers caregivers to learn skills to support their child's behavior, thus reducing barriers to service access for those in marginalized populations or in resource-scarce communities (e.g., rural communities, countries where services are not yet available). Additionally, benefits of behavior intervention can be boosted due to the increase in intervention dosage if the child is also receiving services in other environments. FMI may reduce the financial cost associated with practitioner-delivered intervention or pharmacological intervention (Machalicek et al., 2022). Effective FMI not only has a desired impact on child outcomes (Cheng et al., 2023; Conrad et al., 2021; Tarver et al., 2019;) but may also increase caregiver self-efficacy and confidence levels while also decreasing stress, therefore disrupting the aforementioned bidirectional cycle between caregiver stress and child challenging behavior (Estes et al., 2014; Machalicek et al., 2022).

Unfortunately, although effective interventions exist, they are not readily available or accessible to all families. Furthermore, interventions available to these families may lack alignment with family routines, values, and prioritized outcomes; this mismatch can impact overall fidelity and acceptability. Significant health disparities continue to exist for autistic children and their families from minoritized racial and ethnic groups (Centers for Disease Control and Prevention, 2014; Lim et al., 2020; Pedersen et al., 2012). This service gap calls for

the intentional inclusion of culturally and linguistically diverse (CLD) populations to be implemented with a focus in increasing accessibility both physically and contextually.

Delivery of Family-Mediated Interventions with CLD Populations

There is a dearth of intervention research including families of autistic children from CLD families, immigrant families, and lower socio-economic backgrounds (Carr & Lord, 2016; Keller-Bell, 2017; Lim et al., 2020; Morrier & Gallagher, 2012; Travers et al., 2014; Valicenti-McDermott et al., 2012) therefore limiting the generalizability of the goals, procedures, and outcomes of current practices for families who are CLD. Families from CLD backgrounds experience specific challenges unique to their identities; research has reported existing barriers affecting accessibility of special education and ASD services to CLD families.

Research within and outside of the realm of autism services reports the numerous healthcare barriers experienced by families who are CLD and/or immigrants. Lim and colleagues (2021) reviewed existing literature on barriers to autism services for immigrant parents of autistic children and compiled the most commonly reported barriers. The most noted barriers were a) long wait times for services, b) language barriers between parents and service providers, and c) limited literacy on health services (Lim et al., 2021). Of these barriers, authors noted that the latter two were more likely to be directly related to being an immigrant while the first is a common barrier across backgrounds. These two barriers may dually affect families with incongruence in language serving as not only a barrier to autism services but also a barrier to the development of health literacy (Ding and Hargraves, 2008; Kreps and Sparks, 2008; Lim et al., 2021). Additionally, parent reports of language barriers have been associated with a decreased likelihood of establishing social and communication skill objectives for children from these

families, as well as a reduction in the number of service hours provided (Lim et al., 2021; St. Amant et al., 2018). Lim et al. (2021) pose that in these instances parents may not be comfortable or able to advocate for relevant goals or additional services for their child considering the language barriers.

Additional studies (Chlebowski et al., 2018), reviews, (Rios and Burke, 2021), and book chapters (Kumpfer et al., 2017) considered barriers to autism services for Latin American families specifically, suggesting cultural divergence as a significant barrier to the development of positive therapeutic alliances between parent and provider, positive special education experiences, and strong family-school partnerships. Across studies, families reported that the lack of cultural convergence between family members and providers resulted in facing additional structural barriers such as placement in a culturally unresponsive school and/or a school that was inadequately prepared to help families navigate through autism services (Kumpfer et al., 2017; Rios and Burke, 2021; Salas, 2004). Families had reported having limited communication with teachers since communication typically occurred through an interpreter rather than directly with special education providers (Kumpfer et al., 2017; Rios and Burke, 2021; Zetlin et al., 1996;). CLD families' participation in FMIs can be as low as 10% when intervention is not delivered in their preferred language or if it is incompatible with their culture (Kumpfer et al., 2002; Kumpfer et al., 2017). Racism, discrimination, and stigma was reported across Latina mothers attempting to access services for their child; mothers reported having their concerns dismissed and reduced to overreactions, and having their cultural values disregarded and, in some cases, disrespected (McHatton and Correa, 2005; Shogren 2012; Rios and Burke, 2021). These perceptual and cultural differences between caregivers and professionals clearly impacts numerous families

from CLD and immigrant backgrounds, with divergent expectations and assumptions (in some instances explicit racism) at play (Chlebowski et al., 2018; Rios and Burke, 2021). A recommended pathway to amend this discrepancy is to consider the cultural adaptation of existing resources and interventions to create positive experiences with schools and autism providers (Kumpfer et al., 2017).

Most FMIs were created and designed for English-speaking families and later adapted for the use with non-white families (Kumpfer et al., 2017; Van Ryzin et al., 2016). Considering the barriers to service engagement that families from CLD backgrounds face, the creation of resources and services fit for their values and priorities may positively impact their experiences with service systems. While it must be a minimum to adapt intervention to be delivered in a preferred language to the family (Kumpfer et al., 2017), implementation scientists have long debated whether the content of existing interventions should be adapted to better fit CLD families. It should be stated that cultural adaptations must avoid changing the core content of the intervention as this may impact the measure and interpretation of implementation fidelity (Castro et al., 2004).

In contrast, some have recommended that intervention must be delivered exactly as designed to preserve the initially tested fidelity; the intervention should be implemented exactly as it was designed regardless of whether it was designed with/for individuals from diverse populations. This debate is ongoing with multiple meta-analyses of culturally adapted interventions presenting as more effective than non-adapted interventions in some cases (Benish et al., 2011; Mejia et al., 2017; Sundell et al., 2015) and adaptation of interventions having null results in other analyses (Gardner et al., 2015; Mejia et al., 2017). One study in particular tested

the cultural adaptation of the Strengthening Families Program, a prevention-based intervention for high-risk families (i.e., families at risk of low mental health, substance abuse, family conflict) and found that while the adapted intervention was still as effective as the unadapted intervention, recruitment and retention of CLD families improved by 40% (Kumpfer et al., 2002; Kumpfer et al., 2017). It is important to acknowledge these studies extend beyond autism interventions; nevertheless, the included studies in these analyses are exclusively FMIs. While data from the existing meta-analyses is currently inconclusive, Mejia and colleagues (2017) present a rationale to view the practice of cultural adaptation as “both-and,” rather than “either-or” (i.e., include the core of the intervention while adding recommended adaptations versus either adapting or implementing it unchanged). The recommended “both-and” approach by Mejia and colleagues (2017) is commonly used when culturally adapting studies across CLD populations; cultural adaptations should consider both the implementation fidelity of the selected study while also remaining culturally sensitive to the families to which they are delivered.

Considering these unique challenges that present in supporting families from CLD backgrounds, development of interventions that are designed with cultural, contextual, and personal differences in mind may reduce access and outcome disparities for CLD families. While disparities exist across racial and ethnic backgrounds, research has long reviewed the specific obstacles in the Hispanic/Latine community. Families from Hispanic/Latine backgrounds are particularly at risk of facing barriers while being one of the fastest growing demographics in the United States.

Hispanic/Latine Population and ASD

The Hispanic population is one of the largest and fastest-growing demographics in the U.S., having reached a record of 62.1 million in 2020 (PEW Research Center, 2021). When compared to white children, Hispanic/Latine autistic children and other developmental disorders remain underdiagnosed and underserved. Several studies have reported the under-identification, late diagnosis age, intervention access issues, and lack of culturally aligned resources for Hispanic/Latine children with autism (Carr & Lord, 2016; Keller-Bell, 2017; Morrier & Gallagher, 2012; Travers et al., 2014; Valicenti-McDermott et al., 2012). Hispanic/Latine cultures pose a unique challenge when delivering FMIs due to significant incompatibilities between the Western/white and Hispanic/Latine cultural values. In Western cultures, individualism is highly valued; creating one's identity and sense of self is largely built by separating from family. Hispanic/Latine cultures, across nationalities (e.g., Mexican, Cuban, Puerto Rican), share not only similarities in language, but also in cultural values such as family (*familismo*) and social support (*personalismo*; Bernal & Domenech Rodríguez, 2009). In *familismo*, interdependence is emphasized rather than independence while *personalismo* states that social supports, both personal and material, hold great value (Bernal et al., 2006; Bernal and Domenech Rodríguez, 2009). As these values, particularly *familismo*, not only diverge but are incompatible with Western values of independence, cultural adaptation becomes far more necessary.

Considerations for Supporting Hispanic/Latine Families

Several promising avenues exist to reduce racial/ethnic disparities in autism diagnosis and intervention. Among them include understanding cultural aspects, using reflective practices

to create a collaborative relationship with family and community members, focusing on family support, and adjusting the theoretical framework used in the development of intervention (Bernal & Saez-Santiago, 2006; Lopez et al., 2020). When adapting intervention for Hispanic/Latine families, researchers must take specific aspects into consideration. Multiple researchers have put forth frameworks and methods to guide these adaptations. Bernal and colleagues (1995; Ecological Validity Model; EVM) and Resnicow and colleagues (2000; Cultural Sensitivity Model; CSM) have both created guiding frameworks and recommendations to adapt interventions with Bernal's framework built specifically for individuals from Latin American backgrounds. A concept represented in most frameworks is the need for both surface-level and deep structural changes to the intervention. Resnicow and colleagues (2000) recommend that first, changes to the surface structure must be targeted; the language, audiovisual characteristics (e.g., people, places, food, music, etc. used in the intervention) must be changed to fit the target demographic. These surface structure changes may increase recruitment and retention of individuals. Deep structure changes follow surface structure changes. Bernal's EVM recommends that within these deep structural changes, eight different elements should be targeted: language, persons, metaphors, content, concepts, goals, methods, and context (Bernal and Saez-Santiago, 2006). This framework has been used in the adaptation of various programs across both clinical and school settings (Peterson et al., 2017). Refer to Table 1 to view each EVM dimension with relevant examples.

Table 1*Ecological Validity Model (EVM) and corresponding intervention adaptations*

EVM Element (Bernal and Saez-Santiago, 2006)	Example component of Intervention Addressed
Language	Translation of materials if necessary, considering cultural nuances (e.g., regional and cultural differences)
Persons	Acceptance of deeper family relationships throughout intervention development, providing more constant support and assistance
Metaphors	Inclusion of Spanish idioms and symbols of culture within resources
Content	Consideration of cultural knowledge from provider during assessment, treatment planning, and intervention
Concepts	Presentation of the behavior intervention plan and coaching sessions in a clear, collaborative manner; congruent with cultural expectations
Goals	Reviewing both intervention and cultural goals of intervention for the individual considering values, customs, and tradition
Methods	Development of functional behavior assessment and behavior intervention plan matched with Hispanic/Latine culture, focusing on the use of language
Context	Consideration of social, economic, and political differences within cultures throughout intervention (i.e., immigration, financial stability, deportation)

Review of Key Literature

While some interventions focusing on autism have been simply adapted to fit other cultures (i.e., translation of materials, adjusting recruitment and retention strategies), relatively few interventions have been reformed to not only align with the culture linguistically but holistically as well. The systemic inequities experienced by Hispanic/Latine populations underscore the need for behavior interventions that are not only evidence-based but also

culturally responsive to the lived experiences of Hispanic/Latine families. The development of culturally adapted autism interventions is necessary considering the differences in values, priorities, and perspectives between Western and Hispanic/Latine cultures.

Cultural Adaptation of Evidence-Based Practices for Hispanic/Latine Families

Few interventions have been specifically adapted or developed for Hispanic/Latine autistic children (Ratto et al., 2016; Safer-Lichtenstein et al., 2019). Emergent interventions that include a focus on addressing challenging behavior include a culturally informed psychoeducation program for Hispanic/Latine families raising children with autism (Parents Taking Action; Lopez et al., 2019; Magaña et al., 2020; 2017) and a culturally adapted parent-child interaction intervention focused on parent involvement and prosocial skills, and the reduction of challenging behavior (Parent Management Training, The Oregon Model; Parra-Cardona et al., 2022). Both interventions considered the elements of EVM, which considers an individual only in the context of their own family.

Parents Taking Action (PTA) was developed in 2019 by Magana and colleagues and was designed specifically as a culturally informed psychoeducation program for Latine mothers raising autistic children (Magaña et al., 2017). The creation of PTA included collaborating with Latine families with autistic children to determine how to create a psychoeducation program that would most appropriately serve mothers in the Hispanic/Latine communities. A task force was used to inform and identify recommendations to reduce disparities in ASD by race, ethnicity, educational background, and socioeconomic status (Lopez et al., 2019). This task force put an additional emphasis on linguistic competency from those delivering instruction, flexibility and creativity in the services provided, overall partnership with those consuming the program (e.g.,

families, community-based organizations), and the collection of data on equity and diversity issues (Lopez et al., 2019). Taking the recommendations from those impacted by the development of the program, PTA was designed to address disparities for Latine autistic children and their families, specifically their mothers (as the inclusion of maternal supports in childcare is culturally relevant). Considering the importance of maternal care for childcare supports of autistic children, PTA included *promotoras*, who served as native Spanish speakers to create a nonjudgmental, safe environment for Latine mothers to attend PTA sessions. *Promotoras* were mothers of autistic children in the community who were identified as having leadership qualities and were fluent in reading, writing, and speaking in Spanish. The use of *promotoras* was decided based on previous literature supporting the practice as cost-effective and appropriate for increasing parent involvement in program and overall positive parent behaviors. The inclusion of *promotoras* also ensured that the delivery of instruction would be culturally congruent with the Hispanic/Latine community, focusing on including cultural values and culturally appropriate goals specific to both the child and family (Lopez et al., 2019; Magaña et al., 2017; Magaña et al., 2020). Parents Taking Action (PTA) has since been culturally adapted and implemented with Black parents of children with autism (Dababnah, et al., 2021), Chinese Americans (Xu et al., 2023), and Diné (Navajo) parents of children with autism (Lindly et al., 2023) suggesting generalized necessity for adaptation across cultural backgrounds.

Studies utilizing PTA (Dababnah et al., 2021; Lindly et al., 2023; Xu et al., 2023) took similar approaches to adaptation beginning with collaboration with key stakeholders in the community. All studies implemented multiple meetings with parents, caregivers, professionals, and/or self-advocates (only Dababnah et al., 2021) with two studies utilizing both community

advisory board meetings and individual meetings with stakeholders (Dababnah et al., 2021; Lindly et al., 2023). Xu and colleagues (2022) and Lindly and colleagues (2023) took guidance from the EVM to culturally adapt PTA whereas Dababnah et al. (2021) used the SHARP framework to adapt PTA for their respective communities. Where EVM looks to culture to adapt interventions, SHARP also considers the impact of structural and historical oppression although both were designed to adapt interventions for marginalized communities. Based on community feedback, all three studies retained the implementation of intervention by an individual with a shared identity and understanding of their culture/experience. Further, all three studies edited PTA to increase levels of psychoeducation, address misconceptions about autism, include common experiences in vignettes, and adjust language (translate and/or edit tone and terminology used) to reflect cultural priorities. While the authors of the included studies have yet to report the results of the adapted interventions, the qualitative analysis of the acceptability and revision of an existing FMI provides insight across cultures and races of the need for cultural adaptation.

While PTA focused on psychoeducation of parents (primarily mothers), other interventions have emphasized teaching and observing parenting and child skills in response to intervention. Parent Management Training: The Oregon Model (PMTO), developed by Gerald Patterson and colleagues in 1975 and is based in the concept that parents are a child's first teacher. PMTO leans on teaching parents the skills they need to support their child by using positive contingencies for behavior, primarily taught by using active teaching strategies (Dishion et al., 2016; Patterson & Reid, 1975). Domenech Rodriguez and colleagues (2011) adapted this program to better fit Latine parents to support their child with behavioral challenges. Using a mix

of EVM and the Cultural Adaptation Process model (CAP; Domenech Rodriguez and Wieling, 2004), researchers completed focus groups to develop an adapted intervention for Latine families and has been implemented multiple times (Parra-Cardona et al., 2017; 2022). The adapted PMTO, renamed *Criando con Amor, Promoviendo Armonia y Superacion* (CAPAS; *Raising Children with Love, Promoting Harmony and Self-Improvement*) has been delivered with 174 families across two studies (Parra-Cardona et al., 2017; Parra-Cardona et al., 2022) with reported improvements in child outcomes in both studies. In 2017, Parra-Cardona et al. tested CAPAS with an additional culturally relevant component focusing on immigration-related challenges and discrimination in the midst harsh deportation legislation (CAPAS-Enhanced). When testing with 103 families of children aged 4-12 with behavioral problems, researchers found that additional cultural adaptations further improved child behavior outcomes, reducing both child internalizing and externalizing behavior. In an additional study in 2022, CAPAS-Enhanced was tested with Latine families with adolescents between 12-14 years old with behavioral problems. Those in the CAPAS-Enhanced group reported significant improvements in both internalizing and externalizing behavior compared to those in waitlist control. These studies testing the efficacy and acceptability of various levels of culturally adapted intervention for Hispanic/Latine families with children with behavior problems further suggests the utility of cultural adaptation of existing FMI.

While there is incredible benefit in approaching intervention across developmental domains, there are needs for targeted intervention on responding to challenging behavior. As stated previously, rates of challenging behavior among individuals with IDD are higher than those without IDD (Reyes-Martín et al., 2022; Simó-Pinatella et al., 2019). Thus, it may be of

importance to focus on the availability of a behavior intervention for Hispanic autistic children and their families on an in-depth intervention focusing on challenging behavior entirely rather than as a supplemental lesson or secondary outcome. In 2022, DuBay completed a scoping review on the state of literature reporting on the cultural adaptation of interventions for Hispanic/Latine families with an autistic child. Of the included studies ($n = 21$), the majority ($n = 13$) utilized indirect strategies (e.g., mindfulness-based stress reduction, advocacy) as a mechanism for improving caregiver outcomes (i.e., stress reduction) with cascading effects on child behavior outcomes. Fewer studies ($n = 9$; one study included both direct and indirect methods) implement direct strategies (e.g., behavior skills training, other ABA-based strategies) to teach caregivers skills to support their child's behavior. Of those that take direct approaches to teaching caregiver skills, only one explicitly focused on the reduction of child challenging behaviors (DuBay, 2022).

This presents a dearth of interventions available for Hispanic/Latine autistic children who exhibit challenging behavior and their families. In this already minimal pool of interventions available to support the cultural needs of Hispanic families with autistic children who exhibit challenging behavior, there are even fewer interventions targeted in the reduction of challenging behavior. While the reduction of challenging behavior may have been reported as secondary in these interventions, greater reductions may be seen if challenging behavior is shifted to the focus of the intervention. These targeted interventions are readily available but have yet to be adapted to fit the needs of Hispanic/Latine families and their children.

Prevent-Teach-Reinforce for Families and CLD Families

The intervention used in this study was adapted from Prevent-Teach-Reinforce for Families (PTR-F), an extension of the PTR for use in schools and the PTR for Young Children designed for early childhood settings. PTR-F is a model that integrates the principles of applied behavior analysis and positive behavior supports used for children with challenging behavior (Iovannone et al., 2009). The three tenets of the model are to prevent challenging behavior, teach appropriate, pro-social replacement behavior, and reinforce. PTR-F is an individualized, family-centered model that includes identifying and defining behaviors to increase or decrease, developing hypotheses from the functional behavior assessment, creating a behavior intervention plan, and monitoring responses to the intervention (Dunlap et al., 2009) with the addition of focus on family, community, and improving family quality of life (Dunlap et al., 2018). The original, classroom-based PTR has been replicated in multiple RCTs showing that it is significantly more effective in improving the behaviors of those who received PTR compared to their peers who received typical behavior interventions. Additionally, classroom-based PTR has been demonstrated effectiveness for children with autism throughout multiple settings (Barnes et al., 2019; Strain et al., 2011). Little research and few dissertations have been completed on the implementation of PTR-F (Choi, 2023; Joseph et al., 2019; Shadbolt, 2018; Zhu, 2024); however, classroom-based PTR has been replicated and shown effective when implemented and adapted with families (Bailey and Blair, 2015; Sears et al., 2013). Published research has not been completed on the implementation of PTR-F with a Hispanic/Latine population but has been previously studied as part of student dissertation completion (Santiago, 2018) which reported

increases in child alternate behavior, decreases in child challenging behavior, and high levels of fidelity and social validity as reported by parents.

The core components of PTR-F include conducting behavioral assessments, manipulating antecedents, teaching appropriate behavior, and reinforcing consequences. PTR-F was specifically developed to be implemented in community and home settings. The philosophy supporting PTR-F states that a child is inseparable from their family and, thus, should be considered when delivering comprehensive behavior intervention (Dunlap et al., 2018). The PTR-F process closely follows other positive behavior support interventions. After the family is contacted, a team is created including family members and professionals included in the PTR-F process. In the context of this study, the team consists of an assigned coach and key family members identified in the child's life. A review of the goals of the child and their family is initiated and the overall goals of PTR-F are established. Following the initial meeting, a functional behavior assessment is completed. After completion of the assessment, the coach focuses on working with the family to set goals appropriate for the child based on the data collected in the functional behavior assessment. The coach and family then select what strategies would be most aligned to support the child and family during desired family routines. A key family member is selected to receive coaching and training; however, resources and training guides are available for additional family members. A plan for training and coaching the individual implementing the intervention (family member, caregiver) is developed (Dunlap et al., 2018).

Statement of Study Purpose

Given the documented disparities and the need for culturally responsive behavioral supports, the present study sought to adapt the PTR-F model using a community-informed cultural adaptation process to better meet the needs of Hispanic/Latine families of autistic children. The current study, “Cultural adaptation of PTR-F: A single case evaluation with Hispanic/Latine children with autism,” tested the preliminary efficacy of a culturally adapted, online intervention mediated by parents and other family members to address the behavioral support needs of Hispanic/Latine autistic children. In the initial preparation phase prior to the current study, a graduate-level research assistant and the primary investigator of the current study completed focus groups with Hispanic/Latine members of the autism community including four individuals (2 autism professionals, 1 academic researcher, 1 parent). Methods for adaptation are discussed in the following chapter and in a separate manuscript (Alvarez et al., in prep).

Current Study

The preliminary efficacy of the culturally adapted form of PTR-F was tested using a nonconcurrent single-case research multiple-probe design with three different parent-child dyads. A proposed number of six parent-child dyads was sought however, due to attrition, only three families completed study activities, excluding maintenance. In addition to completing a single-case research study, social validity and acceptability measures, and family quality of life were collected to determine the overall acceptability and feasibility of primary caregivers regarding the adapted intervention.

Research Questions

Research Question 1 (RQ1)

Is there a functional relation between implementation of a culturally adapted, parent-implemented version of PTR-F and decreased level of target challenging behavior for children with autism who identify as Hispanic/Latine?

Research Question 2 (RQ2)

Is there a functional relation between implementation of a culturally adapted version of PTR-F and increased level of target communication or other alternative behavior for children with autism who identify as Hispanic/Latine?

Research Question 3 (RQ3)

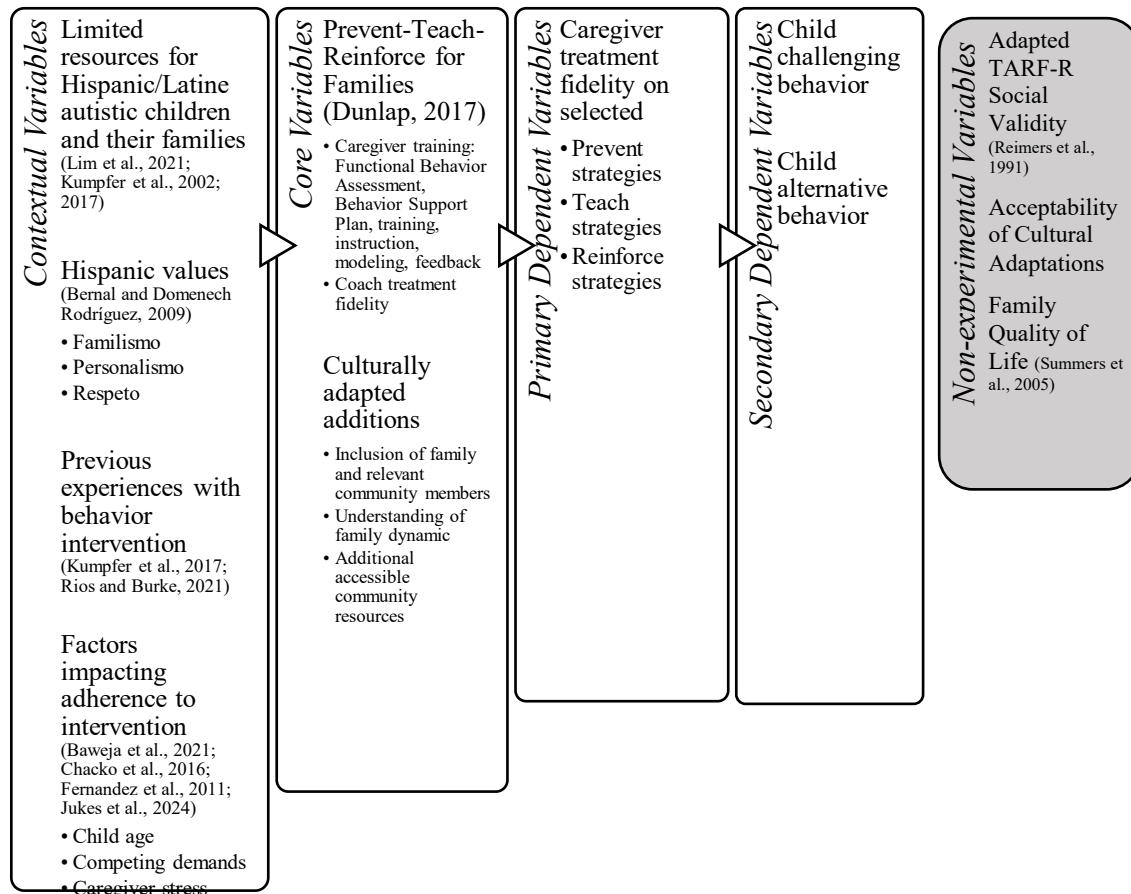
For Hispanic/Latine caregivers participating in the culturally adapted PTR-F, what are the perceptions regarding the goals, procedures, and outcomes of the intervention?

Conceptual Model

The figure below demonstrates the conceptual framework for the current study.

Figure 1

Conceptual Framework



The model illustrates the hypothesized relation between contextual factors, such as cultural background and cultural humility, and their influence on challenging and alternative behaviors observed in Hispanic/Latine children with autism and their families.

The mechanism informing this study utilizes the implementation of a culturally adapted version of PTR-F to determine its effect on behavior change. The primary change agent

identified in this study was the implementation of the culturally adapted PTR-F by the primary caregiver. The cultural adaptations to the existing intervention included: a) the inclusion of extended family/community members in the creation of the behavior support plan and initial training session (Training 1), b) the delivery of the adapted intervention by a bilingual/bicultural coach, c) the use of additional guiding materials to discuss culturally relevant family dynamics, and d) additional resources to increase the accessibility of developed behavior supports for extended family/community members. This study was funded by the Organization for Autism Research (OAR), an organization focused on applying research to address concerns of autistic people, parents, professionals, and caregivers. The organization was founded and led by caregivers of autistic children and is distinguished by its focus on research that has practical utility and meaningful outcomes (OAR, 2024). The grant funding this project (OAR Applied Research Grant) aligns with the targeted mechanism in the current study, emphasizing the importance of supporting caregivers of autistic children in developing essential skills and contributing to improved overall quality of life for families and autistic individuals (OAR, 2024).

CHAPTER II: METHOD

The following section first describes the preceding adaptation process of the targeted intervention in the current study. Following this brief description, recruitment procedures including inclusion and exclusion criteria, recruitment and retention strategies, and study attrition are detailed. Participant information such as diagnoses, demographic information, and other relevant information is reported. The setting, researcher roles, materials, and measurement methods are outlined, followed by a comprehensive overview of the study general procedures and subsequent data analysis processes. Within each section are additional subsections to further detail the components of each phase of the study.

Adaptation of PTR-F for Hispanic/Latine Families

Prior to the current study, focus groups were completed to inform the adaptation of the selected intervention. Using questions informed by the elements included in EVM and literature on cultural priorities of Hispanic/Latine communities, two focus group sessions were completed to review the unadapted PTR-F. Both focus groups were completed in English as all participants preferred speaking English. The primary facilitator (primary investigator for current study) was an intermediate-level Spanish speaker while the assistant/note-taker was a native Spanish speaker. Both facilitators were from Latine backgrounds. Sessions were audio and videorecorded for transcription and data collection purposes.

Prior to the first focus group session, all participants were sent the name of the intervention (PTR-F) and summarized information on the intervention. Participants were reassured prior reading or preparation was not required but recommended if participant schedule permitted. A link to more information about PTR-F was included for individuals who were

interested in reading more about the intervention prior to the first focus group. In the first focus group, the primary investigator reviewed the PTR-F manual and steps using a PowerPoint presentation to ensure all participants had matching baseline knowledge on the target intervention. Following the review, participants were asked questions guided by the EVM to determine the fit of PTR-F with how they were raised, how they were expected to raise their children (if applicable), how they parent/care for their children/students, the cultural impact on these experiences, and how these cultural experiences aligned with the assumptions and expectations of PTR-F.

The second focus group homed in on the intervention process in PTR-F to discuss the relevance and acceptability of PTR-F within their cultural experiences. An inductive thematic analysis was implemented whereby themes were extracted based on the magnitude and frequency of statements corresponding to each concept. Using the created themes, the primary investigator coded all transcripts to quantify the frequency of each theme and subtheme. The magnitude of each theme informed proposed changes and additions to the PTR-F manual and a list of the extracted codes and resulting proposed adaptations were presented to the focus group participants for a member check. Coding data was reported as acceptable by participants and minor adaptation recommendations were put forth by focus group members (i.e., removal of jargon, addition of question in initial meeting guide).

Present Adaptations to PTR-F

Based on feedback from Hispanic/Latine members of the autism community, PTR-F may benefit from individualized adaptations and modifications to best fit the Hispanic/Latine community. Four major themes were identified using inductive thematic analysis:

Comprehensive Integration of Cultural Humility, Meaningful Relationships with Family, Shared Identity, and Wishlist for Autism Intervention. Based on these themes, four modifications were made to PTR-F to be more culturally fit for Hispanic/Latine individuals.

Translation of All Materials.

As expected, participants expressed the need for offering all PTR-F materials and resources in the family's preferred language. Thus, all family materials and resources were translated to Spanish in a multi-step process. First, all materials were sent to a professional educational translation company (Translated.com). The primary investigator sent a list of common ABA terms translated to Spanish published by a group of Hispanic BCBAs (Virues-Ortega et al., 2015). Upon sending materials to the assigned team, the translation project manager requested further clarification on the desired level of formality for the translated materials. Materials were requested to be semi-formal with formality/tone adjusted for study materials meant for children (e.g., informed assent).

The project team at the translation company included a native translator specializing in social science translation, a social science-specialized reviser, and an individual dedicated to quality control. Once all materials were translated and returned, the primary investigator reviewed the documents as a fluent, but not native Spanish speaker. For sections that required further clarification, the primary investigator consulted with a native-speaking, dual-language administrator with over 10 years of experience positive behavior-based interventions for additional feedback. Once the initial review of all translated materials was completed, materials were emailed as a packaged file to focus group participants for additional feedback. All participants in the focus groups were native Spanish speakers involved in the autism community

(i.e., provided services for autistic individuals and/or had autistic children). Minor revisions were recommended by members of the focus groups to further simplify language used and remove jargon. Additionally, all names included in example materials were changed to culturally Hispanic names (e.g., Timmy to Isai, Jodie to Esther, Phil to Luis). The primary investigator completed final edits as recommended by focus group members.

Cultural Congruence of Coach/Family.

Throughout the focus groups, members stated multiple times the importance of cultural congruence between caregiver and coach (i.e., shared cultural identity between the two individuals). Participants recalled on instances where they felt understood by their child's provider/teacher/professional when discussing barriers and challenges specific to being Hispanic/Latine and/or an immigrant (e.g., being *tranzfronteriza*—having to cross the border daily—to access services for their child). Conversely, members spoke on the negative impact of discrimination and misunderstanding due to having a provider from a different cultural background and its ultimate contribution to a weakened therapeutic alliance. Given the importance of relationship building during FMI, recruitment prioritized the identification of fluent Spanish-speaking Hispanic/Latine individuals to serve as family coaches. With the understanding the Oregon is a predominantly white, non-Hispanic state, linguistic congruence was a minimum requirement for coaches.

Initial PTR-F Family Meeting Guide and Community BSP Summary.

While it is noted extensively in literature on the cultural values of Hispanic/Latine individuals, participants in the focus groups emphasized the necessity of cultural humility during the implementation of intervention. For example, participants reported that while they may prefer

services in Spanish or having their extended family members involved, they were aware that other Hispanic/Latine families may not share the same value. Additionally, members discussed the challenges of having separate values and priorities than extended family members, preventing them from fully participating in an FMI. Members noted that while they would like to have extended family members involved, some older family members, specifically their parents or grandparents, had not yet accepted the child's diagnosis or had reservations on positive behavior support strategies. However, the full exclusion of these extended family members led to additional feelings of isolation of primary caregivers receiving supports since the load of teaching extended family members behavior strategies lay entirely on the primary caregiver's shoulders. With limited time and resources to teach their parents or grandparents these strategies, primary caregivers may resort to further isolation.

Focus group members recommended the incorporation of psychoeducation or tiered levels of support into PTR-F; however, the development of psychoeducation modules and/or tiered levels of psychoeducation or training is currently unattainable due to limited resources and restricted timeline. To meet this need, the primary investigator developed two additional materials: a) an additional guide of questions to discuss during the initial meeting to directly and intentionally ask the primary caregiver of their family dynamics, current strategies of use, and any family-related challenges they have faced regarding the target challenging behavior and b) a separate, jargon-free BSP available to share with extended family and community members that includes information about the child's diagnosis (optional), strengths and interests, areas of support, strategies to use to support behaviors, and steps to implementing each strategy. Further, coaches completed The Classroom Check-Up Values Card Sort (VCS; Miller et al., 2001;

Moyers and Martino, 2006). The VCS is a tool used to guide a semi-structured discussion on teacher cultural values. Typically completed in school settings, professionals working to support teachers use the CVS to understand classroom values, develop relationships, and adapt consultation practices. Upon completion of the VCS, the teacher identifies a top three set of values the supporting professional can use to facilitate discussion on classroom values and goals. In the current study, the VCS was delivered using the same protocol as when implemented with teachers. Reviewing each cultural value one by one, the caregiver rated each value as “Very Important,” “Important,” or “Less Important.” After reviewing all values, the caregiver and coach reviewed all values the caregiver marked as “Very Important”, and the caregiver marked which three values were top priorities to their family. To account for online delivery, the caregiver was shown the array of values cards on the coach’s desktop using screen share during video calls. The VCS was used to build a relationship between the coach and primary caregiver and serves as a point of reference throughout the intervention in guiding the selection of strategies and understanding family dynamics.

To view a list of the changes made to PTR-F and corresponding elements of EVM, refer to Table 2.

Table 2*Cultural Adaptations and Corresponding EVM Element*

Cultural Adaptation	EVM Element	Adaptations
Translation of materials	Language	All materials translated to Spanish
	Metaphors	Jargon removed and terms included appropriate for Spanish speaking families
Cultural congruence	Language	Delivery of intervention in Spanish if needed
	Persons	All coaches Latine and Spanish speakers
Initial PTR-F Family Meeting Guide	Persons	Discussion of family dynamic and creation of team
	Content	Use of family dynamics to inform intervention procedures
	Concepts	Inclusion of family and extended members if applicable
	Goals	Development of goals relevant to cultural priorities
	Methods	Intentional questions added to existing guide to address cultural priorities/considerations
Community BSP Summary	Persons	Creation of resource accessible to extended family/community members
	Content	Key information about child and strategies in jargon-free terms
	Concepts	Presentation of strategies in visually friendly manner
	Goals	Development of goals relevant to cultural priorities
	Context	Consideration of individualized community needs and supports

Inclusion Criteria, Recruitment, Screening, and Attrition

Four families and their children with autism (educational or medical diagnosis) aged six to twelve years old who identify as Hispanic/Latine, speak English and/or Spanish and exhibit

mild to moderate challenging behavior were sought for recruitment. Additional caregiver-child dyads past 4 families were placed on a waitlist up to 6 families.

Inclusion and Exclusion Criteria

The study sought Hispanic/Latine families in the United States who had a child with autism. Families were required to report an educational or medical ASD diagnosis. Families without a confirmed diagnosis by an educational or medical professional (children at-risk, waitlisted for diagnosis) were excluded from the study and the primary investigator offered to place otherwise eligible participants on the waitlist until their child had a confirmed autism diagnosis. Eligibility required the child to exhibit daily challenging behavior as reported by the family. Specifically, families must have reported difficulty during at least one specific family routine (as the intervention targets only one routine at a time). Challenging behavior was individually defined for each child, but examples provided to families at the time of recruitment included task refusal, mild aggression, or whining and crying (Dunlap et al., 2009). Family and community members who were included were required to be 18 years old and have access to high-speed Internet. Community members were defined as individuals who did not live in the immediate physical household and/or are not in the family's self-identified immediate circle of supports. Individuals under 18 who expressed interest in learning about how to support their autistic family member/friend were provided access to additional resources developed during Phase 3 (Training; BSP finalization) of the intervention. They were also forwarded additional online and/or local resources to learn strategies or other information on having an autistic family member/friend.

Participants were required to use telehealth equipment including a laptop or mobile phone with webcam capabilities and Bluetooth audio equipment (e.g., headphones/earbuds with microphone) for weekly sessions. If participants did not have reliable, daily access to telehealth materials, they were purchased and mailed to families on loan. An introductory meeting occurred after the informed consent was completed and prior to study activities to ensure a) presence and severity of child challenging behavior during the selected routine, b) sufficient internet connection, c) quality of technology used (i.e., ensure webcam and placement), d) and initial, low-stakes introduction between child, caregiver, and coach prior to starting the intervention.

Participants were excluded if they did not meet the inclusion criteria. Children involved in the study were required to have an existing educational or medical diagnosis of ASD. Caregiver-reported diagnosis served as evidence of diagnosis and confirmatory diagnostic assessment was not completed. Daniels and colleagues (2012) have previously reported parent report of diagnosis to be fairly accurate. Children exhibiting serious or dangerous challenging behavior putting themselves at imminent risk or danger (e.g., serious self-injurious behavior or aggression, elopement from family home, pica) were either a) only included if they engaged in less severe challenging behavior or b) excluded from the current study and referred to community providers and supports in their state or region.

Recruitment and Retention Procedures

Recruitment took place through professional contacts and social media. The recruitment flyer created was shared in both Spanish and English using paid Facebook, Instagram, and Meta Audience Network advertisements focused on mothers and fathers over the age of 18 years residing in Texas, Illinois, Washington, Oregon, and Indiana areas with high numbers of

Hispanic/Latine individuals. These ads were displayed on mobile app feeds, mobile suggested videos feeds, Facebook Marketplace mobile feeds, desktop feeds, Facebook Reels and stories, and Facebook search results on mobile devices. Based on prior recruitment efforts for similar single-case design intervention studies and currently experienced difficulties recruiting Hispanic/Latine caregivers to research studies of any kind, this widespread recruitment effort was necessary and did not lead to a substantial waitlist.

In addition, school-based strategies were used for recruitment (Breitsenstein et al., 2012; McCabe et al., 2012; Magaña et al., 2020) consisting of direct referrals, online flyers, and family self-referral. School-based strategies were utilized in the state of Oregon and Illinois, as individuals on the research team had existing relationships with school districts in the areas. In Oregon, flyers were sent to local Hispanic family support groups, school districts including a Spanish immersion elementary school, local disability nonprofits, and the local county developmental disabilities services organization. In Illinois, flyers were sent to local school districts, county-wide nonprofit organizations, and local family support groups. Since study participation was entirely online, there was no geographic restriction for potential participants.

The first four caregiver-child dyads who completed the informed consent began the study activities non-concurrently. Families began the study in the order they consented to reduce risk of attrition. Any additional families expressing interest were placed on a waitlist and were added to the study non-concurrently. To further reduce the risk of attrition, families were offered flexible scheduling and were compensated for the time dedicated to the study with a \$100 gift card. Caregiver-child dyads were not included if they were actively receiving caregiver training

(direct training and coaching from a behavior/autism professional on a scheduled basis) or other support to implement an existing BSP to address the target behaviors.

Families were given a \$100 gift card upon completion of all study activities. If a caregiver-child dyad needed to withdraw from the study, their coach or the primary investigator offered an optional final session to discuss any final questions or concerns and document the reason for attrition. Per university IRB regulation, participating caregivers were given the \$100 gift card compensation at the time of study completion or after they notified a team member of their desire to withdraw (even if they did not complete all sessions).

Screening Procedures

When individuals expressed interest in the study, they were sent a Qualtrics screener to determine eligibility to participate in the study. The survey included questions confirming the name and age of the adult participant, adult pronouns, name and age of child participant, child pronouns, diagnosis, racial and ethnic identity, nationality, and preferred language and method of communication (i.e., email, telephone call, text, WhatsApp or Facebook Messenger). Questions regarding pronouns and nationality were optional and not required for participation. Eligible responders were contacted via preferred method of communication. A coach was assigned based on availability and language preference. Language preference was considered to account for strengths coaches had in each language. Although all coaches were bilingual and bicultural, they reported to the primary investigator their confidence levels in delivering interventions in Spanish, with some coaches noting less familiarity with professional and clinical terminology in Spanish. The assigned coach scheduled a meeting with the potential participant where the informed consent was reviewed, and any relevant questions were addressed.

Attrition

Attrition was anticipated due to compounding stress from (a) participating in a research study where challenging behavior was expected, (b) preexisting stress from caregiving for a child with autism, and (c) targeted political attacks against immigration and Hispanic/Latine families in the United States during the time of the study. While recruitment efforts took specific measures to reduce risks of attrition, four families either formally dropped out of the study or discontinued communication following medical challenges or scheduling difficulties. Dyad 3 (Margarita and Manuel) did not respond to multiple communication attempts following multiple session cancellations due to child sickness. Dyads 5 (Virginia and Petra) and 6 (Sol and Victor) did not respond to any forms of communication after multiple session cancellations due to scheduling difficulties. Dyad 8 (Luz and Jesús) formally withdrew from the study as the child was anticipating an increase in ABA sessions, restricting overall availability for study participation.

Participants

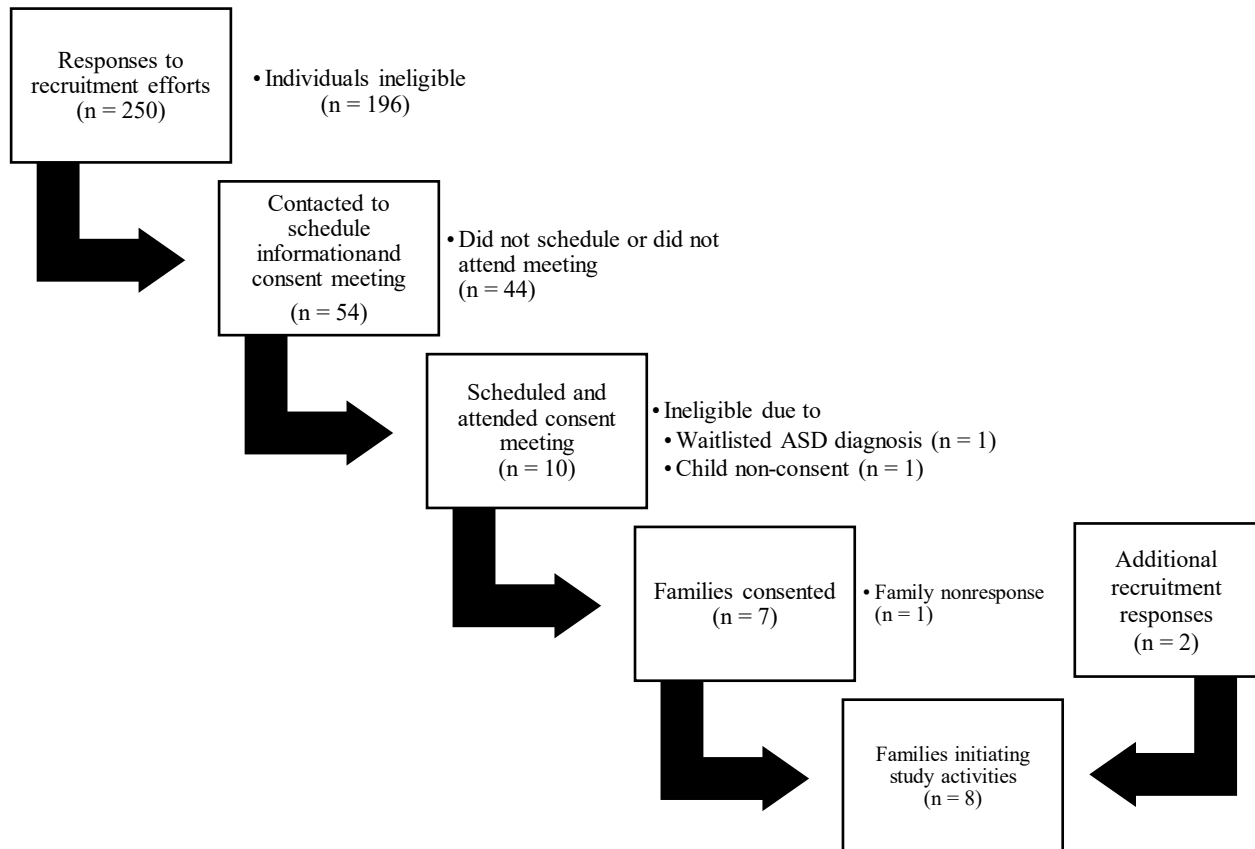
From recruitment efforts, approximately 250 individuals expressed interest. Refer to Figure 2 to view the screening process, including total number of individuals contacted and numbers of contacts at each step of recruitment. During initial recruitment phases, if the individual did not respond within a week, they were contacted an additional three times across two to three weeks. After the third attempt, the PI sent a final email stating if the individual did not respond within 48 hours, they would be assumed not interested and removed from the contact list. After completing recruitment and consent process, families scheduled their first introduction session. All participants were from the midwestern, western, and mountain areas of the United

States. The following information was gathered using the eligibility survey and questions asked in the initial meeting.

Figure 2

Recruitment and Screening Flowchart

Dyad 1: Esther (Mother) and Ramón (Son)



The first dyad consisted of Esther (mother) and Ramón (son). Esther did not have a language preference for communication; communication between Esther and her coach was in English while observations were in Spanish. Esther was in her mid-forties and used she/her pronouns. The household included Esther, her husband, her teenage daughter, and Ramón. At the start of study activities, Ramón was eight years old and used he/him pronouns.

Esther described their family dynamic as small and close knit. While the family has not had the opportunity to visit their country of origin, Ramón and his older sister call their paternal grandparents weekly and their maternal aunt and uncle bimonthly on Zoom. Esther reported that she interacts most with Ramón, but Ramón has a strong bond with his older sister. When spending time with Ramón, Esther reported they watch videos, study and learn new things together, and are physically affectionate. Ramón enjoyed playing games with his older sister and Esther reported he will often look for his sister when he needs help or feels unsafe. As a family, they watch TV together and play board games, although Esther reported it can be difficult to keep Ramón involved. The family will also play video games, visit arcades, and play outside. Esther and her husband get Ramón involved in daily chores such as taking out the trash, setting the dinner table, and washing the dishes.

Regarding cultural values from the VCS (Moyers and Martino, 2006; Miller et al., 2001), Esther ranked “Being happy,” “Taking care of my family,” and “Practicing my religious, cultural, linguistic, and/or spiritual traditions” the most important to her and her family. “Being genuine,” “Having a good sense of humor,” and “Having time for self” were ranked as less important. Esther noted family and respect to be especially important and kept her children

knowledgeable of their culture by discussing national history, practicing cultural traditions, watching videos about life in their country of origin, and food.

Following the initial meeting, Esther selected clean-up and bedtime preparation as the target routine; however, they later changed the target routine to dinner preparation for better observation of the target behavior. The collected data for the initial baseline routine is reported in current graphs but is represented as Baseline A. Esther and her family selected off-task behavior/noncompliance as the target challenging behavior. Esther reported Ramón needed support remaining engaged and on-task during less preferred activities. When Ramón was completing a less preferred task or demand, he would engage in off-task behaviors (any behaviors not matching the delivered request), resulting in disrupted engagement in the ongoing task.

Dyad 2: Vicki (Mother) and Luis (Son)

The second dyad included Vicki (mother) and her son, Luis. Vicki preferred communicating in Spanish. At the start of study activities, Vicki was in her mid-thirties and used she/her pronouns. The household was made up of Vicki and her husband, Luis, and his older brother. At the beginning of the study, Vicki was in her first trimester of pregnancy. Luis was eight years old and used he/him pronouns. Vicki, her husband, and Luis's older brother shared responsibility of taking care of Luis. Vicki reported Luis would most often spend time alone, but he would sometimes seek Vicki out if he needed something or before bedtime.

The family would discuss cultural traditions regularly and would often get together for holidays and special occasions. As a family, they would go to the park and store together and, if available, Luis's grandparents would join to assist with childcare. Vicki reported she wanted to

work toward eating together as a family, as food and mealtimes were important to the family. Vicki ranked “Taking care of my family,” “Being a good listener,” “Understanding others,” “Being a good parent,” and “Making time for my family” as highly prioritized cultural values.

Vicki described Luis as a “good kid” who had lots of enthusiasm when motivated or interested. Luis preferred playing with Legos and Duplos; Vicki reported Luis would put together structures and break them down, sometimes using a manual to replicate structures. Vicki stated Luis would request going on walks and would sometimes play on playgrounds. Luis expressed interest in cartoons such as The Incredibles and Cars. Additionally, he would watch videos related to food and soothing videos on YouTube. Luis received speech services at school but did not receive any therapy outside of academic settings. Vicki reported Luis’s teacher had previously used food as reinforcers, which did not align with the family’s wishes. Luis had a communication device he used at school, but he was resistant to using it at home, often expressing aversion if the device was visible at home.

Vicki selected taking food from others without permission as Luis’s target challenging behavior. Vicki reported that when other people (familiar or stranger) had one of Luis’s preferred foods and/or there were preferred foods in an open area (plated/served), Luis would reach for and/or take the food without permission. Vicki and her coach selected family mealtime as the target routine to observe the behavior.

Dyad 3: Margarita (Mother) and Manuel (Son)

The third dyad was Margarita (mother) and her son, Manuel. Margarita was in her late-thirties and used she/her pronouns while Manuel was six years old and used he/him pronouns. Margarita preferred all communication in Spanish. The household consisted of Margarita and her

husband, Manuel, and his two younger siblings. Margarita described her son as very athletic, often running. Additionally, Manuel liked playing with Legos, Play-Doh, and magnets. Other preferences included physical affection such as hugs, tickles, and roughhousing.

Regarding family dynamic, Margarita emphasized the importance of spending time together as a family. The family spent time together watching television, playing sports, roughhousing, visiting the local activities, and grocery shopping as a family. Manuel had a history of aggression toward his younger brothers; he maintained minimal interaction with his siblings and Margarita reported he had low peer relationships, typically self-isolating. At the time of the study, Manuel was enrolled in school but had inconsistent attendance. Aside from school, Manuel was enrolled in speech therapy, music therapy, ABA, and in-school programs such as special education services. Margarita reported ABA as the only setting that has kept services without interruption, resulting in observable change in Manuel's behavior. However, during the study, Manuel's father lost employment and, subsequently, family insurance; the family lost coverage for all therapeutic services previously covered.

Through ABA, they had learned the differences between traditional physical discipline and positive behavior strategies; the family was making efforts to use reinforcement strategies. Maintaining Spanish in the household was a high priority for both parents. Margarita reported stark contrasts between children in the United States and children in the family's home country, noting children in the United States being more independent. This was incompatible with the family's cultural values in child rearing. Some values Margarita and her husband listed as very important were being a good parent, working hard, and not giving up. "Taking time for myself",

“Being liked by others”, and “Being respected by others” were amongst the values Margarita and her husband listed as less important.

Aggression toward parents during play was selected as the target challenging behavior. Aggression was defined as (a) attempted or successful biting defined by Manuel placing his open mouth on another person and closing his teeth, (b) attempted or successful scratching defined by Manuel placing his fingernails into another person’s skin and/or moving them across person’s skin or clothing and (c) attempted or successful eye gouging defined by Manuel forcefully reaching fingers into the eye socket of another person. Additionally, he would run away from the area during play time (i.e., elopement). Elopement was defined as any instance where Manuel moved away more than five feet from his primary caregivers without caregiver permission or contextual expectation (i.e., playing tag, racing). Margarita and her husband selected outside play with caregivers as the target routine.

Dyad 4: Angelina (Mother) and Pedro (Son)

The fourth dyad was Angelina and Pedro. Angelina preferred communicating in Spanish. At the time of the study, Angelina was in her mid-forties and used she/her pronouns. The household was made up of Angelina, her husband, Pedro, and his older brother. At the time of the study, Pedro was nine years old and used he/him pronouns. The household consists of Pedro, Angelina, her husband, and Pedro’s older brother. Angelina reported Pedro would sometimes play with his brother with generally positive interactions, but Pedro would become “upset” if play was interrupted, such as when taking turns on the tablet.

Pedro has various chores around the house including cooking, cutting vegetables, and doing laundry. Angelina stated Pedro watches television and plays with Legos, but only for brief

periods of time. Pedro did not indicate a preference for any specific television show or movie. Angelina listed organization and following instructions as some of Pedro's strengths. Pedro had expressed preference for colorful visuals, arts and crafts, animal sounds, and outside play. At the time of the study, Pedro had been in ABA therapy for two years, resulting in noticeable improvement in some skills.

Angelina reported mealtime as a significant family social activity, however, Pedro often resisted eating family meals and had a strong preference for sweets. During interactions with extended family, Pedro self-isolated and reduced his engagement with others. The family was involved with community outings/crowded activities such as church and birthday parties, but Angelina reported Pedro's elopement would increase during these events. Some cultural values Angelina marked as very important to their family included having a relationship with their child, feeling safe, practicing religious/spiritual traditions, and making time for family. Three cultural values Angelina marked as less important to their family included being aware of bias, making a difference in the world, and making time for self.

Angelina selected self-injurious behavior and vocal refusal as Pedro's target behaviors and reading time as the selected routine. Self-injurious behavior was defined as successful or attempted instances of the following: (a) Pedro biting himself (e.g., hands, knees), (b) Pedro hitting himself with an open or closed hand, or (c) Pedro digging his fingernails into his skin and/or moving them across his skin/clothing. Vocal refusal was defined as any vocalizations (other than an expected response) indicating protest in response to caregiver demand (e.g., *Este dice vaca. Puedes decir va-ca?*). Vocalizations are defined as extended vowel sounds (e.g., Eeeh, aaah) louder than typical conversation level. Self-injurious behavior data was collected

throughout the study; however, rates of behavior were inconsistent and low; this data was not included in the current manuscript.

Dyad 5: Virginia (Mother) and Petra (Daughter)

The fifth dyad was Virginia and Petra. Virginia was in her early forties and used she/her pronouns. The household consisted of Virginia, Virginia's husband, Petra, and their youngest daughter. At the start of study activities, Petra was six years old and used she/her pronouns. Virginia reported Petra interacted with all members of the household and has a strong bond with her younger sister. When playing with her sister, Virginia stated that Petra liked doing arts and crafts. Petra typically took the lead in their play and across household and school activities.

Virginia and her husband were two different nationalities, and Virginia reported the family made this distinction to Petra using food. Distinguishing the two nationalities was a priority to the family, however, food and mealtimes were a reported challenge for the family since Petra had many allergies and would sometimes attempt to eat inedible items. Religious and cultural practices were a reported priority to the family, but Virginia reported Petra was sensitive to loud noises which had prevented the family from attending church services.

For family time, Virginia reported the family played games together such as Uno, bingo, Loteria (a Mexican chance board game). According to Virginia, Petra was very competitive and liked to win. Petra typically would direct family activities and made attempts to get everyone involved in play. Some of Petra's strengths, as reported by her mom, were her intelligence, curiosity, sociability, and empathy. Virginia reported her top cultural values as "Being a good parent," "Working hard," "Taking care of family," "Practicing religious, cultural, and spiritual traditions," "Having a relationship with my child," and "Making time for family." The family

preferred to speak primarily in Spanish. Virginia reported Petra had not yet received formal behavior support. She previously was in a general education setting but had been placed in a specialized school due to her elopement. Virginia reported finding local resources and implementing behavioral strategies learned from local events, but she had not received consistent, guided support specifically for Petra's behaviors.

Virginia selected tantruming as the target challenging behavior and tablet time as the target observation routine. Tantrums were defined as any of the combination of the following: (a) falling to the floor when not requested, (b) crying defined as any vocalization above normal conversational volume with or without tears, (c) screaming defined as the occurrence of vocalizations above normal conversational volume, and (d) throwing or destroying items.

Dyad 6: Sol (Mother) and Victor (Son)

The sixth dyad was Sol and Victor. Sol was in her early forties and used she/her pronouns. The household consisted of Sol, her husband, Victor's grandmother, Victor, and Victor's younger sibling. The household would interact with each other regularly and there were regular interactions with extended family members, including cousins of the same age. Sol reported that when the children would fight or cry, Victor would become visibly distressed by screaming and sometimes hitting himself. The family was bilingual and bicultural, with Victor's grandmother and Sol speaking primarily Spanish. Victor primarily spoke English and was resistant to speaking Spanish, often stating verbally, "I hate Spanish." Sol reported she and Victor's grandmother attempted to speak more English to communicate more with Victor. Victor would sometimes attempt to speak Spanish only with his grandmother. Sol reported the family

connected to their culture through food by often eating traditional foods. Victor had a high preference for these foods and would also participate in meal preparation.

Sol stated religious ceremony attendance was an additional way of connecting to their culture, however, the family had to suspend churchgoing due to “the noise bothering Victor.” The family restricted community outings due to concerns about Victor’s behaviors. Sol reported difficulty in connecting with Victor as he often preferred to play alone rather than with family. Sol noted they recently discovered Victor enjoyed singing in the car, and they have begun connecting through music. Additionally, the family would watch television together in the afternoon. Victor would also connect with his father through video games, a highly preferred activity. Sol did not complete the cultural values sort with her coach during the session.

Victor’s interests included trains and cars, Legos, video games, making YouTube videos, building/taking things apart (e.g., computers, toys), drawing, cooking, and singing. Previously, Victor had received early intervention services and different therapies at the local children’s hospital. Sol reported early intervention and therapy were helpful for his development, but waiting his turn and elopement were persistent concerns. Additionally, travel to sessions were challenging as Victor would at times unbuckle himself while in transit to therapy.

Sol selected tantrums as Victor’s target behaviors and shared computer time with parents as the target routine. Tantrums were defined as any combination of the following: (a) elopement defined as leaving the immediate area suddenly and without permission, (b) screaming defined by the occurrence of vocalizations above normal conversational volume for any period, and (c) self-injurious behavior defined as any instance of making forceful contact between his hand

using an open or closed fist and his head. Sol reported that if the escalation cycle persisted, Victor would also begin vomiting.

Dyad 7: Renee (Mother) and Omar (Son)

The seventh dyad included Renee and Omar. Renee used she/her pronouns and was in her early thirties while Omar used he/him pronouns and was six years old. Renee, her husband, and Omar lived with Renee's parents. The household consisted of Renee, her husband, Omar, Renee's mother and father, Renee's younger adult sister, and Renee's younger adult brother (both siblings were above 20 years old). Renee reported that Omar got along with the extended family, seeking out his grandparents and Renee's younger brother (Omar's uncle). According to Renee, her husband (Omar's dad) was more of the "fun" parent, often taking him to child amusement centers such as Chuck E. Cheese or SkyZone while the time Omar spent with his mother was more "intentional" and firm.

The family's primary language was English. Renee and her husband were two different nationalities, with Renee being Hispanic/Latina and her husband being culturally South Asian. Renee emphasized the importance of embracing adversity, honoring differences, and promoting change in their family philosophy. The family is active in the community as Renee reports they like to "stay in the know." Describing "family time," Renee mentioned the importance of food, bible studies, and events with extended family members, however, their engagement in whole group celebrations varied due to Omar not liking large crowds. In the VCS, Renee ranked "Religious, cultural, language, and/or spiritual traditions," "Being kind," and "Relating to my child," as her most important family values.

Renee described Omar as intelligent, smart, and like a “little teddy bear.” She reported he often gives hugs and very “happy-go-lucky.” He rarely engaged in aggression and was very flexible but had a history of inflexibility. Among Omar’s preferences were specific cartoons such as color-focused educational videos on YouTube and an animated series about vehicles, specific foods such as chicken nuggets and spaghetti, and engaging in water play. Renee and her husband shared they had not had many resources for Omar, but he is currently enrolled in school and receives speech and occupational therapy. He has an AAC device from the school and was beginning to use a core board for communication. Renee had tried finding ABA services for Omar, however, after school options were not available and Renee did not want to take Omar out of school. The family was on the waitlist for additional services through a regional center.

Omar’s selected target challenging behavior was self-injury, as exhibited by Omar engaging in repeated, mild to medium intensity tapping on his head or stomach with either hand with an open palm. Self-injury was paired with low intensity whining/vocalizations defined by extended vocalizations at a volume slightly above typical conversational volume. Renee reported that if the behavior persisted, he would also begin crying with or without tears.

Dyad 8: Luz (Mother) and Jesús (Son)

The eight dyad was Luz and Jesús. Luz was in her mid-thirties and used she/her pronouns while Jesús was seven years old. The household included Luz, Jesús’s older brother, and Luz’s father. Luz reported Jesús had a strong relationship with his grandfather and Jesús’s grandfather provided respite care for Jesús, helping with daily childcare tasks. Luz stated the relationship Jesús had with his brother had been previously challenging but was strengthening as Jesús gained

more verbal communication skills. Jesús interacted with his mother daily and Luz reported the family had access to lots of local support, advocating for Jesús in the community and at school.

The household spoke both Spanish and English but were mostly English-speaking. Since Jesús's grandfather spoke primarily Spanish, Jesús acquired more Spanish across the past couple years. Luz reported the family stayed in touch with their culture by watching shows and listening to things in Spanish although most reading and speaking was in English. The family was in contact with extended family and celebrated their heritage through food and music. While Luz reported their family was not particularly religious, they were aware of the connection between their culture and religion and would attend church every Sunday and practiced religious occasions (i.e., baptism, First Communion). Additionally, Luz reported maintaining the cultural importance of respecting ones' elders, however she emphasized to her children that individuals of all ages are deserving of respect. Luz ranked, "Having a relationship with my child," "Taking care of my family," and "Doing the right thing," as priority cultural values for her family.

Luz reported Jesús was "more focused on his own goals and desires," opting to play alone or directing play with peers like his cousins. Regarding Jesús's strengths, Luz stated he had an exceptional memory and would often stay focused or "on a loop" about a specific topic. Luz reported Jesús was direct when interacting with others and worked hard to increase his vocabulary and communication skills. Jesús preferred playing with Legos, coloring, and playing tag. Luz reported Jesús was interested in ocean life/sea creatures and Star Wars.

The family had found most success in frequent reminders or primers, communicating schedules ahead of time, using timers to prepare for transitions, and being honest/explaining behavior expectations (e.g., You can't do X because it's almost time to go to Y). Luz noted Jesús

had success in using token boards at school/clinic, but she did not want to use them at home to keep the environment a “calm, non-work associated place.” She reported they were working toward using visual schedules and implementing scenario-specific rule systems.

Jesús target challenging behavior was inappropriate language/name-calling toward others as defined by using socially inappropriate words or insults directed at other individuals, primarily his mother. Luz reported that if she corrected the behavior, the behavior would escalate and Jesús would begin yelling at her.

Table 3

Participant Dyad Demographic and Caregiver Priority Cultural Values

Primary Caregiver (Dyad #)	Caregiver Age, Gender	Child	Child Age, Gender	Reported Priority Cultural Values
Esther (Dyad 1)	Mid-40s, F	Ramón	9, M	Taking care of my family Practicing my religious, cultural, linguistic traditions
Vicki (Dyad 2)	Mid-30s, F	Luis	9, M	Taking care of my family Making time for my family
Margarita (Dyad 3)	Mid-30s	Manuel	6, M	Being a good parent Being respected by others
Angelina (Dyad 4)	Mid-40s, F	Pedro	9, M	Making time for my family Practicing my religious, cultural, linguistic traditions
Virginia (Dyad 5)	Early-40s, F	Petra	6, F	Making time for my family Practicing my religious, cultural, linguistic traditions
Sol (Dyad 6)	Early-40s	Victor	9, M	Not completed
Renee	Early-30s, F	Omar	6, M	Relating to my child

(Dyad 7)				Practicing my religious, cultural, linguistic traditions
Luz (Dyad 8)	Mid-30s, F	Jesús	8, M	Taking care of my family Doing the right thing

Note. Gender: F = female; M = male

Researcher Roles

Primary Investigator

The primary investigator was a Hispanic doctoral candidate in special education at the University of Oregon. They were a certified early childhood special education specialist in the state of Oregon and a certified preschool to twelfth grade special education teacher in the state of Connecticut. They had previous formal training in ABA and a master's in special education. The primary investigator was responsible for: (a) consent of families via telehealth, (b) scoring all assessments, (c) all scheduling for families, (d) weekly supervision meetings with coaches and data collectors, (e) purchasing and mailing telehealth materials to families, (f) creating and mailing all required resources for implementation of the BSP (i.e., task analysis, visual schedule, first/then board), (g) reviewing and inputting data collected by data collectors during all observation sessions.

Coaches

Coaches consisted of four Hispanic/Latine master's students with prior experience working with Spanish-speaking families. The primary investigator served as the coach for Esther and Ramón, Renee and Omar, and Luz and Jesús. A master's student in family and human services (CRV) was the coach for Vicki and Luis and a master's student in ABA (AM) supported

Margarita and Manuel, Angelina and Pedro, Virginia and Petra, and Sol and Victor. A master's student in school psychology (PL) was primarily involved in data collection but was also trained as a coach as standby.

The online training module (retrieved from <https://pyramid.trifoia.com/catalog>) was a self-paced eight-hour course following the five-step process of PTR-F to support positive child behavior. The comprehensive module included a mix of presentation slides, video modeling, and brief multiple-choice assessments. The training was divided into seven sections including Introduction to PTR-F, Working with Families and Universal Practices, Initiating the PTR-F Process, PTR-F Assessment, PTR-F Intervention, Coaching the Family to Implement Plans with Fidelity, and Using Data and Next Steps. To receive certification, coaches had to complete all brief assessments (one per PTR-F phase) with a score 80% or above. All coaches in the current study completed the official PTR-F online training and received certification through the Pyramid Model website. Additional training was completed to review the process and rationale of cultural adaptation of the existing PTR-F.

Training for additional cultural adaptations included one 90-minute session and followed behavioral skills training, an ABA-based package to systematically teach and train new skills (DiGennaro Reed et al., 2018; Kirkpatrick et al., 2019). During the additional training, the primary investigator reviewed the PTR-F process with coaches and addressed any questions not addressed in the official PTR-F training. After the initial review, the primary investigator introduced the additional culturally adapted materials and discussed the methods of creation and conceptual foundations of the adaptations. The primary investigator reviewed the EVM and its elements with particular emphasis on how each element was integrated into the adaptations.

After direct instruction on the concepts and materials, the primary investigator modeled implementation of each adaptation followed by questions from trainees. Once training on the cultural adaptations was completed, coaches were required to complete all initial meeting forms using a vignette and roleplay a sample initial meeting with a friend/spouse/etc. to rehearse the skill independently. The roleplay was recorded and reviewed by the primary investigator for fidelity. The primary investigator and each coach scheduled a feedback meeting where the primary investigator delivered performance feedback and coaching on the rehearsed skills. Coaches were required to complete both forms in the vignette and roleplay with at least 80% fidelity. If 80% fidelity was not reached, the primary investigator would schedule additional performance feedback and training in the areas of need until 80% fidelity was reached. Furthermore, retraining was completed if coach fidelity fell below 80% for two consecutive sessions during the study.

Coaches with assigned families were responsible for (a) weekly scheduling with families, (b) reporting dates of scheduled sessions to the primary investigator, (c) maintaining regular communication with families, (d) completing at least two introduction, six baseline, two training, six intervention, and two maintenance sessions with each family, and (e) attending weekly supervision sessions with the primary investigator.

Data Collectors

Five data collectors were trained to watch weekly family sessions and collect data on either coach fidelity, caregiver fidelity, or child challenging and alternative behavior. All data collectors were master's students at the University of Oregon in school psychology. Data collectors received four hours of training on collecting data on all variables. After training, each

data collector coded a practice video and fidelity was assessed. Data collectors were assigned to each variable based on preference and performance on practice videos. Each data collector was required to reach at least 80% fidelity with the primary investigator on the practice video for their assigned variable. Data collectors focused on data collection for one variable and an additional two data collectors collected data for two variable types. Retraining was initiated if agreement fell below 80% for two consecutive sessions. Weekly supervision and feedback were synchronous as data collectors were beginning data collection then transitioned to asynchronous and as-needed synchronous sessions once fidelity was reached for each variable for each family. Asynchronous check-ins and deadline reminders via instant messaging on Telegram occurred weekly at minimum.

Data collectors had limited access to the study Dropbox account so only data collection templates, session recordings, and individual data collection folders were available. Assigned session data collection was completed within 48 hours of the session upload to allow for responsive decision making throughout the study.

Setting

Coaches were in the Pacific Northwest, Midwest, and southern area of the United States. All procedures took place via synchronous audiovisual telepractice sessions via Zoom, allowing for flexibility when meeting with participants and broadening recruitment efforts due to known recruitment difficulties with the target population. Families used their own password enabled WIFI to join private telepractice sessions from their family home. For meetings prior to baseline (e.g., initial meeting, behavior support plan development), participants and those involved were instructed to join from a private room with only individuals who had consented/assented (i.e.,

child, extended family/community members). During baseline and intervention sessions, location within the house varied depending on the targeted routine (e.g., in the kitchen for mealtime routines, in backyard for playtime routine). All areas were required to be limited to consented individuals only. Additionally, the recording device was to be placed to allow full visibility of the routine.

All families used their personal smartphone as the recording device during baseline and intervention observations. For Esther and Ramón, Esther set up her phone on the kitchen counter facing the dining room. This allowed for full visibility of the dining table, where Ramón completed the target routine. For Vicki and Luis, Vicki set up her phone on the dining table facing the kitchen. The placement allowed for observation of Luis at the dining table and in the kitchen. For Margarita and Manuel, Margarita placed her phone on a phone stand designed for outside use. The phone stand was placed on the grass in the backyard to include the fence exit (where he would typically attempt elopement) and the trampoline where he and his parents would play. For Angelina and Pedro, the phone was placed on Pedro's desk in his bedroom where Angelina and Pedro were both visible sitting either at a desk or on Pedro's bed. While their coach planned camera placement for pending baseline sessions, Virginia and Petra and Sol and Victor did not attend multiple attempted initial baseline sessions. Both dyads eventually ceased communication. Additionally, Luz formally withdrew from the study since Jesús was beginning increased weekly ABA sessions. Renee and Omar are still participating in the study and continue to progress through baseline.

Materials and Technology

Intervention Materials

Coaches used the official PTR-F manual to guide families through the study. Coaches had either a physical or online version of the manual. All forms included in the manual were uploaded to the Dropbox folder as templates for coaches to fill out with their families. After the completion of the BSP, the primary investigator and family coach (if not the primary investigator) created and purchased individualized materials for families. Materials included a task analysis, First/Then boards, timers, fidgets, English and Spanish versions of the BSP, and English and Spanish versions of a layperson-friendly BSP. Participating family members were emailed and mailed their personalized intervention materials as they were created throughout the study. Individualized resources were purchased/created, personalized, laminated, and shipped overnight at no cost to families. Materials were revised or additional materials were sent as caregivers requested or if the BSP was altered based on child progress and caregiver implementation.

Technology

Hardware

All coaches used either university-issued or personal laptops. Coaches using personal laptops did not have any dissertation documents or information saved directly on their drives and accessed required documents only via Dropbox online. The primary investigator used a university-issued 2024 13-inch MacBook Air with an Apple M3 chip and 16 GB of memory with a built-in camera and speakers. AM used a 2024 14-inch MacBook Pro with an Apple M4 Pro chip, 24 GB memory, and built-in camera and speakers. CRV used a 14-in Lenovo Yoga 7i

operating on Windows 11 with an Intel® Core™ Ultra 5 226V Processor and Integrated Intel® Arc™ graphics card. The laptop had 16 GB of memory, a built-in camera, and 4 x 2W speakers.

All families used their laptop, tablet, or phone equipped with built-in camera and speakers. Sessions were held via Zoom with devices wirelessly connected to personal internet networks. Soundcore by Anker P20i True Wireless Earbuds equipped with Bluetooth 5.3 were purchased and on loan to families to allow for full range of motion during baseline and intervention observations. A 10-inch long, portable and flexible tripod with a wireless remote and smartphone clamp was purchased and on loan to families primarily using their smartphone as the recording device during sessions. Families could opt to use their personal earbuds and/or phone stand if preferred. Primary caregivers were trained to use the equipment and were guided on laptop, tablet, or smartphone placement either at the end of Behavior Support Plan Development or in a five-minute meeting prior to baseline.

Software

All sessions were held on Zoom™, a HIPPA approved secure platform. All sessions were recorded using the internal recording system available on Zoom™. Sessions and session materials were immediately uploaded to a HIPPA-compliant Dropbox folder. Cloud-based storage allowed for the ease of sharing recorded sessions across coaches and data collectors. All sessions were recorded for the purpose of data collection and interobserver agreement (IOA) scoring.

Response Measurement, Treatment Fidelity, and IOA

Data was collected on child challenging and alternative behavior, caregiver fidelity of implementation, and coach treatment fidelity. IOA was collected for all variables collected via

observation. Family quality of life and treatment acceptability were collected at discrete points of the study.

Child Challenging and Alternative Behavior

Child data included challenging behavior and alternative behaviors (i.e., functional communication response). Child behavior was measured using 5-second partial or whole interval recording across 15–25-minute baseline and intervention sessions. If the child was completely off screen and quiet for the whole interval, the interval was omitted since the occurrence or non-occurrence of the behavior could not be determined.

Caregiver Fidelity of Implementation

Caregivers were trained on the selected strategies in the BSP in two, 60-minute sessions. Training method options included role play, discussions, online and printed resources (i.e., pamphlets, informational worksheets), and active coaching with performance feedback. Coaching during intervention sessions occurred weekly thereafter until the caregiver received 6 weeks of intervention and achieved a pre-determined performance criterion of 80% of behavior intervention plan strategies implemented correctly for three consecutive sessions.

Coach Fidelity of Implementation

For all sessions, coach fidelity of implementation was collected using an adapted version of PTR-F self-evaluation checklists. The checklists were adapted to increase the level of detail in the delivery of each session, allowing for standardization across coaches. The checklists included steps required in each phase and each step was marked discretely with “Yes,” “No,” or “N/A,” depending on completion or applicability. Additional sections were added to checklists where needed to account for the adapted resources (i.e., Initial Meeting Guide, Community BSP).

IOA

IOA was completed for 33% of sessions to surpass the minimum as indicated by Ledford and Gast (2018). To ensure formative analysis, IOA was completed within 48 hours of the session completion. Primary data collection was completed for all sessions while other independent observers collected data on the same measures for 33% of all sessions. Secondary data was collected for all stand-alone sessions (i.e., introduction session, FBA session, and training sessions). After data was collected by all observers, disagreements were discussed to attempt to reach consensus. If IOA fell below 80% for three consecutive sessions, the primary investigator retrained the data collector until they met initial criteria required for data collection. Point-by-point agreement was used to calculate IOA for fidelity of implementation ($[\text{Agreements}/(\text{Agreements} + \text{Disagreements}) * 100]$). Gross agreement was used to calculate IOA for child alternative and challenging behavior ($\text{Smaller Measurement}/\text{Larger Measurement} * 100$).

Child Behavior Checklist

Child challenging behavior was reported by the primary caregiver using the Child Behavior Checklist (CBCL; Achenbach and Rescorla, 2001) prior to the initial phase of the study. The CBCL was selected based on its wide use in autism research and assessment availability in Spanish. The CBCL is a caregiver reported standardized measure including 120 questions regarding the behavior of children aged 6-18 years old. The CBCL includes both open-ended and Likert-type scaled questions assessing physical problems, concerns, and strengths of the target child. The rankings from the questions yield scores across internalizing, externalizing, other behavior problems, and total problems. Reliability scores for the CBCL scales are reported as a range of $\alpha = 0.78 - 0.97$ depending on the scale while inter-rater reliability between mother

and rather ratings range from $r = 0.65 - 0.85$ (Achenbach and Rescorla, 2001). To view all participant CBCL scores, refer to Table 4.

Table 4*Participant CBCL Scores*

Child (Dyad #)	Internalizing Score (Clinical Cutoff)	Externalizing Score (Clinical Cutoff)	Total Score (Clinical Cutoff)
Ramón (Dyad 1)	22 (12-13)	18 (15)	90 (49)
Luis (Dyad 2)	8 (12-13)	8 (15)	42 (49)
Manuel (Dyad 3)	6 (12-13)	35 (15)	88 (49)
Pedro (Dyad 4)	20 (12-13)	11 (15)	60 (49)
Petra (Dyad 5)	24 (14)	22 (15)	78 (49-51)

Note. CBCL = Child Behavior Checklist (Achenbach and Rescorla, 2001)

Family Quality of Life

Quality of life was assessed using the Family Quality of Life survey (FQOL). The FQOL is a 25-item measure developed to collect information regarding a family's quality of life when raising a child aged birth to 21 years old with intellectual or developmental disabilities (Summers et al., 2005). The FQOL was selected based on its effectiveness, reliability, and validity with Spanish-speaking families (Verdugo et al., 2005). The FQOL includes questions grouped in ten domains of family quality of life, including: family interaction, parenting, financial well-being, emotional well-being, social well-being, health, physical environment, advocacy, and productivity (Beach Center on Disability, 2015). Questions are rated on a five-point Likert scale of Very Dissatisfied (1) to Very Satisfied (5). Reliability scores are reported as $\alpha = 0.94$ on importance ratings and $\alpha = 0.88$ on satisfaction ratings. Internal validity scores are reported as acceptable and excellent fit, while convergent validity between FQOL and the Family APGAR (Smilkstein, Ashworth, and Montano, 1982) score means were significantly correlated ($p < 0.001$).

Social Validity

Social validity was assessed using an adapted version of the *Treatment Acceptability Form-Revised* (TARF-R; Reimers et al., 1991). The questionnaire included 15 questions to determine the participants' perceptions regarding the acceptability, effectiveness, feasibility, procedures, and outcomes of the intervention. An additional six questions were added to the end of the questionnaire to determine acceptability on adaptations to the behavior intervention. Responses ranged from Strongly Disagree (1) to Strongly Agree (5) for each item. The first 15 items were scored and reported to determine the treatment acceptability of the BSP while the last

six questions reported the impact and acceptability of components specific to the current study. Caregivers completed the questionnaire virtually through a Qualtrics survey. The TARF-R was given to primary caregivers at the completion of parent training sessions and completion of the telehealth coaching intervention.

General Procedures

The following table includes summarized information about each phase in the study, what activities were completed, and the duration and number of sessions.

Table 5*Summary of Study Activities*

Session Phase	Session Details	Time Required/Number of Sessions
Introduction	Coach introductions Completion of VCS Introductions to family dynamic and cultural values Discussion of child interests and behavior of interest Set short-term goals and review long-term goals Review the intervention model (Prevent-Teach-Reinforce for Families; PTR-F)	60 min/1 online meeting Total time: 60 min
Behavior Support Plan Development	Coach introductions to whole family Identifying routine in which behavior of interest happens the most Discuss behavior of interest Fill out forms to determine why the behavior happens and why it persists Review child interests Create PTR-F Assessment Summary Table	90 min/1 online meeting Total time: 90 min
Baseline	Coach observes the caregiver and child completing target routine Complete Family Quality of Life Survey	20 min/6 – 10 online meetings Total time: 120 min – 200 min
Training 1	Review of universal behavior support strategies Review of PTR-F strategies Selection of 3 strategies specific for child Finalization of Behavior Support Plan Create PTR-F BSP Community Summary	60 min/1 online meeting Total time: 60 min

Session Phase	Session Details	Time Required/Number of Sessions
Training 2	Review Behavior Support Plan Review of selected PTR-F strategies with coaching caregiver	60 min/1 online meeting Total time: 60 min
Coaching/Intervention	Review Behavior Support Plan Caregiver complete routine with child while using the strategies taught in Training 2 Feedback from coach Practice of strategies using roleplay, problem-solving discussions, examples, rearranging physical environment	60 min (20 min observation, 40 min coaching)/9 online meetings Coaching continues for a minimum of 6 sessions and will continue until the caregiver has reached 80% accuracy in delivering the strategies for three consecutive sessions. Coaching sessions included a maximum of 9 sessions. Total time: 540 min
Maintenance	Caregiver independently completes routine with child taught in Training 2 a minimum of two weeks after coaching/intervention has finished	20 min/2 online meetings If caregiver accuracy falls below 80%, coach delivers one 20-minute maintenance booster session after both maintenance sessions have been completed. Total time: 40 min – 60 min
Total Time Range: 16.5 hrs – 18 hrs 10 min		

Phase 1: Pre-Baseline.

Initial Meeting

Prior to the initial meeting, all primary caregivers completed the CBCL (Achenbach and Rescorla, 2001) to provide the coach with additional, objective information about the child's challenging behavior. The initial meeting consisted of introductions and establishment of rapport between the coach and primary caregiver. The session was approximately 60 minutes. The session began with introductions between the coach and caregiver. The coach introduced themselves while sharing information about their professional and cultural background. The

coach invited the caregiver to share information about themselves, letting the caregiver know that specific questions about cultural background, family dynamic, and child behaviors would be addressed throughout the session. After initial introductions, the caregiver shared their screen to begin the cultural values sort using the VCS. Reviewing each cultural value one by one, the caregiver rated each value as “Very Important,” “Important,” or “Less Important.” After reviewing all values, the caregiver and coach reviewed all values the caregiver marked as “Very Important”, and the caregiver marked which three values were top priorities to their family. After the cultural values sort, the coach opened the Initial Meeting Guide, a guide with specific questions addressing family structure, cultural background, family time, child strengths, child interests, and previous behavior supports accessed by the family. To view the Initial Meeting Guide, view Appendix A.

After answering all questions in the Initial Meeting Guide, the coach explained the process of PTR-F. Coaches explained to the primary caregiver the core principles of PTR-F that a) behavior is a form of communication and b) behavior serves a purpose and c) behavior is contextual; thus, the process would begin with determining what the child was attempting to communicate via challenging behavior. Coaches then described the importance of family to the PTR-F process and noted that throughout the study, there would be two sessions where additional family members could be invited to share more information about the child and the target challenging behavior. The coach asked if there was anyone the primary caregiver would like to invite to join the PTR-F process, but the caregiver could confirm who they wanted to invite at a later time.

The session ended with a quick discussion on the child's challenging behavior. The conversation was guided by the PTR-F Goal Sheet. The coach and caregiver discussed all behaviors the caregiver was interested in decreasing and their contexts/routines. Next, the coach and caregiver selected a target behavior for the purpose of the study. The coach described that although it would be ideal to target all behaviors, the process requires one focus behavior at a time. Multiple behaviors were only selected as target behaviors if they had the same response class and occurred during the same routine. Additionally, the coach and caregiver considered the ease of observation for each behavior. For example, vocal refusal during tooth brushing before school may have been an appropriate behavior to decrease, however, the routine would likely be difficult to capture due to limited time and increased caregiver stress levels in the mornings. After selecting an appropriate target behavior, the caregiver and coach developed an operational definition for the selected behavior. The coach defined operational definition using jargon-free language. The coach and caregiver repeated the behavior selection process with alternative behaviors, but the coach described the operational definition of the alternative behavior would occur in the following meeting. The coach ended the session asking for questions and scheduling a time and day for the behavior support plan development session.

Behavior Support Plan Drafting

The following week, a meeting was scheduled with the family to begin development of the behavior support plan, beginning with an indirect functional behavior assessment. The coach, caregiver, and any invited family and community members reviewed three forms including questions to determine antecedents, consequences, and potential alternative behaviors for the selected routine/target behavior. The meeting was approximately 90 minutes long. During the

meeting, the support team reviewed three forms corresponding to a step in the PTR model: Prevent, Teach, and Reinforce. The Prevent portion focused on antecedent and environmental conditions preceding the behavior, the Teach portion identified skills that could be taught to replace the target behavior (i.e., alternative behavior), and the Reinforce portion parsed out the consequences maintaining the behavior. Prior to completing each checklist, the coach made sure to explain the purpose of each checklist to ensure there was a mutual understanding of the purpose of each step in the process. The coach followed the explanations as described in the PTR-F Manual (Dunlap et al., 2019). Refer to Appendices G, H, and I to view the corresponding checklists.

The meeting began with a review of the child's identified target behavior and members answered questions on PTR-F forms to determine the contingencies maintaining the behavior. The support team and the coach worked collaboratively to understand the antecedents, environmental conditions, and consequences maintaining the behavior. Each checklist took approximately 15 to 20 minutes long.

Once all three PTR-F Assessment Checklists were completed, the coach completed the PTR-F Summary and wrote the hypothesis statement for the target behavior. Initially, coaches were expected to complete the summary while on camera with the family. After completing the first session the PI deemed it more appropriate for the coach to complete the summary and hypothesis statement after ending the meeting, as families typically were waiting ~10 min silently for the coach to find and fill out the necessary information in the summary form. All completed forms were sent to the primary caregiver for review and personal future reference.

Phase 2: Baseline

Baseline occurred prior to caregiver training and continued for at least six sessions for each participant. Baseline sessions were synchronous Zoom meeting lasting approximately 20 minutes. The session began with the coach greeting the caregiver and the child. Five to ten minutes prior to the first baseline session, the coach and primary caregiver met to find an appropriate location for the routine to occur and camera placement. For baseline sessions after the initial one, the coach checked in with the primary caregiver to see if there were any changes or significant events since the prior meeting. After a check in, the coach guided the caregiver to set up the device. Once the device was set up, the coach reviewed the steps of the session, which were individualized based on the family routine and child target behavior. Esther was reminded to deliver low-probability demands related to the dinner routine, Vicki was reminded to keep preferred foods in sight and accessible, Margarita and her husband were instructed to initiate play in five-minute intervals, and Angelina was reminded to deliver low-probability demands related to shared reading. The coach prompted the primary caregiver to begin the routine. Once the routine was over, the coach met with the primary caregiver immediately following the routine or as soon as the primary caregiver was available. Specifically, for Esther and Ramón's dinner routine, it was not appropriate to meet immediately after completion of the routine; thus, the coach texted Esther to arrange a phone call once the family had finished eating dinner. During the post-observation debrief, the coach and caregiver discussed the session, reviewed any relevant questions, and scheduled the next session. The coach confirmed the next meeting time and ended the call.

During the baseline phase, data was collected on the target child challenging behavior as identified during the functional behavior assessment. Alternative child behavior data and caregiver strategy use were not collected for families until intervention sessions, as these were not finalized until the training phase. Alternative child behavior was tracked for Esther and Ramón since the alternative behavior to off-task behavior was on-task behavior, or the inverse of off-task rates (i.e., if Ramón was not on-task, he was off-task and vice versa). All baseline child challenging behavior data was collected during the selected routine in which the target behavior had the greatest frequency/intensity. The FQOL was sent for families to complete after the first baseline session was completed. Baseline sessions occurred for a minimum of six sessions and continued as necessary for stable behavior responding.

Phase 3: Training

Both training sessions were adult-only sessions meant to teach relevant adults in the child's life universal and individualized strategies of behavior support. Training sessions were led by the coach and guided by PowerPoint. PowerPoints were delivered in English or Spanish, depending on family preference. To view the PowerPoints used, refer to Appendices J and L.

Training 1

The first training was approximately 90 minutes long and consisted of two parts: a review of PTR-F universal strategies and the selection of PTR-F strategies that would be most helpful to the child and the target challenging behavior. The session started with greetings, including re-introductions as necessary for any new invited family and/or community members in the session. Coaches included relevant cultural and professional background information for new invited

members. Following introductions, the coach began review of strategies using a structured PowerPoint using behavior skills training strategies (Appendix B).

Review of Universal Strategies. The coach first iterated to the family that it was likely they already were inadvertently using these universal strategies, and they may already be familiar with the strategies. This approach was recommended by the PTR-F manual to foster a collaborative environment and minimize the potential for an imbalanced power dynamic in the coaching relationship, wherein the coach is perceived as the expert and the caregiver as the novice. The coach then began the instructional portion of the meeting reviewing PTR-F universal strategies including (a) providing high rates of positive attention, (b) establishing and maintaining predictable daily schedules, (c) including consistent patterns of activities within schedules, and (d) defining behavioral expectations. All information shared was relayed using accessible, jargon-free language including individualized, culturally relevant examples. Coaches checked for understanding and questions after reviewing each universal strategy.

Selection of PTR-F Strategies. Following the discussion regarding universal strategies, the coach reviewed the initial draft of the BSP with the family (PTR-F Assessment Summary Form). The coach ensured the BSP draft was viewed as relevant and appropriate by the family and invited community members. After reading each section and checking for approval, the coach answered any questions from the family and invited members. Next, the coach explained each of the strategies for each PTR-F category in the PTR-F Menu of Interventions table (Table 6). For each category of PTR-F strategy, the coach gave relevant examples including implementation examples. Examples included pictures, vignettes, and videos showing implementation of the strategy. After introduction to the PTR-F strategies, the coach reviewed an

example BSP with selected PTR strategies and implementation notes relevant to the example family's selected routine and target challenging behavior. The coach started with a quick summary of the family, their needs, selected routine, and target child challenging behavior. Next, the coach discussed each section of the BSP including the Prevent strategies and implementation notes, Teach strategies and implementation notes, and Reinforce strategies and implementation notes. To view the example BSP, refer to Appendix C.

Table 6.*PTR-F Menu of Strategies*

Prevent Strategies	Teach Strategies	Reinforce Strategies
Provide choices	Teach appropriate ways to communicate	All plans must:
Intersperse difficult or nonpreferred tasks	Functional communication training	1. Identify a functional reinforcer(s)
Embed preferences into activities	Teach social skills	2. Provide reinforcer for desirable behavior
Enhance predictability with calendars and schedules	Teach self-monitoring	3. Remove reinforcement for challenging behavior
Use timers and other visual/auditory supports for added structure	Tolerate delay of reinforcement	
Alter physical arrangement of environment/activity area	Teach independence with visual schedules and calendars	
Remove triggers for challenging behavior	Teach active participation	
Modify what is explicitly asked of your child		
Change how instructions are delivered		
Reduce distractions or competing events/materials		
Use safety signal to inform your child of follow-up activities		
Use scripted social stories to describe problematic situations and potential solutions		

After answering any questions the family had regarding the example BSP, the family then, with coach support, selected at least one strategy from each PTR section. The coach guided

the family and community members to select strategies that would be relevant to the routine and function of the child challenging behavior. The process of selection was a collaborative approach where all strategies were available to view on a Miro board and the team reviewed and selected strategies as the coach progressed through PTR sections. The coach put a star next to selected strategies and added comments as needed. Additional notes or strategies were added if requested by the family. Once the team selected strategies and confirmed their selection, the coach summarized the session and final selections. The coach asked for any questions, confirmed the next meeting time with the primary caregiver, and said goodbye to the family. Prior to the second meeting, the coach prepared a draft of the PTR-F Fidelity of Strategy Implementation form based on the selected strategies from Training 1.

Training 2

The second training was approximately 60 minutes long and consisted of a review of the selected strategies and training for implementation of the selected strategies. The session included only the coach and primary caregiver. After the coach shared the agenda for the session with the primary caregiver, they reviewed the universal strategies and hypothesis statement from the BSP; the coach prompted the caregiver to share any questions if applicable. The training session was guided by a structured PowerPoint using behavior skills training techniques (Appendix D).

Finalization of BSP. Once questions were addressed, the coach initiated a discussion on the selected Prevent strategies. The coach confirmed with the primary caregiver that the team-selected Prevent and Teach strategies were acceptable and doable. If the strategy was not acceptable, the coach worked with the caregiver to identify alternative strategies. Once strategies

were finalized with the primary caregiver, the coach discussed specific implementation details relevant to the target child and selected routine.

Primary Caregiver Training. Collaboratively, the coach and primary caregiver filled out the implementation steps of each strategy. The coach based the implementation steps on the PTR-F Intervention Guide and made changes to be fit for the family and primary caregiver. After, the coach reviewed expectations for coaching sessions. PTR-F coaching was likened to athletic coaching, emphasizing collaboration and the role of the coach in supporting and enhancing existing skills to promote success. It was also noted that coaching may pose challenges, as the family worked to implement routines that had previously been difficult for the child. The coach emphasized that the primary objectives of coaching were to enhance skill utilization, boost confidence, and improve overall comfort with the routine and BSP.

To further individualize the supports given to primary caregivers, the coach reviewed different coaching strategies available to use to give the caregiver options on how they received training. Refer to Table 7 to view PTR-F recommended coaching strategies. Following the discussion of preferred coaching strategies, the coach outlined the next steps and expectations for the upcoming phase. The coach reviewed the cyclical nature of coaching, described further in the following section. After Training 2 session ended, the coach sent the finalized BSP summary to the primary caregiver. The PI created and mailed all required materials for the selected strategies (i.e., First/Then boards, picture icons, visual timers, social stories) with overnight shipping to ensure all materials arrived by the first intervention session the following week. Additionally, caregivers were emailed a coaching handout reviewing commonly asked questions about coaching prior to coaching sessions.

Table 7.

Recommended PTR-F Coaching Strategies

PTR-F Coaching Strategy	Description
Video Recording	The coach and primary caregiver review previously recorded sessions for reflection
Modeling	The coach demonstrates how to use the strategy during the selected routine
Side-by-Side Support	The coach provides active support including verbal and non-verbal clues during the selected routine
Problem-Solving Discussion	The coach and primary caregiver discuss a challenge related to the observed routine. The coach and primary caregiver collaboratively identify ideas and options to address the barrier
Role-Playing	Prior to or after the observation, the coach and caregiver simulate the routine where members take on the role of either the family member (primary caregiver) or child
Environmental Arrangement	The coach makes recommendations to the primary caregiver on how to physically rearrange the space

Phase 4: Intervention and Maintenance

The final phase of the study included the implementation of selected strategies and coaching (i.e., intervention) and follow-up maintenance sessions after intervention sessions were completed.

Intervention and Coaching

Coaching was held in hour-long sessions. Each intervention session would begin with a review of progress then review the BSP, specifically touching on the steps to implementation.

Next, the coach would observe the routine and, if side-by-side coaching was preferred, would give active feedback and recommendations for implementation. After the observation, the coach and primary caregiver would take 15-20 minutes for observation reflection and feedback. Then, the team would plan for upcoming sessions where the coaching cycle would restart.

Coaches used a planning and reflection guide to track notes during each session. The PTR-F Coach Planning and Reflection Log included sections for the coach to write a review of progress, review of the intervention plan and any changes needed, separate sections on observations made during the routine and comments to share after the routine (during debriefing/feedback), and discussion notes from reflection and feedback. Open-ended, guided questions were included to prompt reflection if needed. Coaches marked which coaching strategies were used during the session and included notes for next steps following the session, including follow-up method (email, phone call, text, material provision), day/time for next session, and goal for next session.

Coaching occurred for a minimum of six weekly telepractice sessions and until the caregiver reached 80% accuracy for three consecutive sessions. Families completed a minimum of six sessions and a maximum of nine sessions. If caregiver and/or child behavior criterion was not reached, families were referred to local resources and provided self-paced online caregiver training modules.

Maintenance

Maintenance occurred after the caregiver sustained 80% criterion mastery of the PTR-F strategies for three consecutive sessions or after nine sessions were completed. Maintenance sessions were scheduled a minimum of two weeks post mastery/end of coaching/intervention

sessions. Sessions included an observation of the target routine without active coaching or direct feedback. Maintenance sessions were approximately 20 minutes and lasted two sessions. If caregiver fidelity fell below 80% during the maintenance sessions, one 20-minute maintenance booster coaching session was offered.

Experimental Design and Analysis

Experimental Design

A non-concurrent multiple probe design across participants (Horner et al., 1978) was used to determine the efficacy of the implementation of PTR-F strategies and caregiver training via telepractice on decreased child target challenging behavior and increased child target alternative behavior. Non-experimental data collection was collected for pre- and post-intervention comparisons. Participants began study activities at a staggered rate as each family completed all consent documents. Data collection was continuous for the first participant dyad while subsequent tiers included fewer data points during the baseline phase. All tiers completed a minimum of six sessions as required by Ledford and Gast (2018). Six sessions allowed for reliable assessment of variability during baseline and minimal risk of confounding variable introduction. A multiple probe design was chosen to reduce the likelihood of participant frustration associated with attending baseline sessions without receiving intervention. Additionally, this approach minimized the occurrence of challenging behaviors, as the routine procedure selected for all participants consistently involved the target behavior. Employing a multiple probe design also helped maintain internal validity by decreasing the potential influence of testing effects or participant reactivity due to observation (Ledford and Gast, 2018). The experimental design tested efficacy by analyzing the presence and strength of a functional

relation between the implementation of PTR-F strategies and participant responses (child challenging behaviors, child alternative behaviors, caregiver use of PTR-F strategies).

Data Analysis

Visual analysis was completed within and across participants to determine the presence of a behavior change and functional relation between the independent and dependent variables in the current study. Visual analysis included an assessment of level, trend, variability, overlap, consistency across participants, immediacy of effect, and vertical analysis (Ledford and Gast, 2018). Additionally, the calculation of the non-parametric effect size Tau-U was calculated for within-case estimation of treatment effect size for each dyad. Tau-U measures the non-overlap between phases within a case to determine the treatment effect size. Tau-U extends Tau non-overlap by controlling for possible monotonic trends in baseline data (Parker et al., 2011). The single-case effect size calculator web application was used to calculate Tau-U for the current data (Pustejovsky et al., 2024). When applied to single case research designs, a Tau-U score of 0.93 or greater indicated a strong basic effect, a score of 0.66 – 0.92 indicated a medium to high basic effect, and a score lower than 0.65 suggested a weak basic effect.

Pre- and Post-Measures

Pre- and post-intervention measures included the FQOL and TARF-R. The FQOL was administered at two points: the first baseline session and final intervention session. The TARF-R was completed after the completion of the first intervention/coaching session and after all intervention sessions were completed. Raw scores were compared within participant dyads to show changes pre- and post-intervention.

Response Measurement, Treatment Fidelity, and IOA

Data collection was completed via asynchronous video review. All family dyads had individualized data collection templates available on an Excel file for data collection assistants to code each video. To view example data collection forms, view Appendix F. All sessions were recorded using the internal recording feature on Zoom. Once sessions were uploaded to the shared Dropbox folder, coaches deleted videos from their local hard drive. Event recording (e.g., 5-second partial or whole interval recording) was completed based on the occurrence or non-occurrence of the target behavior. Study phases included two sessions of introductory/development sessions (Introduction, BSP Development), a minimum of six sessions of baseline sessions, two training sessions, a minimum of six intervention/coaching sessions, two maintenance sessions, and an optional booster session if needed. Child/caregiver data collection occurred for no longer than 25 minutes.

Child Behavior Response Measurement. Child behavior response measurements included child target challenging behavior and child alternative behavior. Challenging behaviors were measured using 5-second partial or whole interval recording for 15-25-minute observation sessions. Child target behavior varied from family to family; all descriptions of child behaviors are available in Table 8. Luis and Pedro's target challenging behavior was recorded using partial interval recording. Ramón's target challenging behavior was recorded using whole interval recording. Ramón's target alternative behavior (on-task behavior) was recorded using whole interval recording while Luis and Pedro's alternative behaviors (functional communication responses; FCR) were recorded using frequency count. View Appendix G for each family's BSP Summary.

Caregiver Fidelity of Implementation. Caregivers were recorded on the fidelity of BSP implementation during all intervention sessions. All prevention and teaching strategies were recorded based on discrete completion of the step (Yes or No). Reinforcement strategies were evaluated according to the proportion of instances in which the strategy was correctly applied. Data collectors recorded the frequency of instances in which the reinforcement strategy was appropriately implemented as well as cases where the strategy was not applied when required or was delivered inaccurately. The number of correct applications was divided by total opportunities to determine the accuracy of each reinforcement strategy. Scores were then converted to a percentage ranging from 0% to 100% of PTR-F steps completed. Reinforcement strategy implementation was rated as Yes (100% of opportunities), Most (66-99% of opportunities), Some (33-65% of opportunities), or No (Less than 32% of opportunities). The scaling of fidelity for reinforcement strategies provided additional information for coaches to target during performance feedback. However, for graphing purposes, scores were collapsed to create total percentage accuracy across BSP implementation (i.e., Yes included “Yes,” “Most,” and “Some” scores). To view each family’s data collection form for caregiver fidelity of implementation, view Appendix H.

Coach Procedural Fidelity. All sessions were coded for coach procedural fidelity. Scores were reported based on the number of steps completed during the session converted to a percentage ranging from 0% to 100%. Scores for some sessions were affected by loss of video due to technological difficulties. For Dyad 1, coach procedural fidelity averaged at 96% and a median score of 100% (n sessions = 23, range = 80% - 100%). For Dyad 2, coach procedural fidelity averaged at 90% and a median score of 100% (n sessions = 16, range = 25% - 100%).

Dyad 3 completed three sessions, and the coach completed the sessions with slightly below acceptable fidelity (>70%). For Dyad 4, coach procedural fidelity was averaged at 85% and a median score of 86% (range = 50% - 100%). Dyad 5 completed two sessions with coach procedural fidelity at 74% and 100%. Dyad 6 completed two sessions with coach procedural fidelity at 70% and 80%. Dyad 7 has completed two sessions and coach fidelity is high (>85%). Dyad 8 only completed one session (introduction) where the coach scored 100% procedural fidelity.

IOA. IOA was completed for a minimum of 33% of sessions in each phase per dependent variable and coach fidelity for each family dyad. Reliability for coach procedural fidelity ranged from 80% to 100 for Dyad 1's coach % (n sessions = 9; M = 93%). Reliability for coach procedural fidelity ranged from 80% to 100% for Dyad 2's coach (n sessions = 10; M = 92%). Procedural fidelity reliability for Dyad 3's was an average of 94% procedural fidelity across three sessions (range = 83% - 100%). Reliability for coach procedural fidelity ranged from 73% to 100% for Dyad 4's coach (n sessions = 11; M = 86%). For the two sessions completed by Dyad 5's coach, procedural fidelity reliability was acceptable (>75%) while reliability for Dyad 6 procedural fidelity was 70% (n sessions = 1). Reliability for the session completed by Dyad 8's coach was 96%.

Child behavior IOA was acceptable across all families reaching the intervention phase. IOA for child behavioral data for Dyad 1 was an average of 84% (n sessions = 12; range = 71% - 94%). IOA for child behavioral data for Dyad 2 was an average of 83% (n sessions = 10; range = 71% - 100%). IOA for child behavioral data for Dyad 4 was an average of 95% (n sessions = 8; range = 71% - 100%). Across caregiver procedural fidelity, IOA was acceptable (>75%).

CHAPTER III: RESULTS

Due to attrition, behavior data was only collected for three families. Refer to Figure 3 for visual depictions of dependent variable progression and phase changes throughout the study. Refer to Table 8 for a summary of all participant dyad child behaviors, selected routines, and settings. Refer to Table 9 for a summary of caregiver PTR strategies and preferred coaching strategies. Study sessions and data collection are not yet complete for Renee and Omar, thus, results will be shared in a future report.

Child Behavior and Caregiver Procedural Fidelity

Within- and between-participant analyses were completed to determine the presence of a functional relation between the independent and dependent variable. Within-participant analysis evaluated the presence of behavior change within each tier (i.e., participant is compared to themselves). To assess behavior change within each case, visual analysis was completed to identify trend, variability, immediacy of effect, level, and overlap between phases. Tau-U was calculated the online single-case effect size calculator retrieved from <https://jepusto.shinyapps.io/SCD-effect-sizes/> (Pustejovsky et al., 2024). Between-participant analysis evaluated the presence of behavior change in subsequent tiers when intervention was implemented in a selected tier. Additionally, between-participant visual analysis assessed the similarity in behavior responding across phases (i.e., behavior responding in all baseline phases, behavior responding in all intervention phases).

Table 8.*Summary of Child Behaviors, Routines, and Setting*

Child (Dyad #)	Target Challenging Behavior	Target Alternative Behavior	Target Routine	Setting (Room/ Placement of Device)
Ramón (Dyad 1)	Noncompliance; off task behavior	Following directions	BL A: Bedtime routine BL B: Dinner preparation	Kitchen; Dining table
Luis (Dyad 2)	Taking food from others without permission	Mands for food	Dinner with mother/brother	Kitchen; Dining table
Pedro (Dyad 4)	Self-injurious behavior; Vocal refusal	Mands for break	Reading with mother	Bedroom; desk

Note: BL = Baseline

Tier 1: Esther and Ramón

Ramón's target challenging behavior was off-task behavior while alternative behavior was on-task behavior. Baseline A contained significant variability in responding, reflecting the family's statements that the initial selected routine (clean up prior to bedtime routine) was not accurately capturing the target behavior. Upon the family's request, baseline conditions were changed to mealtime/table preparation during regular dinner routine. The primary strategy used to reduce off-task behavior during mealtime preparation was a visual task analysis to support independent completion of steps. Number of task analysis steps was not completed as Esther explicitly stated he did not need support in completing the routine correctly but needed support for staying on-task and completing the routine in a timely manner. Four Baseline A sessions and six Baseline B sessions were scheduled across 3 months. Baseline B had minimal variability compared to Baseline A. Ramón's challenging behavior in Baseline B exhibited a decreasing

trend throughout the phase while his alternative behavior displayed an increasing trend. Data was not collected during the two training sessions.

The start of the intervention phase showed a small decrease in target challenging behavior (32% of total intervals in BLB6 to 25% of total intervals in Intervention 1) and small increase in alternative behavior (68% of total intervals in BLB6 to 75% of intervals in Intervention 1) with minimal evidence of an immediate effect. Ramón's decreasing trend in challenging behavior continued through the intervention phase with challenging behavior decreasing to 15% of intervals by the end of the intervention phase. Ramón's alternative behavior similarly continued an increasing trend through intervention. Level of challenging behavior decreased from Baseline B to intervention while level of alternative behavior increased from baseline to intervention ($M_{CbxInt} = 21\%$; $M_{AltInt} = 80\%$). Generalization points displayed overlap with Baseline B responding for both challenging and alternative behavior. An additional intervention data point for each challenging and alternative behavior had overlap with Baseline B responding. Minimal overlap was present across sessions for both target challenging and alternative behaviors. Tau-U analysis conducted for the challenging behavior data indicated a weak to moderate basic effect ($d = -0.65$) for child challenging behavior change and the implementation of a culturally adapted PTR-F. Due to scheduling conflicts, the family took a four-week break prior to starting maintenance sessions. Esther and Ramón attended two maintenance sessions. In the maintenance phase, Ramón maintained low levels of challenging behavior (15% of intervals with challenging behavior, 18% of intervals with challenging behavior) and high levels of alternative behaviors (85% of intervals with alternative behavior, 82% of intervals with challenging behavior).

Esther maintained high caregiver fidelity throughout the intervention phase and maintained high fidelity through maintenance sessions. Across intervention sessions, Esther completed the steps of the BSP with an average of 89% fidelity (range = 70% - 100%). Esther first scored 70% fidelity during the first intervention session, but then consistently scored greater than 80% procedural fidelity throughout the phase. Esther scored above 80% fidelity for three consecutive sessions by Intervention Session 6, meeting the criteria to graduate to the maintenance phase. During the maintenance phase, Esther maintained high levels of procedural fidelity scoring above 80% procedural fidelity across both sessions.

Tier 2: Vicki and Luis

Luis's target challenging behavior was taking food from others without permission while his alternative behavior was using a FCR (i.e., point, touch visual card) to request food. Seven baseline sessions were scheduled across 2.5 months. Luis's challenging behavior showed variable responding in baseline with a 41% average percentage of intervals with observed challenging behavior (range = 14% - 60%). Luis displayed moderate variability in FCR count throughout baseline with an average FCR count of 4.14 (range = 1 – 9). A decreasing trend in Luis's challenging behavior was present in baseline with a drop in challenging behavior after the second baseline session. No trend was apparent for alternative behavior during the baseline phase. Data was not collected during the training phase.

A small immediate effect observed for Luis's challenging behavior with a decrease in challenging behavior when intervention was implemented. Regarding alternative behavior, a moderate immediate effect was observed when comparing the final three baseline sessions to the first three intervention sessions. Luis completed few FCRs in the first intervention session ($n =$

3) but then delivered over 20 FCRs in each session during the following two intervention sessions. Trends were not observed for neither Luis's challenging behavior nor his alternative behavior during the intervention phase. Moderate variability in Luis's challenging behavior was observed in the intervention phase while Luis's FCR use was highly variable in the intervention phase. On average during intervention, Luis engaged in challenging behavior at a low level ($M = 8\%$, range = 4% - 24%) while Luis used an average of 16.5 FCRs (range = 3 – 26) each session during the intervention phase. Across baseline to intervention phases, Luis showed a slight decrease in level of challenging behavior and increase in alternative behavior; however, comparing behavior responding across phases, overlap was present for one data points for challenging behavior and two data points in the alternative behavior. Visual analysis suggested a weak effect between the independent and dependent variable for challenging behavior. Tau-U analysis of challenging behavior aligned with visual analysis ($d = -0.48$), indicating evidence for a weak effect between the implementation of the culturally adapted PTR-F and challenging behavior.

Vicki had variable responding in caregiver procedural fidelity. In the first intervention session, she scored low procedural fidelity completing 36% of the steps in the BSP. It is of importance to note that the day prior to the session, Vicki was recommended to be induced multiple weeks before her expected due date. The family took a two-month break before returning to intervention sessions. During the first session after the extended break, Vicki scored 72% procedural fidelity. Vicki's procedural fidelity varied across the next 4 sessions, with an average of 68% fidelity and a median of 71% fidelity. After six intervention sessions, Vicki expressed compounding stress of having a newborn, session scheduling, and inability to

consistently practice BSP implementation. Thus, the family took a short break and returned for two scheduled check-in maintenance sessions. Due to an immigration-related emergency, the family had to cancel their final maintenance session and only completed one maintenance session. In the maintenance session, Luis had an increase in challenging behavior from 4% of total intervals in Intervention 6 to 12% of total intervals during Maintenance 1. Luis also exhibited a decrease in alternative behavior from 20 FCRs in Intervention 6 to three FCRs in Maintenance 1. Additionally, caregiver fidelity decreased from 70% of total steps implemented in Intervention 6 to 50% of BSP steps implemented in Maintenance 1.

Tier 3: Angelina and Pedro

Pedro's target challenging behavior was vocal refusal while reading with his mom. His selected alternative behavior was using an FCR to request a break. Eight baseline sessions were spread across three months due to family vacation and time out of the country. During baseline, Pedro displayed high variability in challenging behavior (range = 2% - 27%) and low variability in his alternative behavior (range = 0 – 2). It must be noted that in the session where challenging behavior (vocal refusal) was observed in <5% of total session intervals, Pedro repeatedly physically refused to engage with the target routine. A trend was not observed for Pedro's challenging behavior or alternative behavior during baseline. Pedro showed low levels of challenging behavior ($M = 15\%$) and low levels of alternative behavior during baseline ($M = 0.38$). Data was not collected during the training sessions.

An immediate effect was observed for alternative behavior from baseline to intervention; however, an immediate effect was not identified for challenging behavior. Challenging behavior remained consistent during the intervention phase (range = 11% – 17%) while there was

considerable variability in observed alternative behaviors per session (FCRs; range = 1 – 9). No trend was apparent in either challenging or alternative behavior during the intervention phase. Pedro showed low levels of challenging behavior during the intervention phase, displaying a little change in level of challenging behavior compared to the baseline phase ($M_{Baseline} = 15\%$; $M_{Intervention} = 14\%$). Pedro exhibited a moderate level of alternative behavior during intervention, increasing in level of alternative behavior compared to baseline levels ($M_{Baseline} = 0.38$; $M_{Intervention} = 4$). Across phases, there was considerable overlap in challenging behavior across baseline and intervention phases. All data points in the intervention session challenging behavior overlapped with baseline responding. Alternative behavior (FCR) had some overlap with baseline alternative behavior with two data points in baseline overlapping with baseline responding.

Angelina had high variability in caregiver fidelity of implementation throughout the intervention phase. Fidelity of implementation ranged from a minimum of 55% of steps of the BSP correctly implemented to 92% of steps of the BSP correctly implemented. Across the intervention phase, Angelina completed an average of 77% of steps implemented correctly.

Between-Participant Analysis

All participants began study activities nonconcurrently, allowing for a tiered introduction of the intervention. Vertical analysis across tiers showed a decrease in behavior for Pedro when intervention was initiated for Ramón but no change in responding for Luis. It must be noted that Pedro's decrease in challenging behavior during the corresponding session may have been attributed to a change in routine location during the session (i.e., completing observation room in neutral room versus highly preferred room). Implementation of intervention for Luis did not

affect behavior responding for Pedro as the family was vacation during this time. Behavior responding varied across tiers in baseline phases, however, Ramón and Luis displayed similar levels of challenging behavior ($M_{RamónCbx} = 44.2$; $M_{LuisCbx} = 31.29$). Ramón and Luis displayed similar patterns of responding in intervention phases; however, Ramón had higher, more consistent levels of alternative behavior throughout the phase. Pedro's behavior responding during baseline and intervention phases differed from the upper tiers; possible explanations are discussed further in later sections.

Table 9.

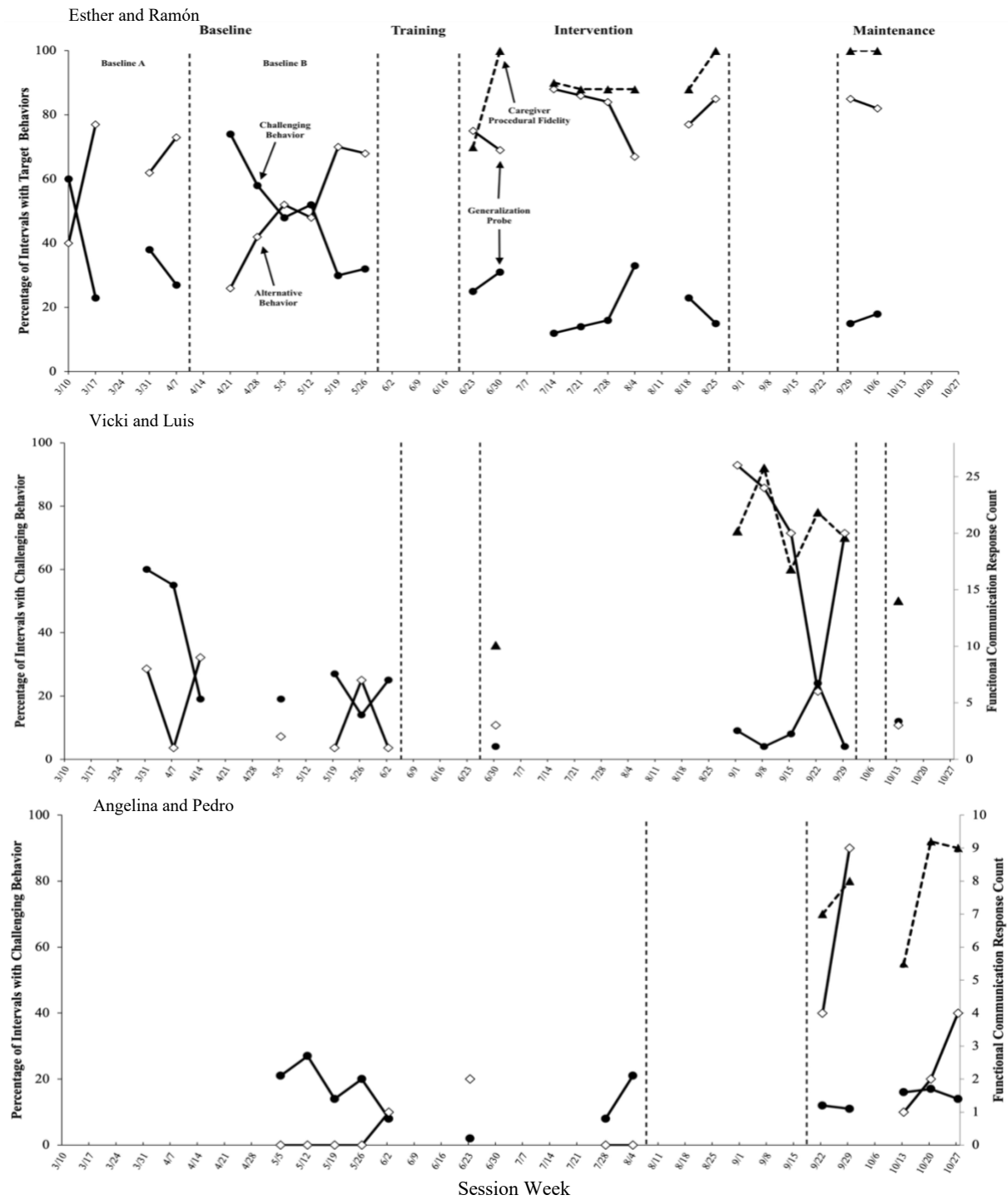
Summary of Caregiver-Selected Strategies and Preferred Coaching Strategies

Caregiver/Child (Dyad #)	BSP Strategies			Preferred Coaching Strategies
	Prevent Strategies	Teach Strategies	Reinforce Strategies (Child Reinforcers)	
Esther and Ramón (Dyad 1)	Reduce/Eliminate distractions Alter the physical environment/area of the activity	Tolerate delay of reinforcement Teach independence using schedules/visual supports	Adult verbal praise Videos of cats Disney movies	Modeling Side-by-Side Support Environmental arrangement Problem-solving discussion
Vicki and Luis (Dyad 2)	Give options Reduce/Eliminate distractions Alter the physical environment	Teach appropriate forms of communication Tolerate delay of reinforcement Teach independence with schedules/visual supports	Food: hamburgers, taquitos, McDonald's Tickles Adult verbal praise	Modeling Side-by-Side Support Environmental arrangement Problem-solving discussion

Angelina and Pedro (Dyad 4)	Give options Mix preferred/non- preferred tasks Incorporate preferences into activities	Teach appropriate forms of communication Teach social skills Teach independence with schedules/visual supports	Adult verbal praise Legos Tablet	Modeling Side-by-Side Support Problem-solving discussion
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Figure 3

Child Behavior Responses and Caregiver Procedural Fidelity



Pre- and Post-Measures

Refer to Table 10 for a summary of all pre- and post-measure scores. Each dyad reported social validity and any changes in family quality of life using the TARF-R and FQOL, respectively. The TARF-R included 15 questions assessing the acceptability of the developed BSP and an additional six questions to evaluate the importance of culture to the intervention process. FQOL was completed by participants at the beginning of the baseline phase and the end of intervention phase. Esther showed a slight increase in family quality of life based on FQOL scores ($FQOL_{Pre} = 99$; $FQOL_{Post} = 107$). Vicki's reported family quality of life decreased from baseline to intervention phase ($FQOL_{Pre} = 107$; $FQOL_{Post} = 100$). Angelina had a decrease in FQOL score ($FQOL_{Pre} = 123$; $FQOL_{Post} = 113$).

Regarding social validity and acceptability of the BSP, Esther's level of acceptability of the BSP increased from Intervention 1 to the final intervention session ($TARF-R_{Pre} = 66$; $TARF-R_{Post} = 71$). Vicki displayed no change in social validity between sessions ($TARF-R_{Pre} = 62$; $TARF-R_{Post} = 62$). Angelina's social validity scores were unchanged from Intervention 1 to the final intervention session ($TARF-R_{Pre} = 67$; $TARF-R_{Post} = 67$). Reporting the importance of culture to the intervention process, Esther rated its importance the same from Intervention 1 to the final intervention session ($Cultural\ Adaptation_{Pre} = 25$; $Cultural\ Adaptation_{Post} = 25$). Vicki's ratings of the importance of culture to the intervention process decreased from Intervention 1 to the final intervention session ($Cultural\ Adaptation_{Pre} = 28$; $Cultural\ Adaptation_{Post} = 24$). Angelina rated the importance of culture the same from Intervention 1 to the final intervention session ($Cultural\ Adaptation_{Pre} = 27$; $Cultural\ Adaptation_{Post} = 113$).

Table 10*Pre- and Post-Measures of Family Quality of Life and Social Validity*

Non-Experimental Measure	Participant			
	Administration	Esther	Vicki	Angelina
FQOL	Pre	99	107	123
	Post	107	100	113
TARF-R	Pre	66	62	67
	Post	71	62	67
Cultural Adaptation	Pre	25	28	27
	Post	25	24	27

Note. FQOL = Family Quality of Life; TARF-R = Treatment Acceptability Rating Form – Revised; Maximum FQOL Score: 125; Maximum TARF-R Score: 75; Maximum Cultural Adaptation Score: 30; FQOL pre- delivery at Baseline 1 for all families, post- delivery upon completion of intervention; TARF-R and Cultural Adaptation pre- delivery at Intervention 1, post- delivery upon completion of intervention.

CHAPTER IV: DISCUSSION

This study evaluated the efficacy of a culturally adapted PTR-F, a manualized intervention employing positive behavior support strategies for children exhibiting challenging behavior. The intervention was delivered via telehealth to four Hispanic/Latine families with autistic children demonstrating challenging behaviors. The goals of the study were twofold: (1) to teach positive behavior support strategies to caregivers and other support members to reduce challenging behavior and increase alternative behavior in Hispanic/Latine autistic children and (2) determine the acceptability of a culturally adapted PTR-F. The following chapter discusses the findings, limitations, and future directions for the current study.

Prior to initiating the first phase of the study, primary caregivers completed the CBCL (Achenbach and Rescorla, 2001) to assist with coach preparation. The initial phase of the study included two introductory sessions to establish rapport, discuss cultural priorities, and create an initial BSP draft. After completing introductory sessions, primary caregivers reported their family's quality of life using the FQOL (Summers et al., 2005). Families started baseline sessions and continued for at least six sessions. Two training sessions were completed with the primary caregiver and extended family members to review universal and individualized behavior supports for the target child. After training sessions were completed, at least six intervention sessions were completed. The TARF-R (Reimers et al., 1991) was completed after the first and final intervention sessions to assess the acceptability of the BSP. In both baseline and intervention phases, target challenging behavior and alternative behavior were tracked and reported. Caregiver fidelity of implementation was tracked for primary caregivers during the intervention phase. Culturally responsive components were added to the PTR-F process to

promote cultural fit; intentional conversations, including a guided, open-ended questions and a cultural values card sort, were completed during introductory sessions to identify cultural values of each family, informing and guiding the therapeutic relationship and study process. Extended family members were included in two sessions during the study to understand the target child's behavior holistically and to teach family and community members behavior strategies that could be implemented with the target child. The findings of this study extend current research on the implementation of culturally adapted intervention. Additionally, experiences in recruitment, retention, and attrition inform developing literature on working with CLD populations.

Summary and Interpretation of Results

This study was designed to answer three research questions to determine the impact of implementation of a culturally adapted version of PTR-F with Hispanic/Latine families who had an autistic child who exhibited challenging behavior. Two experimental research questions were tested using a nonconcurrent multiple-probe design across four caregiver-child dyads, three of whom have completed the study while the fourth family continues. One non-experimental research question was tested using caregiver questionnaires regarding family quality of life and acceptability of the developed BSP.

Experimental Research Questions

Research Question 1 (RQ1)

Is there a functional relation between implementation of a culturally adapted, parent-implemented version of PTR-F and decreased level of target challenging behavior for children with autism who identify as Hispanic/Latine?

The first research question was assessed using 5-second intervals to track the rate of target child challenging behavior during 15–20-minute family-selected routines with their primary caregiver in baseline and intervention phases. Child challenging behavior varied across participants between phases. Two families had a reduction in level of target challenging behavior. However, data for only one family provided evidence of a relation between implementation of a culturally adapted PTR-F and a decrease in level of targeted challenging behavior. The third family did not display change in target challenging behavior during the selected routine.

Key Points

Esther and Ramon targeted off-task behavior during mealtime preparation, and Ramon had a consistent decrease in challenging behavior during intervention. While the decreasing trend in the intervention phase was also present in the baseline phase, there was minimal overlap between phases. Overlap occurred in two sessions; the first session with overlap, Intervention Session 2, was marked as a generalization probe due to changes in the conditions of the routine. The session, occurring on a holiday, was completed during breakfast meal/table preparation compared to dinner meal/table preparation. Although the visual task analysis card remained unchanged, the variation in routine timing enabled a greater number of individuals to be present during the activity. During this session, Ramón's father delivered several corrections, which affected the intended 5:1 ratio of positive to corrective statements outlined in PTR-F universal strategies. Following the session, during the debrief with Esther, she observed a noticeable difference in Ramón's responses when receiving overcorrections compared to "catching him being good." Intervention Session 6 challenging behavior rates were also increased; during this

session, Ramón's sister was present and telling Esther about weekend plans. Ramón's off-task behavior during this session was most often commenting on the outside conversation, ceasing dinner preparation and, in some cases, leaving the table. Environmental arrangement was selected as one of the PTR-F prevention strategies in Ramón's BSP; the data suggest minimizing additional individuals in the immediate environment during the targeted routine may aid in skill acquisition. While this may increase alternative behavior identified for Ramón, the impact on family togetherness and alignment with family values must also be considered. Alternative strategies to minimize distractions (e.g., extended family reducing verbal communication) and/or clearly defined plans for generalization (i.e., systematically incorporating additional individuals into the routine) may be implemented.

Vicki and Luis targeted taking food from others without permission during mealtimes as the target behavior and routine. Luis had a decrease in level of challenging behavior from baseline to intervention phase but had variable responding during the intervention phase. The sessions where the behavior occurred at the highest rates (Baseline 1 and Baseline 2) were sessions where Luis had to wait for food to finish cooking on the stove or wait for food to be prepared on the counter; during these sessions, where Vicki was preparing taquitos and warming tortillas, Luis attempted to take food off the stovetop. As the therapeutic relationship between Vicki and her coach developed, Vicki noted that preparation and completion of the routine was challenging since travel to the grocery store was a difficult activity for the family. Additionally, observations were generally scheduled during the latter part of the week, coinciding with the period when food supplies were most limited, as the family typically visited the grocery store over the weekend. To minimize participation barriers, the PI ordered high-preference food for

delivery 15-20 minutes prior to the beginning of observation sessions. Vicki was advised to adjust and extend the portion sizes for Luis to allow for multiple opportunities for the challenging behavior to occur; however, this guidance was not consistently adhered to. During multiple sessions, there were extended periods when Luis was eating a large serving of food, which reduced the likelihood of the challenging behavior. While the purpose of the baseline condition was to observe the behavior prior to implementation of behavior strategies and coaching, active guidance from the coach may have assisted Vicki in following the baseline guidance. Intervention challenging behavior was low for most sessions; a small increase is observed during Intervention Session 5 where Luis was served nonpreferred food. Since the food was nonpreferred, Luis exhibited the target challenging behavior and took food from open and closed areas (counter, fridge) without permission.

Anecdotally, Vicki reported to her coach that she did not practice using the BSP or materials outside of scheduled sessions, as she felt she did not have the time. The literature confirms the relationship between caregiver and child challenging behavior, with multiple studies highlighting the cyclical and mutually reinforcing nature between the two (Estes et al., 2014; Kurtz et al., 2021; Machalicek et al., 2022; Ranjbar et al., 2025). While research has not identified a link between parental stress and procedural fidelity, the relationship has been explored in teachers experiencing burnout. Studies have identified that teachers with high indices of burnout had lower fidelity of implementation of academic and behavioral supports (Oakes et al., 2013; Ross et al., 2012; Wehby et al., 2012; Garwood, 2023). Further research is needed to determine if the relationship between fidelity and stress is apparent in FMI and other caregiver-implemented interventions.

Angelina selected vocal refusal from Pedro during guided reading as the target behavior and routine. Based on challenging behavior data from baseline to intervention for Pedro, there was no apparent change in challenging behavior. Although this does not align with the intended outcome, additional discussions are necessary to determine the appropriate selection of the challenging behavior. While vocal refusal may be nonpreferred by adults/caregivers, this may not be a behavior that should be targeted for reduction. Refusal, at reasonable rates, is an appropriate behavior and communication response to display based in Western values; however, the context of cultural values and priorities must be considered. A previous study noted that in a sample of Korean, Mexican, Black, and white caregivers, Mexican caregivers rated verbal disruptions, in addition to aggression and disrespect, as the most problematic challenging behavior (McGuire et al., 2022). Angelina's identification of this behavior as the target challenging behavior magnifies the importance of cultural consideration, highlighting the differences in perception of challenging behavior depending on cultural values (McGuire et al., 2022; Fung et al., 2018). Researchers should consistently evaluate their own methodologies to determine whether their primary focus should be on fostering cultural partnerships (while increasing social validity) or enhancing clinical efficiency. Based on the conceptual framework of the current study, aligning behavioral objectives with cultural values is essential to enhance acceptance, adherence, and overall effectiveness. Future research should consider incorporating structured guidelines, such as checklists or semi-structured interviews, to facilitate the goal-setting process for caregivers.

Research Question 2 (RQ2)

Is there a functional relation between implementation of a culturally adapted version of PTR-F and increased level of target communication or other alternative behavior for children with autism who identify as Hispanic/Latine?

Research question two used measures of either alternative behavior responding in 5-second intervals or frequency count of target FCR during baseline and intervention phases. Variability in alternative behavior responding was present for two families; however, all participants exhibited moderate to high levels of target communication or alternative behavior responding during the intervention phase.

Key Points

In Tier 1, Ramón displayed high levels of alternative behavior (on-task behavior) ($M = 80\%$). Ramón's high levels of alternative behavior in the intervention phase continued to the two maintenance phase points, where he demonstrated high rates of alternative behavior ($>80\%$). The latter two tiers displayed variable counts of FCR during the intervention phase. Luis's FCR for food was high (> 20 FCR) during four intervention sessions and low (<5 FCR) for two sessions. In the first intervention session, Vicki reported to her coach that she had not yet familiarized herself with the PTR-F materials (i.e., First/Then card, food visuals, reinforcer visuals) and the day prior, had been advised by her doctor to be induced several weeks earlier than her anticipated due date. Given minimal preparation and stress from external factors, fidelity of implementation was considerably low. The low fidelity may be a possible explanation for low FCR during the first session. Once the family returned to the study, FCR increased to its maximum of 26 FCR and maintained high levels barring low frequency of FCRs during

Intervention Session 4. During this session, food was not ordered for the family since Vicki had prepared a meal. Throughout the session, Luis refused the food provided to him and he sought other food around the kitchen without using an FCR to request food. This variability in response behavior might have been minimized through more controlled conditions; however, the naturalistic approach of FMI also provides valuable insights into behavior demonstrated under socially relevant conditions while increasing ecological validity.

Pedro exhibited variability in response behavior during the intervention phase. Pedro's variability in responding coincides with caregiver procedural fidelity as Angelina also demonstrated a substantial drop in fidelity in the corresponding sessions. At this point in the intervention phase, Angelina and Pedro's family experienced a significant family emergency resulting in a cancelled session. Anecdotally, Angelina and Pedro's coach noted Angelina was not fully engaged during the session following the incident. The coinciding drop in caregiver procedural fidelity and child response behavior highlights the importance of fidelity when implementing a BSP. The positive relation between procedural fidelity and child response outcomes has been established in previous literature; studies have reported that maintaining high procedural fidelity in positive behavior support interventions have resulted in more rapid mastery of alternative skills and lower levels of challenging behavior (Brady et al., 2018). However, previous studies have reported high caregiver fidelity when implementing PTR interventions in family settings (Argumendes et al., 2021; Bailey and Blair, 2015; Sears et al., 2013; Joseph et al., 2019; Santiago, 2018; Choi, 2023; Zhu, 2024). Further assessment of caregiver procedural fidelity, external personal factors impacting implementation (i.e., unplanned emergencies

affecting caregiver stress), and possible investigation into training methods by the coach is required to determine barriers to maintaining fidelity for Angelina and Pedro.

Non-Experimental Research Questions

Research Question 3 (RQ3)

For Hispanic/Latine caregivers participating in the culturally adapted PTR-F, what are the perceptions regarding the goals, procedures, and outcomes of the intervention?

Research question three used measures of family quality of life and social validity. Social validity assessed both the acceptability of the BSP and the primary caregiver's perception of the importance of cultural considerations within the current study. Families were given each survey at two discrete points; the FQOL was completed prior to beginning the first baseline session and after completing the final intervention session. The modified TARF-R was completed after the first intervention session and after the final intervention session.

Scores on the FQOL increased for Esther, indicating a slight increase in perceived family quality of life. Satisfaction ratings increased on questions on support from family members and support from outside sources. However, ratings for questions relating supports for children with disabilities changed from the beginning of the study. Esther initially rated satisfaction on Ramón's supports to accomplish goals at schools and his ability to make friends. Post-intervention, Esther noted dissatisfaction with the two factors. Additionally, Esther expressed a decline in her satisfaction with her family's relationships with local service providers, indicating a neutral stance overall (neither satisfied nor dissatisfied). This represents a change from her previous rating of satisfaction prior to baseline. Anecdotally, Esther informed her coach that the

impact of coaching persisted beyond intervention sessions as she established goals to increase the proportion of positive to corrective statements in her interactions with her daughter.

Vicki marked a decrease in family quality of life from pre-baseline to post-intervention. While contrasted with the anticipated outcome, the decrease in FQOL scores was expected for Vicki as her family endured major life changes during their time in the study, including preterm labor, adjusting to life with a newborn, and targeted attacks on citizenship and immigration in the local community. Questions that received lower rankings than the pre-baseline responses pertained to the adequacy of support available to the family in meeting the needs of all family members, including those with disabilities. Considering the established stress of caring for a child with a disability (Estes et al., 2014; Machalicek et al., 2022), future research may consider the addition of stress reduction components (i.e., mindfulness, cognitive behavioral therapy) to further support caregivers completing an FMI.

Similarly, Angelina noted a decrease in family quality of life from pre-baseline to post-intervention. Angelina and Pedro experienced a major family emergency during the intervention phase, offering possible explanation for the decrease in FQOL scores. Comparison of individual questions from pre-baseline to post-intervention reveals Angelina ranked slightly less satisfaction (“Very satisfied” to “Satisfied”) in child independence, stress relief support, and family resilience. However, she marked increased satisfaction regarding accessibility to whole family supports. Most notably, Angelina reported being dissatisfied with the factor, “Adults in my family know other people in the children’s lives.” She had previously marked this as “Very satisfied.” While the family reported a slight decrease in family quality of life, the overall FQOL rating was high with 24 out of 25 questions marked as either “Satisfied” or “Very satisfied.”

Social validity ratings excluding cultural adaptation-specific questions increased for Esther's rating of social validity but did not change for either Vicki or Angelina. When comparing changes in ratings for individual questions from pre-intervention to post-intervention, Esther indicated that the time required to implement the BSP was less compared to her initial response at the start of intervention. TARF-R scores were moderate to high with all scores greater than 60 (total score of 75). Families rated the intervention as acceptable, minimally disruptive, easy to understand, and aligned with their child's goals. The TARF-R was delivered at two points to assess whether acceptability ratings varied with increased practice and familiarity with the BSP. Given the minimal difference observed between pre- and post-intervention scores, the utility of administering the TARF-R at two closely spaced time points (approximately six weeks apart) warrants reconsideration.

Six questions were added to the end of the TARF-R to assess specific adaptations and perceived level of importance culture had on the intervention process. Cultural adaptation ratings did not change for Esther and Angelina and decreased for Vicki. When comparing responses from the beginning of intervention to those after completion, Vicki rated the importance of culture as less impactful to the intervention process, whereas initially she considered culture to be highly impactful to the study. However, Vicki also marked she would feel "Not confident at all" if their coach did not speak her preferred language. Although a reduction in perceived impact of culture is evident, there may be concerns regarding the validity of the question. It is possible the phrasing related to cultural impact was interpreted as assessing whether the coach's culture influenced their coaching ability or skills, rather than the intended focus on how the coach's culture affected the quality of delivery and therapeutic relationship. The questions used to

evaluate cultural acceptability were specific to this study and have not been previously tested for reliability or validity. Utilizing an established, validated measure to assess the perceived importance of culture in the intervention process may have been more appropriate and is recommended for future studies.

Limitations

Measurement

Several limitations in the current study should be addressed. Inclusion criteria did not require confirming official autism diagnosis, however, the completion of a measure of autism symptomology such as the Autism Spectrum Rating Scales (ASRS; Goldstein & Naglieri, 2009) or the Social Responsiveness Scale – Second Edition (SRS-2; Constantino & Gruber, 2012) may have provided a fuller profile of child participants. Participants completed the CBCL (Achenbach & Rescorla, 2001) to prepare coaches prior to beginning study activities. Additional screeners specifically on autism symptomology could have been used to better inform coaching by establishing detailed child strengths and areas of support.

Goals were selected during the initial session using the PTR-F Goal Sheet, however, the selection of goals may have been better guided and structured with the use of an established tool, such as the Goal Attainment Scale (GAS; Kirusek & Sherman, 1968). The use of the GAS to select and scale goals would allow for individualized outcomes measures in a way that would also allow statistical analysis (Kirusek & Sherman, 1968; Krasny-Pacini et al., 2013). The PTR-F Manual prompted coaches to have families to discuss a long-term (two to five years into the future) and short-term (two to three months into the future) goal for their child, but the guidelines for long-term goals did not have to be centered on the selected challenging behavior.

Furthermore, the selection of the short- and long-term goals are not written on the PTR-F Goal Sheet, and the focus moves directly to the selection of challenging and desirable behavior. Splitting overall developmental goals and behavioral goals into defined conversations throughout the goal development process may have allowed for further investigation and understanding of family priorities (via long term goals) and more clearly defined challenging and alternative behaviors. Similarly, the addition of a structured tool such as the Routines Based Interview (RBI; McWilliams, 2009) could be used to guide the selection of target routine. Multiple families had challenges in selecting a routine that was both observable via telehealth and had a high likelihood of challenging behavior occurrence. The use of these measures would provide additional structure to the introduction and goal setting sessions while reducing possible differences in goal setting and routine selection between coaches.

While quality of life was measured in the current study, there was a lack of notable difference between pre- and post-intervention scores. The delivery of the pre-intervention FQOL could have been scheduled during the pre-baseline phase to provide additional time between assessments, thereby increasing the interval between scoring points. Alternatively, researchers could have implemented periodic qualitative social validity assessments focusing on factors related to quality of life to gain more comprehensive insights into the acceptability of the intervention and its effects on participants' well-being. Employing this approach, the coach could have arranged regular, scheduled sessions—either biweekly or monthly—during which the primary caregiver could have provided feedback regarding the acceptability of the intervention and any adverse effects, using either semi-structured interview formats or open-ended questionnaires. Information collected from said check-ins could have also been used to inform

and further individualize regular sessions (i.e., alter level of support when needed, offering alternate scheduling options during times of high stress).

Caregiver stress was not measured in the current study. The inclusion of caregiver stress as an additional variable measured by the Parenting Stress Index – Short Form (PSI-SF; Abidin, 1995) or the Parental Stress Scale (PSS; Berry & Jones, 1995) delivered prior to study activities would provide insight on external factors affecting adherence to the BSP and/or delivery of intervention. The current study, as with all FMIs, targets the primary caregiver as the agent of change thus, additional measures to fully understand the wellbeing of the primary caregiver would elucidate factors affecting the persistence of challenging behavior, acceptability of the BSP, and BSP procedural fidelity. With previous literature noting the unique challenges and stressors CLD individuals endure, the addition of a measure specific to identifying stress levels for racial and ethnic minorities such as the Race-Based Traumatic Stress Symptom Scale (RBTSSS; Carter et al., 2013) could provide even greater explanation specific to the individuals in the current study.

Intervention

Previous cultural adaptation studies have used different conceptual models to target not only the adaptation of content, but also the adaptation of delivery. For example, Domenech Rodriguez and colleagues (2011) approached the adaptation of PMTO using the EVM but noted the primary investigator's need for additional adaptations that considered the needs of the community as well as treatment developers (Domenech Rodríguez & Wieling, 2004). The approach used in conjunction with the EVM specified the methods of adaptation (e.g., identification of change agents versus intervention leaders, development of relationship with

community leaders, decentering original manualized intervention) in addition to conceptual framework. Similarly, Dababnah and colleagues (2021) used a framework for adaptation that was centered on structural oppression. The SHARP Framework included consideration of historical context of the target community, analysis of the interventionist/coach's role (either to disrupt or maintain the status quo), and individual power to engage in advocacy to change circumstances (Dababnah et al., 2021; Shaia, 2019). The current study utilized the EVM to primarily adapt the content of PTR-F rather than the delivery of intervention by coaches. Using additional or alternative frameworks to approach adaptation may have strengthened the depth of adaptation in the current study, increasing cultural acceptability. Within these frameworks, the study could have directly addressed barriers to engagement previously identified in the literature such as stigma toward disability, caregiver knowledge of disability, caregiver self-efficacy, and discordance between caregivers regarding intervention (Baweja et al., 2021). Previous studies have incorporated psychoeducation on behavior and disability (Dababnah et al., 2021; Lindly et al., 2023; Magaña et al., 2017; Sato et al., 2022; Xu et al., 2023) to decrease stigma, increase knowledge, and promote self-efficacy to increase engagement and adherence throughout behavior interventions. Furthermore, studies have specifically utilized enhanced intake procedures including open discussion on barriers for participation, realistic expectations from the intervention, and identifying attributes that promote caregiver efficacy (Baweja et al., 2021; Herbst et al., 2009). Utilizing a mix of enhanced intake and psychoeducation opportunities throughout the PTR-F process, the current study may have seen increased adherence and buy-in from participating families.

Challenges in baseline conditions were present across families. These challenges varied from webcam setup to the difficulty adhering to guidelines set to contrive settings to elicit the target behaviors. Variation in baseline conditions may have been minimized if families were given additional guidance, such as a task analysis, to complete target routines. Regarding baseline conditions, the study included numerous challenges in scheduling due to emergencies and limited schedules. Just prior to baseline, two families (Virginia and Petra; Sol and Victor) ceased communication after repeatedly cancelling sessions or missing sessions without prior notice. An additional family (Margarita and Manuel) ceased communication after attending two baseline sessions reporting child sickness. Lapses in sessions also occurred for families reaching intervention sessions as Angelina and Pedro were out of the country for over one month during baseline over the summer and experienced a family emergency during intervention. Given these challenges and the unpredictable nature of working with families, future studies may consider asynchronous baseline sessions to minimize stressors of scheduling. This would also allow for submission of baseline videos during times when it is most convenient to the family. It is important to note that prior to ceasing communication, Virginia had asked her coach if asynchronous baseline sessions was an option due to her limited availability. While this may decrease schedule stressors and increase flexibility, it may also result in lower quality therapeutic relationships between the coach and their family. Studies should weigh the benefits and needs of their respective study to determine the fit of asynchronous baseline sessions.

Flexibility of scheduling was further dependent on the availability of coaches. Coaches in the current study were full-time graduate students and, at some points during the study, worked full-time jobs. Additionally, since the study was via telehealth and participants were not limited

to geographical location, some families lived in different time zones as their coaches resulting in two-to-three-hour time differences—a substantial difference when meeting in the late afternoon or evening (i.e., meeting for a dinner routine at 7PM PST would require a coach in EST to meet at 10PM). Future studies should consider the long-term availability of coaches and may match coaches to families depending on schedule availability and time zone.

Furthermore, future research should assess the impact of coach experience level on family outcomes. In the current study, two coaches had prior experience working with families in a coaching environment while one coach had experience limited to school settings. While all coaches were trained using the same materials and sessions were guided using procedural task analysis to standardize sessions across coaches, it is possible the level of experience and subsequent confidence in treatment delivery may have impacted coaching procedures.

Implications for Future Research

Previous research has established the utility of FMI when delivered to autistic children exhibiting challenging behavior (Conrad et al., 2021; Tarver et al., 2019; Denusik et al., 2024; Kuracackel et al., 2018; Bearss et al., 2018). The current study extends the application of FMI for autistic children engaging in challenging behavior to develop a culturally adapted version of an existing intervention. Cultural adaptations to the intervention considered the unique needs of Hispanic/Latine individuals informed by the dimensions outlined in the EVM (Bernal et al., 1995; Bernal and Saez-Santiago, 2006). While results in the current study were mixed, future research should be completed to further develop the pool of literature on cultural adaptation and delivery of FMI with Hispanic/Latine individuals.

Specific to this study, additional measures were implemented to ensure the appropriateness of the intervention within the specific cultural context of additional measures to consider the contextual fit when the intervention was delivered with Hispanic/Latine families were implemented. The VCS was integrated at the beginning of the study to guide delivery of coaching throughout the duration of the project. This approach acknowledges that, although the broader culture may encompass prominent and recurring values, Hispanic/Latine individuals are a diverse group with varied experiences and perspectives. This was reflected as only one participant elected to invite extended family or community members to whole group sessions. While literature notes the collectivistic nature of the Hispanic/Latine culture, families repeatedly mentioned feeling hesitant or opting not to invite extended family members for reasons ranging from avoiding criticism regarding parenting strategies from other family members to feeling like extended family members would be unhelpful to the intervention process. This concept was addressed through focus group discussions conducted prior to the development of the current intervention. Participants expressed feelings of isolation and highlighted variations among family members concerning their understanding of autism, disability, and positive behavior support strategies (Alvarez et al., in prep). Future studies may consider a large-scale tiered intervention to support primary caregivers and family members in a way that matches their knowledge, experience, and needs.

Multiple participants anecdotally described having the greatest difficulty in maintaining a 5:1 proportion of positive to corrective statements. Similarly, participants in the focus groups described their experience that Hispanic/Latine parents typically focused correction instead of positive reinforcement (Alvarez et al., in prep.). In the study, focus group participants tied this

experience to the cultural value of humility and *respeto*, or respect. The practice of obedience toward authority figures, including parents and other respected elders, has been described in depth throughout cultural values literature (Caldaza et al., 2015; Pagán et al., 2024). This difficulty highlights the importance of cultural consideration when implementing FMI; primary caregivers were able to share their experienced difficulty with their coach who had a shared cultural identity.

The current study utilized a nonconcurrent multiple-probe design, which compared response behavior to one's own baseline phase data and to response behavior of other participants. In addition to replications of the present design, future research should compare child behavior outcomes between Hispanic/Latine autistic children receiving a culturally adapted version of PTR-F and Hispanic/Latine autistic children receiving a standard version of PTR-F to further determine the efficacy of a culturally adapted behavior intervention. Future research may also replicate the current study with a different age groups or settings, utilizing PTR for Young Children (PTR-YC) or PTR in school settings; research has yet to determine the effectiveness of PTR-YC or PTR with adolescents for Hispanic/Latine families thus there is a dearth of evidence for these populations.

Additionally, future research may move from testing the preliminary efficacy of the researcher implemented intervention to testing the effectiveness of the culturally adapted intervention when a limited intensity Promotora/o/e de Salud approach, or Community Health Worker approach, is incorporated (Magaña et al., 2017; Magaña et al., 2020). The inclusion of a promotora/o/e has been shown to leverage the relational aspect of parent-to-parent support while maintaining professional support to identify the function of child challenging behavior. The

promotora/o/e also develop intervention and coach the parent in an individualized behavior intervention plan (Magaña et al., 2017; Magaña et al., 2020). The promotora/o/e model has been effective in addressing health disparities in the Latine community, thus the inclusion of this model within the intersection of autism and Hispanic/Latine identity may be beneficial.

Past research involving promotoras who were trained parents of Hispanic/Latine autistic children demonstrated effectiveness in increasing maternal confidence, frequency of use of evidence-based practices, and child social communication, however, this research is limited. Researchers suggested a combined approach of coaching from a specialist with a promotora approach when supporting parents in the implementation of intervention with their child with ASD (Magaña et al., 2017; Magaña et al., 2020). Additionally, there is limited research available on the inclusion of promotora/o/es for Hispanic/Latine autistic children who display challenging behavior. Future research should continue the use of family-mediated, culturally sensitive intervention, but may consider the inclusion of the promotora/o/e model.

Conclusion

Recent data indicate the prevalence of ASD has risen in recent years. The increase may be influenced by broader diagnostic criteria, enhanced surveillance efforts, and increased public awareness (Croen et al., 2002; Worley and Matson, 2011; Zeidan et al., 2022). The prevalence of autism among 8-year-old children in the United States is approximately 1 in every 36 children (Centers for Disease Control and Prevention, 2023). While not a diagnostic criterion for ASD, challenging behavior has high prevalence rates among individuals with autism (Reyes-Martín et al., 2022; Simó-Pinatella et al., 2019). Challenging behavior has the potential to have a global effect on child development. Research indicates that the prolonged presence of these behaviors

may significantly affect a child's developmental progression; thus, the necessity of behavior intervention is apparent when challenging behavior begins to result in exclusion from community facilities and/or increased risk of serious harm (Emerson et al., 1995; 2001).

The Hispanic population in the United States is one of the largest and most rapidly growing demographic groups, reaching a record high of 62.1 million in 2020. Despite increased representation in the general public, there is increasing disproportionality between white children and Hispanic/Latine children regarding autism diagnosis and access to quality autism services (Keller-Bell, 2017; Carr and Lord, 2016; Travers et al., 2014; Morrier and Gallagher, 2012; Valicenti-McDermott et al., 2012). Research has sought to reduce these disparities by developing culturally adapted autism interventions such as Parents Taking Action (Lopez et al., 2019; Magaña et al., 2020; 2017) and Parent Management Training, The Oregon Model (Parra-Cardona et al., 2022). There is ongoing debate on the necessity of cultural adaptation with critics stating interventions must be delivered as designed to preserve fidelity and validity; however, this literature is still developing (Benish et al., 2011; Sundell et al., 2015; Mejia et al., 2017; Gardner et al., 2017).

The current study utilized an existing, established intervention, PTR-F, and incorporated cultural components informed by prior focus groups conducted with Hispanic/Latine members of the autism community (Alvarez et al., in prep). A culturally adapted version of PTR-F was delivered to enhance cultural relevance and engagement with Hispanic/Latine participants while preserving the positive child outcomes observed in previous research (Shadbolt, 2018; Joseph et al., 2019; Choi, 2023; Zhu, 2024; Sears et al., 2013; Bailey and Blair, 2025; Santiago, 2018).

Aims of the present study were to evaluate the efficacy of a culturally adapted PTR-F

intervention in reducing level of child challenging behaviors and increasing alternative behaviors or FCRs. Additionally, qualitative data were collected through non-experimental measures to explore changes in family quality of life and the social validity of the BSP. The study included intentional conversations regarding on cultural values and included invited opportunities for extended family and community members to join BSP development meetings. The BSP was developed as a collaborative effort, reflecting *familismo* and *personalismo* , two commonly prioritized cultural values as noted in Hispanic/Latine research (Caldaza et al., 2015; Pagán et al., 2024).

The study evaluated the impact of a culturally adapted PTR-F on level of challenging behavior and alternative behavior in Hispanic/Latine children with autism. Additional goals included assessing caregiver acceptability of a culturally adapted PTR-F. A nonconcurrent multiple-probe design across dyads was utilized. Analysis included visual analysis and Tau-U for tiers demonstrating behavior change across baseline and intervention phases. Results of the current study were mixed across families. One family displayed evidence of a relation while subsequent two families showed mixed evidence. All children showed increased levels of alternative behavior from baseline to intervention, however, there was considerable variability in intervention FCR for two children. Two children displayed decreased level of challenging behavior from baseline to intervention, however, there was some variability during intervention phase challenging behavior. Additionally, the observed reduction in level was not sustained during maintenance sessions for one participant. Although results were mixed, the current study provides additional information to inform future studies in developing and implementing FMI with Hispanic/Latine autistic individuals and their families. Furthermore, information regarding

factors affecting recruitment, retention, and attrition with Hispanic/Latine families may inform the development of future studies with CLD populations.

APPENDIX

APPENDIX A: INITIAL MEETING GUIDE

Support Team	
NAMES OF MEMBERS	
Interventionist	NAME
Describe your family structure. Who does your child interact most with? What are those interactions like?	
Describe your family's cultural background. What are some things that are important to you culturally?	
What does family time look like? What does your family like doing together?	



INITIAL MEETING



What are some of your child's strengths?	
What are some of your child's interests?	
What support has your child received in the past? What worked? What didn't work?	



REUNIÓN INICIAL



Equipo de apoyo	
NOMBRES DE LOS MIEMBROS	
Intervencionista	NOMBRE
Describe la estructura de su familia. ¿Con quién interactúa más su hijo? ¿Cómo son esas interacciones?	
Describe los antecedentes culturales de su familia. ¿Cuáles son algunas cosas que son importantes para usted a nivel cultural?	
¿Cómo es el tiempo en familia? ¿Qué les gusta hacer en familia todos juntos?	



REUNIÓN INICIAL



¿Cuáles son algunos de los puntos fuertes de su hijo?

¿Cuáles son algunos de los intereses de su hijo?

¿Qué apoyo recibió su hijo en el pasado? ¿Qué funcionó? ¿Qué no funcionó?

APPENDIX B: TRAINING 1 MATERIALS

Capacitación 1: Apoyos universales e individuales

Equipo de disertación de Álvarez: Katie Álvarez, Cindy Rojas Villagomez, Alan Morales

1

Agenda

1. Introducción (si es necesario)
2. Estrategias universales
3. Revisión del plan de apoyo del comportamiento
4. Estrategias individualizadas
5. Selección de estrategias

2

Katie Álvarez, M.S.

Michoacán, Chicago, Texas
Maestría en educación especial y
primera infancia
Especialista de autismo y el
comportamiento

Cindy Rojas Villagomez, M.S.

Varios lugares en Oregon
Maestra de preescolar y cuidadora de niños durante diez años
Terapeuta, con enfoque en jóvenes y familias

3

Estrategias universales de apoyo a los niños

4

**¡Probablemente ya hagan esto!
Podemos tomar este tiempo para
compartir cómo funcionan para su
hijo o cómo podemos darles
recursos para hacer las estrategias
más fáciles de hacer a diario.**

5

Estrategia 1: Altos índices de atención positiva y notar comportamientos apropiados

Puede ser fácilmente controlado cuando se aplica un comportamiento disruptivo y no se aplica un comportamiento disruptivo

Cuando notar niño puede ap	"Deberían estar haciendo el comportamiento esperado de todos modos"	lo "incorrecto", la vez rá la atención.
-------------------------------	---	--

Los niños también resulta en una base de la "e"

Lo más importante: ¡la atención positiva cuando están haciendo correcto puede ayudar a fortalecer las relaciones!

Se recomienda dar cinco intercambios positivos por cada corrección de comportamiento disruptivo

Tú eres...

Alegre	Divertido	Aguentando
Amable	Educativo	Observador
Carfioso	Estudioso	Ordenado
Comprensivo	Flexible	Paciente
Considerado	Generoso	Positivo
Cooperativo	Gracioso	Respetuoso
Creativo	Humorista	Responsable
Curtoso	Independiente	Investigador
Decidido		Valiente

"Encuétralas compartíndose bien"

6

Estrategia 2: Establecer y mantener rutinas diarias regulares y predecibles

Los niños tienden a mejorar cuando hay rutinas regulares y confiables.

Los horarios diarios predecibles pueden ayudar a evitar el comportamiento disruptivo.

Cuando estos horarios o rutinas cambian (así es la vida), es importante que se lo comuniquemos lo antes posible y (si es apropiado) discutamos por qué está cambiando.

Ejemplo de video



7

Estrategia 3: Incluir Patrones Consistentes de Actividades dentro de las Rutinas Diarias

Junto con tener horarios regulares, puede ser útil tener rutinas consistentes dentro de las rutinas.

Ejemplo de un análisis de tarea

Ejemplo de Primero/Luego/Después



8

Estrategia 4: Definir claramente las expectativas de comportamiento

Cada familia tiene una copia de esto, pero a veces, las expectativas pueden cambiar. P. ej., Mantener los límites entre el comportamiento apropiado y el comportamiento disruptivo deben ser enseñados explícitamente.

Si no se les enseña, ¿cómo sabrán qué hacer?

Estas expectativas se enfatizan cuando los adultos responden a un comportamiento apropiado de una manera positiva y a un comportamiento disruptivo de una manera correctiva.

¿Cuáles serán algunas de las expectativas cuando usted era niño? ¿Qué hay de algunas expectativas que tiene ahora para su hijo?

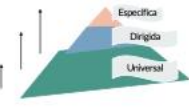
Los niños necesitan ser enseñados durante la hora de jugar con sus hermanos.

9

¿Para quién son útiles estas estrategias?

¡Todos los niños! Estas estrategias se pueden usar para cada niño en todas las circunstancias para evitar el comportamiento disruptivo.

Empezamos con prácticas universales, luego si es necesario, avanzamos para apoyar a la familia en la forma que necesitan.



10

Estrategias individualizadas y el Plan de Apoyo del Comportamiento

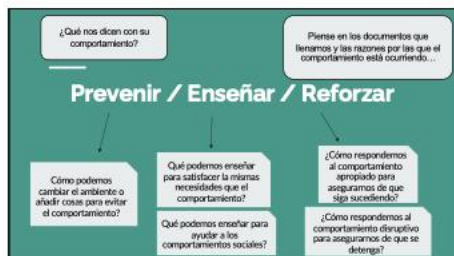
11

Plan de Apoyo del Comportamiento

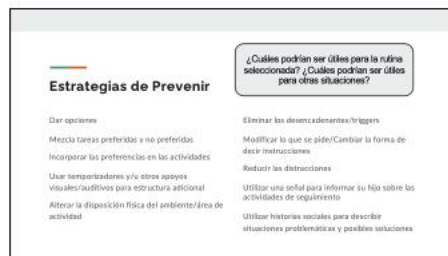
Summary from previous meeting

EDIT FOR EACH FAMILY

12



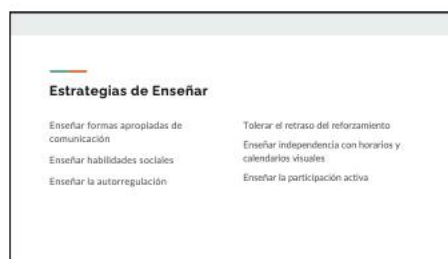
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14



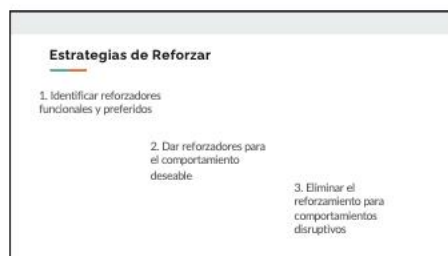
15



16



17



18

Ejemplo:

Comportamiento: Cuando es hora de acostarse, Isal emite un grito agudo y rueda por el suelo y pateas sus piernas.

Declaración de hipótesis: Cuando la rutina a la hora de acostarse termina y mamá y/o papá tratan de salir del cuarto, Isal comienza a rabiar. Como resultado, retrasa la hora de acostarse y recibe atención adicional de mamá y / o papá.

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Ejemplo:

	Prevenir
Estrategias	1. Mejorar la previsibilidad con calendarios y horarios 2. Usar relojes u otros apoyos visuales/auditivos para mejorar la estructura
Descripción breve	1. Dar un aviso de cinco minutos 2. "¿Qué hora es?" "¿A qué hora acuestas?" 3. Enseñar un horario visual 4. Dar aviso para el final del cuentacuento
Notas de aplicación	Usa fotos de la hora de acostarse, agarra el reloj Ejemplos del elogio descriptivo: "¡Gracias por caminar sereno!" "¡Me gusta cuando sigues mis instrucciones! ¡Eres tan atento!" "¡Buen trabajo diciendo buenas noches!"

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Ejemplo cont.

	Enseñar
Estrategias	Tolerar el retraso del refuerzo
Descripción breve	1. Mostrando una foto de Isal en su cama. "Quédete en su cama y Mamá volverá para leerle un libro especial" 2. Programa un temporizador para un minuto 3. Acostar juntos. "Buenas noches" 4. Empieza el temporizador 8. Si Isal se queda en el cuarto por un min → Reforzar #2. Si Isal sale del cuarto → Reforzar #3
Notas de aplicación/Recordatorios	Agarra las fotos de Isal en su cama, los libros, y el reloj

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Ejemplo cont.

	Reforzar
Estrategias	1. Identificar reforzadores funcionales y preferidos
Descripción breve	1. Escoge libros preferidos y ponlos fuera de alcance 2. Cuando se quede en su cuarto hasta que suene el tiempo, dale elogios descriptivos a Isal, y pídele que escoja un libro 3. Si Isal sale del cuarto, si "Es hora de dormir", llévolo a la cama, programa el reloj, y sale
Notas de aplicación/Recordatorios	Ejemplos elogio descriptivo: "¡Te quedaste en tu cama! ¡Buen trabajo! ¡Te ves muy cómodo!" "¡Me gusta cuando te quedas en tu habitación! ¡Eres tan grande!"

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Estrategias de Prevenir

Dar opciones	Eliminar los desencadenantes/triggers
Mezcla tareas preferidas y no preferidas	Modificar lo que se pide/Cambiar la forma de decir instrucciones
Incorporar las preferencias en las actividades	Reducir las distracciones
Usar temporizadores y/u otros apoyos visuales/auditivos para estructura adicional	Utilizar una señal para informar a su hijo sobre las actividades de seguimiento
Alterar la disposición física del ambiente/línea de actividad	Utilizar historias sociales para describir situaciones problemáticas y posibles soluciones

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Estrategias de Enseñar

Enseñar formas apropiadas de comunicación	Tolerar el retraso del reforzamiento
Enseñar habilidades sociales	Enseñar independencia con horarios y calendarios visuales
Enseñar la autorregulación	Enseñar la participación activa

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Estrategias de Reforzar

1. Identificar reforzadores
funcionales y preferidos

2. Dar reforzadores para
el comportamiento
deseable

3. Eliminar el
reforzamiento para
comportamientos
disruptivos

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APPENDIX C: EXAMPLE BSP

Sample PTR-F Behavior Support Plan

Child: Isai

Team members: Esther (Mom), Luis (Dad), Kaci (PTR-F facilitator)

Date of plan: July 2, 2015

Target behavior to increase: Goes to sleep on his own

Operational definition: Isai will calmly (e.g., use an inside voice, use compliant phrases and actions, walk from room to room, follow parent prompt in 30 seconds or less) participate in and complete the bedtime routine. When Mom or Dad completes the routine and leaves the room, Isai will stay in his room and fall asleep independently.

Target behavior to decrease: Tantrums

Operational definition: Isai emits a high-pitched scream (often for several seconds) and usually rolls around on the floor and kicks his legs; if someone is near, he may hit or kick whoever is close. He sometimes screams "NO!" during these episodes.

Hypothesis statement: When the bedtime routine is over and Mom and/or Dad attempt to leave the room, then Isai tantrums: as a result, he delays bedtime and gets extra attention from Mom and/or Dad.

Prevent strategy: Enhance predictability with calendars and schedules; use timers and other visual/auditory supports for added structure

Materials needed: Pictures of the steps of the bedtime routine in the correct order, digital timer

Steps for implementing the strategy:

1. Five minutes before it is time for Isai to begin his bedtime routine, Mom will make sure to have Isai's attention and tell him, "Five more minutes until bedtime. I'm going to set the timer." Briefly review the steps for bedtime with Isai and set the timer. The timer will be kept out of Isai's reach.
2. When the 5 minutes are over and the timer is beeping, Mom will take the timer to Isai and ask, "What time is it?" (pause to wait for response from Isai-if he does not respond or gives an incorrect answer, Mom will say) "It's time to get ready for bed."
3. Mom will show Isai the picture of the first step of the bedtime routine (pick out pajamas) and say, "What do we do first?" (pause to wait for response from Isai- if he does not respond or gives an incorrect answer, Mom will say) "We pick out pajamas."
4. Isai will walk to his room and pick out pajamas.
5. As Isai completes each step (pajamas, potty, brush teeth, pick out two books, read books, say goodnight), Mom will provide descriptive verbal praise (e.g., "Thank you for walking with Mommy," "I like when you listen to Mommy") for each of the steps (even if Mom has to help Isai complete the steps at first).
6. When the second story is almost over (last few pages), provide Isai with a verbal warning that the book is almost over and it will be time to go to sleep.

Teach strategy: Tolerate delay of reinforcement

Materials needed: Pictures of Isai in his bed and of the basket of superhero books, digital timer

Steps for implementing the strategy:

1. When the bedtime routine steps are complete, show Isai the next step in the schedule, which is him lying in his bed. Mom will say, "Stay in bed and mommy will come back to read you a special story."
 2. Set the timer for 1 minute.
 3. Say "Goodnight" and leave the room.
 4. When Isai stays in his bed (or at least in the room), follow step 2 of Reinforce Plan: when Isai leaves the room, follow step 3 of Reinforce Plan
 5. Repeat these steps until Isai falls asleep.
-

Reinforce plan: 1) Identify functional reinforcers, 2) provide reinforcer for desirable behavior, and 3) remove reinforcement for challenging behavior

Materials needed: Special superhero books in Isai's room, out of his reach

Steps for implementing the strategy:

1. Select special superhero books that Isai can only access for successfully staying in his bed/room.
2. When Isai stays in his bed (or at least in the room) until the timer starts to beep, provide descriptive praise to Isai (e.g., "Good job staying in your bed"), allow him to pick a special superhero book, and read it to him. When the story is over, say "Goodnight" again and leave the room.
3. If Isai leaves his room before the timer starts to beep, calmly tell him one time, "It's time for bed," put him back in bed, and walk out of the room. Reset the timer for 1 minute. If he does not stay in his bed/room, continue to follow this step until he stays in bed for 1 minute (then follow step 2, above).

Ejemplo de plan de apoyo conductual de PTR-F

Niño: Isai

Miembros del equipo: Esther (Mamá), Luis (Papá), Kaci (Facilitadora de PTR-F)

Fecha del plan: 2 de julio de 2015

Comportamiento objetivo a aumentar: Se va a dormir solo

Definición operativa: Isai participará y completará con calma (p. ej., usando una voz interna, usando frases y acciones complacientes, caminando de una cuarto a otra, siguiendo las ordenes de los padres en 30 segundos o menos) y completará la rutina de la hora de acostarse. Cuando mamá o papá completen la rutina y salgan del cuarto, Isai se quedará en su cuarto y se dormirá de forma independiente.

Comportamiento objetivo a disminuir: Berrinches

Definición operativa: Isai emite un grito agudo (a menudo durante varios segundos) y generalmente rueda por el suelo y patea sus piernas; si alguien está cerca, puede golpear o patear a quien esté cerca. A veces grita "¡NO!" durante estos episodios.

Hipótesis: Cuando la rutina de la hora de acostarse termina y mamá y/o papá intentan salir del cuarto, entonces Isai hace berrinches: como resultado, retrasa la hora de acostarse y recibe atención adicional de mamá y/o papá.

Estrategia de prevención: Mejore la previsibilidad con calendarios y horarios; use temporizadores y otros apoyos visuales/auditivos para agregar estructura

Materiales necesarios: Fotos de los pasos de la rutina de la hora de acostarse en el orden correcto, temporizador digital

Pasos para la implementación de la estrategia:

1. Cinco minutos antes de que sea hora de que Isai comience su rutina a la hora de acostarse, Mamá llama la atención de Isai y le dirá: "Cinco minutos más hasta la hora de acostarse. Voy a poner el temporizador". Revise brevemente los pasos para la hora de acostarse con Isai y ponga el temporizador. Ponga el temporizador fuera del alcance de Isai.
 2. Cuando terminen los 5 minutos y el temporizador está sonando, Mamá le llevará el temporizador a Isai y le preguntará: "¿Qué hora es?" (haga una pausa para esperar la respuesta de Isai, si no responde o da una respuesta incorrecta, Mamá dirá) "Es hora de prepararse para ir a la cama".
 3. Mamá le mostrará a Isai la imagen del primer paso de la rutina de la hora de acostarse (escoger la pijama) y dirá: "¿Qué hacemos primero?" (haga una pausa para esperar la respuesta de Isai, si no responde o da una respuesta incorrecta, Mamá dirá) "Escogemos las pijamas".
 4. Isai caminará a su cuarto y escogerá la pijama.
 5. Mientras que Isai completa cada paso (pijama, orinal, cepillarse los dientes, escoger dos libros, leer libros, decir buenas noches), Mamá dirá elogios verbales descriptivos (por ejemplo, "Gracias por caminar con mamá", "Me gusta cuando escuchas a Mamá") para cada uno de los pasos (incluso si Mamá tiene que ayudar a Isai a completar los pasos al principio).
 6. Cuando el segundo libro esté casi terminado (últimas páginas), dale a Isai una advertencia verbal de que el libro está casi terminado y será hora de irse a dormir.
-

Estrategia de enseñar: Tolerar el retraso del refuerzo

Materiales necesarios: Fotos de Isai en su cama y de la canasta de libros de superhéroes, temporizador digital

Pasos para la implementación de la estrategia:

1. Cuando se completen los pasos de la rutina de la hora de acostarse, muéstrole a Isai el siguiente paso en el horario, que es él acostado en su cama. Mamá dirá: "Quédate en la cama y mamá volverá a leerte un cuento especial".
 2. Ponga el temporizador en 1 minuto.
 3. Di "Buenas noches" y sal del cuarto.
 4. Cuando Isai se quede en su cama (o al menos en el cuarto), siga el **paso 2 del Plan de Refuerzo**. Cuando Isai salga de la cuarto, siga el **paso 3 del Plan de Refuerzo**
 5. Repite estos pasos hasta que Isai se duerma.
-

Plan de Reforzamiento: 1) Identificar los reforzadores funcionales, 2) proporcionar refuerzos para el comportamiento deseable y 3) eliminar el refuerzo para el comportamiento disruptivo

Materiales necesarios: Libros especiales de superhéroes en el cuarto de Isai, fuera de su alcance

Pasos para la implementación de la estrategia:

1. Seleccione libros especiales de superhéroes a los que Isai solo puede obtener si se queda en su cama/cuarto.
2. Cuando Isai se quede en su cama (o al menos en su cuarto) hasta que el temporizador comience a sonar, dale elogios descriptivos (por ejemplo, "Buen trabajo quedándote en tu cama"), permítele escoger un libro especial de superhéroes y léelo. Cuando termine el libro, vuelva a decir "Buenas noches" y salga de la habitación.
3. Si Isai sale de su cuarto antes de que el temporizador comience a sonar, dígame con calma una vez: "Es hora de acostarse", vuelva a meterlo en la cama y salga del cuarto. Vuelva a empezar el temporizador por 1 minuto. Si no se queda en su cama/cuarto, continúe siguiendo este paso hasta que se quede en la cama por 1 minuto (luego siga el paso 2, arriba).

APPENDIX D: TRAINING 2 MATERIALS

Training 2

Introduction to Coaching

Alvaredo Dissertation Team: Katie Alvarez, Cinthia Rojas Villagomez, Alan Morales

1

Agenda

01

Review of Behavior Support Plan

02

Confirm selected PTR strategies

03

Steps to implement PTR strategies

04

Coaching: What to expect

2

Behavior Support Plan Review

Universal Practices:

- ☐ Maintain high ratio of positive attention.
- ☐ Establish and maintain predictable daily schedules.
- ☐ Include consistent patterns of activities within daily routines.
- ☐ Define behavior expectations and the differences between desirable and disruptive behavior.

Hypothesis Statement:

3

Prevent Strategies

Strategy 1

Strategy 2

Strategy 3

4

Teach Strategies

Strategy 1

Strategy 2

Strategy 3

5

Reinforcement

Every plan includes:

1

Identify preferred functional reinforcement

LIST

2

Deliver reinforcement for the desirable behavior

3

Remove reinforcement for the disruptive behavior

6

Example:

Challenging Behavior: Iai emits a high-pitched scream, rolls on the floor, and kicks his legs (tantrum).

Hypothesis Statement: When bedtime routine finishes and his mom tries to leave his room, Iai begins to tantrum. As a result, he delays bedtime and receives additional attention from his mom.

7

Example:

	Prevent
Strategies	1. Improve predictability with calendars and schedules 2. Use timers or other visual/auditory aids to improve structure
Brief Description	1. Give a five-minute warning 2. "What time is it?" 3. Teach a visual schedule 4. Give notice for the end of the storybook
Application Notes	Use bedtime photos, grab the timer Examples of descriptive praise: "Thank you for waiting with me!" "I like it when you follow my instructions! You are so attentive!" "Good job saying good night!"

8

Example cont.

	Teach
Strategies	Totomote delay of reinforcement
Brief Description	1. Showing a photo of Iai on his bed: "Stay in your bed and Mom will come back to read you a special book!" 2. Set a timer for one minute 3. Play together, "Good Night!" 4. Start the timer 5. If Iai stays in the room for a min → Reinforce #2; if Iai leaves the room → Reinforce #3
Application Notes	Grab the photos of Iai in his bed, the book, and timer

9

Example cont.

	Reinforce
Strategies	1. Identify functional and preferred reinforcers
Brief Description	1. Choose preferred books and put them out of reach 2. When he stays in his room until timer rings, give descriptive praise to Iai and ask him to choose a book 3. If Iai leaves the room, say "It's time to sleep," take him to bed, restart the timer, and go out
Application Notes	Examples descriptive praise: "You stayed in your bed! Good job! You look very comfortable!" "I like it when you stay in your room! What a big boy!"

10

Prevent Strategies

Strategies	1. 2. 3.
Description	
Application Notes	

12

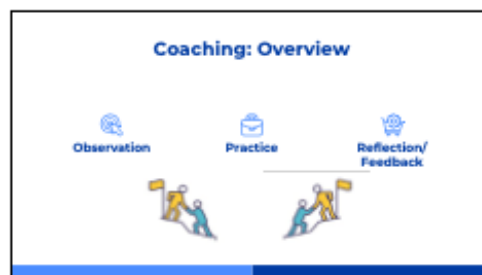
Teach Strategies

Strategies	1. 2.
Description	
Application Notes	

13

Reinforce Strategies	
Strategies	1. Identify functional preferred reinforcers Preferred Reinforcers:
Description	
Application Notes	

14



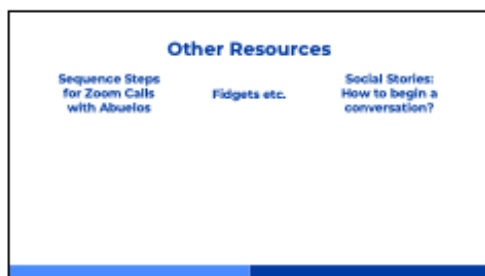
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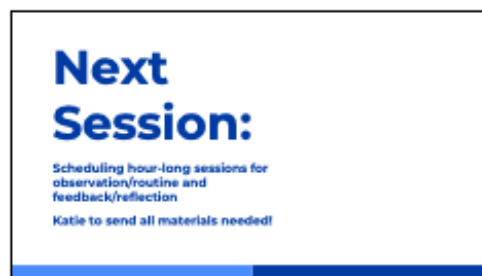
16



17



18



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Capacitación 2 Introducción al Coaching

1

Agenda

01	Revisión del plan de apoyo al comportamiento	02	Confirmar las estrategias de PTR seleccionadas
03	Paso para implementar estrategias de PTR	04	Coaching: Qué debe esperar

2

Revisión del plan de apoyo al comportamiento

Estrategias universales:

- Alta influencia de atención positiva y notar comportamientos apropiados.
- Grabador y mantener rutinas diarias regulares y predecibles.
- Incluir patrones consistentes de actividades dentro de los rutinas diarias.
- Definir claramente las expectativas del comportamiento.

Reducción de la carga:

3

Estrategias de Prevenir

- Estrategia 1
- Estrategia 2
- Estrategia 3
- Estrategia 4

4

Estrategias de Enseñar

- Estrategia 1
- Estrategia 2
- Estrategia 3

Ejemplo de una carta de comunicación

Carta de primero/después

5

Estrategias de Reforzamiento

Todos planes deben:

- Identificar reforzadores funcionales preferidos.
- Proporcionar reforzamiento para el comportamiento deseado.
- Eliminar el reforzamiento para el comportamiento disruptivo.

Reforzadores:

6

Implementación de las estrategias

7

Ejemplo: La familia de Isai

Comportamiento: Cuando es hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas.

Declaración de hipótesis: Cuando la rutina a la hora de acostarse termina y mamá y/o papá insisten en salir del cuarto, Isai comienza a rabiar. Como resultado, retrasa la hora de acostarse y recibe atención adicional de mamá y/o papá.

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Ejemplo: La familia de Isai

Estrategia de prevención: Mejorar la previsibilidad con calendarios y horarios; Las temporizadoras y otros apoyos visuales/auditivos para agregar estructura.

Materiales necesarios: Fotos de los pasos de la rutina de la hora de acostarse en el orden correcto, temporizador digital

9

Pases de implementación

1. Encuentra antes de que ocurra qué pasos se van a enseñar. Identifica el comportamiento que se va a enseñar. "Cuando es hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas".
2. Encuentra el comportamiento que se va a enseñar. "Cuando es hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas".
3. Encuentra el comportamiento que se va a enseñar. "Cuando es hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas".
4. Encuentra el comportamiento que se va a enseñar. "Cuando es hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas".
5. Encuentra el comportamiento que se va a enseñar. "Cuando es hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas".
6. Encuentra el comportamiento que se va a enseñar. "Cuando es hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas".

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Ejemplo: La familia de Isai

Enseñar estrategia: Tal vez el retraso del refuerzo.

Materiales necesarios: Fotos de Isai en su cama y de la cama de Isai de superhéroe, temporizador digital

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Pases de implementación

1. Cuando se complete los pasos de la rutina de la hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas.
2. Cuando se complete los pasos de la rutina de la hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas.
3. Cuando se complete los pasos de la rutina de la hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas.
4. Cuando se complete los pasos de la rutina de la hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas.
5. Cuando se complete los pasos de la rutina de la hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas.
6. Cuando se complete los pasos de la rutina de la hora de acostarse, Isai emite un grito agudo y rueda por el suelo y golpea sus piernas.

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Ejemplo: La familia de Isai

Plan de Reforzamiento: 1) identificar las refuerzos funcionales, 2) proporcionar refuerzos para el comportamiento deseado y 3) eliminar el refuerzo para el comportamiento disruptivo

Materiales necesarios: Libros especiales de superhéroes en el cuarto de Isai, fuera de su alcance

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Pasos de implementación

1. Seleccionar cinco oportunidades de experiencias a las que Isai aún puede obtener el su poder como superhéroe.
2. Cuando Isai se quede en su cuarto al menos en su cuarto/leste que el comportamiento continúa a ser un solo ejemplo disruptivo por ejemplo, "Isai siempre quedándose en su cuarto" o "Isai siempre se queda en su cuarto" y no en su cuarto.
3. Entre cada cinco minutos de 20 que el comportamiento continúa a ser un solo ejemplo disruptivo por ejemplo, "Isai siempre se queda en su cuarto" o "Isai siempre se queda en su cuarto" y no en su cuarto.

14

Coaching: Descripción General

Observación Práctica Reflexión/Feedback

15

Coaching: Métodos

Modelado
Observación de un modelo de comportamiento

Grabación de video
Grabación de video para ser visto y reflexionar

Role-playing
Práctica de habilidades de comunicación en un entorno seguro

Resolución de problemas
Identificación de problemas y búsqueda de soluciones

16

Coaching: Próximos Pasos

17

Próxima sesión:

Programación de sesiones de una hora de duración para observación/rutina y comentarios/reflexión

Kate le enviará todos los materiales necesarios!

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APPENDIX E: BSP COMMUNITY SUMMARY TEMPLATE

NAME's Support Plan Summary

Age: Gender: Language Preference:

Likes:

-
-
-
-

Dislikes:

-
-
-
-

Important to Know about NAME

Individualized to family's preference

- Diagnosis
- What diagnosis means to child/family
- Behaviors

Strategies to support NAME

General (Universal):

Prevent:

Reinforce:

NAME's Support Plan Summary



Age:

Gender:

Language Preference:

Strategies to Support NAME

		PREVENT	REINFORCE
Description	Strategy 1	Description of prevention strategies and context for using in layperson's terms	Description of reinforce/consequence strategies and context for using in layperson's terms
		Strategy • • •	Strategy • • •
	Strategy 2	Strategy • • •	Strategy • • •
		Strategy • • •	Strategy • • •



Resumen del plan de apoyo de NAME

Edad:

Sexo:

Idioma preferido:

Preferencias:

-
-
-
-

Aversiones:

-
-
-
-

Lo que es importante saber sobre NAME

Individualizado según las preferencias de la familia

- Diagnóstico
- Qué significa el diagnóstico para el niño y la familia
- Comportamientos

Estrategias para apoyar NAME

General (universal):

Prevenir:

Reforzar:

Resumen del plan de apoyo de NAME

Edad:

Sexo:

Idioma preferido:



Estrategias de apoyo NAME

		PREVENIR	REFORZAR
Descripción	Estrategia 1	Descripción de las estrategias de prevención y el contexto para su uso en términos sencillos	Descripción de las estrategias de reforzamiento/consecuencia y el contexto para su uso en términos sencillos
		Estrategia • • •	Estrategia • • •
	Estrategia 2	Estrategia • • •	Estrategia • • •
		Estrategia • • •	Estrategia • • •

APPENDIX F: SAMPLE DATA COLLECTION FORM

[illegible]

BX COUNT #	
CBX	0
ALT	0

INTERVAL COUNT #	
TOTAL INTERVAL	0
OFF SCREEN	0
ADJUSTED INTERVAL	0

PERCENTAGE AND ADJUSTED INTERVAL WILL AUTO CALCULATE

% OF INTERVALS WITH CBX	#DIV/0!
% OF INTERVALS WITH ALT	#DIV/0!

APPENDIX G: PTR-F BSP SUMMARY

DYAD 1 BSP SUMMARY

Resumen del plan de apoyo al comportamiento de PTR-F

Niño: Ramón

Fecha: 6 de junio, 2025

Prácticas para todos los niños:

- ☐ Mantener altos índices de atención positiva.
- ☐ Establecer y mantener horarios diarios predecibles.
- ☐ Incluir patrones consistentes de actividades dentro de las rutinas diarias.
- ☐ Definir las expectativas de comportamiento y la diferencia entre el comportamiento deseable y el disruptivo.

	PREVENIR	ENSEÑAR	REFORZAR
ESTRATEGIAS	1. Reducir/eliminar distracciones 2. Alterar la disposición física del ambiente/área de la actividad	1. Tolerar el retraso del reforzamiento 2. Enseñar independencia con horarios/apoyos visuales	Todos planes deben: 1. Identificar reforzadores funcionales preferidos 2. Proporcionar un reforzador para el comportamiento deseable 3. Eliminar el reforzamiento para el comportamiento disruptivo Reforzamiento preferido: Elogios de adultos, videos de gatos
DESCRIPCIÓN BREVE	1. Elimine las distracciones del ambiente – apague el TV, asegurese de que todos juguetes están recogidos 2. Ponga solo los materiales necesarios en la mesa	1. “Primero prepara la cena, después podemos prender la tele. Si lo haces sin mi ayuda, podemos mirar videos de gatos.” 2. Revise los pasos de la rutina en la tarjeta de secuencia de la cena con Ramón 3. “Qué vamos a comer hoy?” 3. Empiece la rutina 4. Si Ramón termina un paso independientemente → Reforzar #2 5. Si Ramón deja de preparar la cena por más de 10 segundos → Reforzar #3	1. Escoge un video especial de gatos o un película de Disney 2. Cuando Ramón termina un paso independientemente , dale elogios descriptivos a Ramón 3. Cuando Ramón deja de enfocar en un paso por más de 10 segundos , señale el paso. Si ocurre otra vez, señale el paso y di “Recuerda seguir tus pasos” (o algo similar) 4. Si Ramón termina la rutina con tres o menos recordatorios/correcciones , puede escoger un video de gatos para mirar durante la cena 5. Si Ramón necesita cuatro o más recordatorios , puede escoger tres videos para mirar y Mamá y/o Papá escoge cual video puede mirar

	PREVENIR	ENSEÑAR	REFORZAR
NOTAS DE IMPLEMENTACION	Quite cosas extras de la mesa Ponga el control de la tele donde Ramón no puede verlo	Agarre la tarjeta de secuencia para la cena Rellene Paso 2 y 3 con un marcador Ejemplos del elogio descriptivo: “¡Gracias por preparar la limonada, eres un gran ayudante!” “¡Gracias por rallar el queso SIN comerlo, ahora tenemos más queso para la familia!”	Ejemplos del elogio descriptivo: “Hiciste la cena sin mi ayuda! ¡Gracias por ayudarme!” “Wow, preparaste la cena tú solo! ¿Cuál video de gatos vamos a mirar?”

DYAD 2 BSP SUMMARY

FORMA 9

Resumen del plan de apoyo al comportamiento de PTR-F

Niño: Luis

Prácticas para todos los niños:

- ☐ Mantener altos índices de atención positiva.
- ☐ Establecer y mantener horarios diarios predecibles.
- ☐ Incluir patrones consistentes de actividades dentro de las rutinas diarias.
- ☐ Definir las expectativas de comportamiento y la diferencia entre el comportamiento deseable y el disruptivo.

	PREVENIR	ENSEÑAR	REFORZAR
ESTRATEGIAS	1. Dar opciones 2. Alterar la disposición física/Eliminar desencadenantes 3. Usar temporizadores 4. <i>Antes de salir de la casa, asegurarse que Luis ya comió)</i>	Enseñar formas apropiadas de comunicación Tolerar el retraso del reforzamiento Enseñar la autorregulación Enseñar independencia con horarios y calendarios visuales, y primero/después	Todos planes deben: 4. Identificar reforzadores funcionales preferidos 5. Proporcionar un reforzador para el comportamiento deseable 6. Eliminar el reforzamiento para un comportamiento disruptivo
DESCRIPCIÓN BREVE	1. Dile a otros adultos conocidos que Luis solo acepta comida/bebidas de su mamá y papá 2. Guarde todas las comidas preferidas 3. Ponga la señal de "PARA/ALTO" en los gabinetes cuando no es hora de comer 4. Ponga la rutina en un área donde Luis puede mirarla 5. Ponga los juguetes/fidgets y el temporizador preparado en la mesa donde Luis va a comer	Enséñale a Luis la tarjeta de la comida para la cena Luis o Vicki (Madre) puede poner la tarjeta de comida en Después área Luis o Vicki puede poner la visual para "Jugar/Esperar" en Primero área "Primero puedes jugar o esperar por X minutos, luego puedes comer X." (Empieza la temporizadora) Si Luis se espera o pregunta por la comida →Reforzar #2 Si Luis agarra la comida →Reforzar #3 Cuando ya casi es hora de terminar, Vicki puede decir a Luis, "Este es el último plato."	Reforzamiento: Elogios verbales, cosquillas, comida preferida 1. A. Cuando Luis espera por la comida por 10 segundos sin agarrarla, proporcionar elogios verbales y específicos. 2. B. Cuando Luis se espera por el tiempo en el temporizador, proporcionar elogios verbales y dale la comida preferida. 3. C. Cuando Luis sigue las reglas de comer en la mesa sin agarrar la comida por más de 50% de oportunidades, puede recibir una soda chica para llevar de la mesa. También sirve as un señal que ya acabo la comida. 4. Si Luis no espera o intenta agarrar la comida, bloquee y rediríjalo a la tarjeta de Primero/Después. Repita "Primero siéntate, luego comida."

	PREVENIR	ENSEÑAR	REFORZAR
NOTAS DE IMPLEMENTACIÓN	Agarra las visuales necesarias para la hora de comer (p. ej., si van a comer pizza y soda, saca las visuales de 'pizza' y 'soda') Elogios positivos y específicos: Gracias por ayudarme arreglar la comida. ¡Eres un ayudante genial!	El uso del temporizador es para cuando la comida no está lista y Luis tiene que comer (Es posible que la rutina sea más exitosa si esperamos llamar a Luis a la cocina hasta que la comida esté lista)	Ejemplos de elogios: Gracias por esperar, aquí esta tu comida Puede poner la visual de "ALTO/PARA" en la mesa cuando termine la comida

DYAD 3 BSP SUMMARY

Resumen del plan de apoyo al comportamiento de PTR-F

Niño: Pedro

Fecha:

Prácticas para todos los niños:

- ☐ Mantener altos índices de atención positiva.
- ☐ Establecer y mantener horarios diarios predecibles.
- ☐ Incluir patrones consistentes de actividades dentro de las rutinas diarias.
- ☐ Definir las expectativas de comportamiento y la diferencia entre el comportamiento deseable y el disruptivo.

Declaración de la hipótesis:

	PREVENIR	ENSEÑAR	REFORZAR
ESTRATEGIAS	• Dar opciones • Mezclar tareas preferidas y no preferidas • Incorporar las preferencias en las actividades	• Enseñar formas apropiadas de comunicación • Enseñar habilidades sociales • Enseñar autorregulación • Enseñar independencia con horarios y calendarios visuales	Todos planes deben: 7. Identificar reforzadores funcionales preferidos 8. Proporcionar un reforzador para el comportamiento deseable 9. Eliminar el reforzamiento para un comportamiento disruptivo
DESCRIPCIÓN BREVE	1. Dale a Pedro opciones entre las tareas o demandas 2. Usa las preferencias de Pedro durante actividades menos preferidas 3. Arregla el orden de tareas para que Pedro puede hacer cosas más fáciles al principio, antes de tareas más difíciles/no preferidas 4. Ponga la carta de Primero/Después en un área donde Pedro puede verla	1. Enséñale a Pedro la carta de la actividad preferida (p.ej., tableta, Legos, dibujar) 2. Pedro o Angelina (Madre) puede poner la carta de actividad preferida en “Después” área 3. Pedro o Angelina puede poner la visual para “Leer” en “Primero” área 4. “Primero vamos a leer por X minutos. Luego, puedes hacer X por X minutos. Si necesitas un break, puedes tocar la tarjeta de “No” o “Break” 5. Empieza un temporizador. Inicia el temporizador solo cuando esté listo. 6. Si Pedro lee con Angelina sin golpearse o sin quejarse → Reforzar #2 7. Si Pedro rehúsa a leer o si Pedro golpease → Reforzar #3	1. Reforzamiento: Elogios verbales, Legos, tiempo con su tableta 2. A. Cuando Pedro lee por un minuto con su mamá sin golpearse o sin quejarse, proporcionar elogios verbales y específicos. B. Cuando Pedro lee por el tiempo en el temporizador con su mamá sin golpearse o sin quejarse, proporcionar elogios verbales y dale su tiempo con la actividad preferida. C. Si Pedro pide un break, proporcionar elogios verbales y dale su tiempo con la actividad preferida. 3. A. Si Pedro rehúsa a leer, enséñale que puede pedir un descanso o puede leer algo diferente. También puede escoger algo diferente para hacer después de leer. B. Si Pedro golpease, enséñale que puede pedir un descanso si no se siente listo para leer.

	PREVENIR	ENSEÑAR	REFORZAR
NOTAS DE IMPLEMENTACION	Agarra las visuales necesarias para la rutina (p. ej., leer, tableta, Primero/Después) Elogios positivos y específicos: Gracias por sentarse a leer conmigo.	Elogios positivos y específicos: ¡Gracias por leer conmigo! Me gusta pasar tiempo contigo. Wow! Leíste la última página. ¡Eres un buen lector!	Elogios positivos y específicos: ¡Leíste conmigo por todo el tiempo! Te ganaste un descanso con tu tableta. Gracias por pedir un descanso. Me gusta que me preguntaste en lugar de golpear/gritar. Podemos regresar al libro en un minuto.

APPENDIX H: CAREGIVER FIDELITY OF IMPLEMENTATION

Dyad 1: Esther and Ramón

STRATEGY STEP	WAS THE STEP IMPLEMENTED?					PROMPT NEEDED FROM COACH?	YES = 100% of opportunities/strategy MOST = 66-99% of opportunities/strategy SOME = 33-65% of opportunities/strategy NO = Less than 32% of opportunities/strategy N/A = Not applicable
	YES	MOST	SOME	NO	N/A	Number of prompts needed from coach	
PREVENT STRATEGIES (setting up routine)							
1. Turn off the TV	☐	☐	☐	☐	☐		
2. Make sure all toys are put away	☐	☐	☐	☐	☐		
3. Put required materials/ingredients on table	☐	☐	☐	☐	☐		
TEACH STRATEGIES (during routine)							
4. State First/Then for dinner routine - Primero prepara la cena, después podemos preder la tele. Si lo haces sin mi ayuda, miramos videos de gatos.	☐	☐	☐	☐	☐		
5. Review the steps for dinner preparation using the sequence card	☐	☐	☐	☐	☐		
6. Check for comprehension: Ask repeat a step/what is for dinner today.	☐	☐	☐	☐	☐		
7. Start dinner routine	☐	☐	☐	☐	☐		
REINFORCE STRATEGIES							
8a. When finishes a step, give descriptive verbal praise	☐	☐	☐	☐	☐		
STEP 1 Wash hands	Praise/No praise						
STEP 2 Set the table	Praise/No praise						
STEP 3 Help mom make dinner	Praise/No praise						
STEP 4 Grab dinner plates from counter	Praise/No praise						
STEP 5 Put dinner plates at each seat	Praise/No praise						
STEP 6 Tell Mom you are done	Praise/No praise						
8b. When is off task for more than 10 seconds, point to the sequence card. If it happens again, point to the sequence card and say "Recuerda seguir tus pasos" (for example)	☐	☐	☐	☐	☐		
Opportunities Prompt							
after 10 seconds							
COUNT							
Does not prompt							
COUNT							
AFTER DINNER							
9. If completes routine with 3 (or less) prompts/reminders, praise him and let him choose a cat video to watch.	☐	☐	☐	☐	☐		
10. If needed more than three reminders/prompting, let him choose a Disney movie to watch. Terminaste la rutina! Escoge un película de Disney porque necesitaste unos recordatorios, pero mañana podemos tratar de nuevo!	☐	☐	☐	☐	☐		
TOTAL COUNTS							
PERCENTAGES							
TOTAL NUMBER OF ITEMS (EXCLUDING N/A)							
YES	Yes/TOTAL * 100						
MOST	Most/TOTAL * 100						
SOME	Some/TOTAL * 100						
NO	No/TOTAL * 100						

Dyad 2: Vicki and Luis

STRATEGY STEP	WAS THE STEP IMPLEMENTED?					PROMPT NEEDED FROM COACH?
	YES	MOST	SOME	NO	N/A	Number of prompts needed from coach
PREVENT STRATEGIES (setting up routine)						
1. Put away preferred foods that are not available for eating	☐	☐	☐	☐	☐	
2. Put the STOP sign on cabinets that have foods Luis should not have access to	☐	☐	☐	☐	☐	
3. Put First/Then materials (First/Then card, visual cards) on the table	☐	☐	☐	☐	☐	
4. Put fidgets/small toys and timer on the table	☐	☐	☐	☐	☐	
TEACH STRATEGIES (during routine)						
5. Show Luis what is for meal that day and say "Hoy vamos a comer X"	☐	☐	☐	☐	☐	
6. Either Luis or Mom places the food card on the "Después" area of the Primero/Después card	☐	☐	☐	☐	☐	
7. Luis or Mom places the "Jugar/Esperar" visual on the "Primero" area of the Primero/Después card	☐	☐	☐	☐	☐	
8. Show the Primero/Después card to Luis and say, "Primero puedes jugar o esperar por X minutos, luego puedes comer X."	☐	☐	☐	☐	☐	
9. Start the timer	☐	☐	☐	☐	☐	
10. When the timer is done, give Luis behavior specific praise and serve him a plate of food.	☐	☐	☐	☐	☐	
11. When it is his final plate, show him the non-food options for after meal, "Este es el último plato. ¿Qué quieres hacer después?"	☐	☐	☐	☐	☐	
12. Luis or Mom places the selected visual on the "Después" area of the Primero/Después card	☐	☐	☐	☐	☐	
13. When Luis finishes his final serving, Mom removes the food visual from Primero and shows Luis the card. Ya terminaste la cena/el almuerzo. Puedes jugar/mirar tus videos/etc.	☐	☐	☐	☐	☐	
14. Mom places the STOP sign on the table and any other necessary places	☐	☐	☐	☐	☐	
REINFORCE STRATEGIES						
15a. When Luis waits for food for longer than 10 seconds without reaching for food, deliver behavior-specific positive praise/high five/tickles.	☐	☐	☐	☐	☐	
Opportunities	Praise Luis when he is waiting for 10 sec	COUNT	Does not praise Luis when he is waiting for 10 sec	COUNT		
15b. When Luis waits for food for the whole timer, deliver behavior-specific positive praise and serve him his plate.	☐	☐	☐	☐	☐	
Opportunities	Luis waits for food for the whole timer and gets his food	COUNT	Luis waits for food for the whole timer but does not get his food OR Luis gets his food before the timer is done	COUNT		
16. When Luis reaches for food, block and physically redirect him to the Primero/Después card. Repeat, "Primero espera, después comida." or "Ya terminaste tu comida, es hora de jugar"	☐	☐	☐	☐	☐	
Opportunities	Redirects Luis and repeats Primero/Después	COUNT	Does not redirect or repeat Primero/Después	COUNT		
AFTER DINNER						
17. If Luis waits for food more than 50% of total opportunities, deliver behavior-specific praise and allow him to choose a small bottled soda to take.	☐	☐	☐	☐	☐	
18. If Luis does not wait for food more than 50% of total opportunities, remind Luis of Primero/Después and tell him he can try again at next meal. Redirect him to his after-meal activity.	☐	☐	☐	☐	☐	
TOTAL						
PERCENTAGES						
TOTAL NUMBER OF (Luis's) (EXCLUDING N/A)						
YES	Yes/TOTAL * 100					
MOST	Most/TOTAL * 100					
SOME	Some/TOTAL * 100					
NO	No/TOTAL * 100					

YES = 100% of opportunities/strategy
 MOST = 66-99% of opportunities/strategy
 SOME = 33-65% of opportunities/strategy
 NO = Less than 32% of opportunities/strategy
 N/A = Not applicable

Dyad 3: Angelina and Pedro

STRATEGY STEP	WAS THE STEP IMPLEMENTED?					PROMPT LEVEL NEEDED FROM COACH?		YES = 100% of opportunities MOST = 66-99% of opportunities SOME = 33-65% of opportunities NO = Less than 32% of opportunities N/A = Not applicable
	YES	MOST	SOME	NO	N/A	Type of Prompt (circle)		
PREVENT STRATEGIES (setting up routine)								
1. Give Pedro options between types of work	☐	☐	☐	☐	☐	Gesture	Verbal	
2. Arrange the order of tasks so Pedro does easier tasks first, then works on more challenging tasks	☐	☐	☐	☐	☐	Gesture	Verbal	
3. Put the First/Then card in an area where Pedro can see it	☐	☐	☐	☐	☐	Gesture	Verbal	
TEACH STRATEGIES (routine intro)								
1. Show Pedro the activity/ies available for break time (e.g., tablet, Legos, drawing)	☐	☐	☐	☐	☐	Gesture	Verbal	
2. Pedro or Angelina puts the preferred activity/item in the "Then" section of First/Then card	☐	☐	☐	☐	☐	Gesture	Verbal	
3. Pedro or Angelina puts "Read/Leer" in the "First" section of First/Then card	☐	☐	☐	☐	☐	Gesture	Verbal	
4. "Primero vamos a leer por X minutos. Luego, puedes hacer X por X minutos. Si necesitas un break, puedes tocar la tarjeta de "No" o "Break"	☐	☐	☐	☐	☐	Gesture	Verbal	
5. Start the timer. Start the timer only when Pedro is ready.	☐	☐	☐	☐	☐	Gesture	Verbal	
REINFORCE STRATEGIES (throughout the routine/post routine)								
6a. When Pedro reads for one minute without vocal refusal, give him verbal praise.	☐	☐	☐	☐	☐	Gesture	Verbal	
COUNT	Pedro reads for a minute without vocal refusal and Angelina praises him:	XX	Pedro reads for a minute without vocal refusal and Angelina does NOT praise him:	XX				
6b. When Pedro reads for the time on the timer with his mom without vocal refusal, give him verbal praise and access to the preferred activity.	☐	☐	☐	☐	☐	Gesture	Verbal	
COUNT	Pedro reads for the allotted time without vocal refusal and gets his preferred activity:	XX	Pedro reads for the allotted time without vocal refusal and does NOT get his preferred activity:	XX				
6c. When Pedro asks for a break, give him verbal praise and access to his break activity.	☐	☐	☐	☐	☐	Gesture	Verbal	
COUNT	Pedro asks for a break and is granted a break:	XX	Pedro asks for a break but is NOT granted a break:	XX				
7a. If Pedro vocally refuses, show him he can ask for a break or choose something different to work on. He may also choose something different as a break time activity.	☐	☐	☐	☐	☐	Gesture	Verbal	
COUNT	Pedro vocally refuses and Angelina prompts a break/choose alt work:		Pedro vocally refuses and Angelina does NOT prompt a break/choose alt work:					
7b. If Pedro engages in SIB, show him he can take a break if he is not ready to read or choose something different to work on.	☐	☐	☐	☐	☐	Gesture	Verbal	
COUNT	Pedro does SIB and Angelina prompts a break/choose alt work:		and Angelina does NOT prompt a break/choose alt work:					
PERCENTAGES								
TOTAL NUMBER OF ITEMS (EXCLUDING N/A)								
YES	Yes/TOTAL * 100							
MOST	Most/TOTAL * 100							
SOME	Some/TOTAL * 100							
NO	No/TOTAL * 100							

REFERENCES

- Abidin, R. R. (1995). *Parenting Stress Index, Third Edition: Professional Manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Achenbach, T. M., & Rescorla, L. A. (2001). *Child Behavior Checklist for Ages 6-18 (CBCL/6-18, ASEBA CBCL/6-18)* [Database record]. APA PsycTests. <https://doi.org/10.1037/t47452-000>
- Adams, N. B., McGuire, S. N., Meadan, H., Loya, M. R. M., Terol, A. K., Haidar, B., & Fanta, A. S. (2024). Impact of challenging behavior on marginalized and minoritized caregivers of children with disabilities. *Topics in Early Childhood Special Education, 44*(2), 76–88. <https://doi.org/10.1177/02711214211052087>
- Aman, M. G., Singh, N. N., Stewart, A. W., & Field, C. J. (1985). The aberrant behavior checklist: a behavior rating scale for the assessment of treatment effects. *American Journal of Mental Deficiency, 89*(5), 485–491.
- Amant, H. G. St., Schrager, S. M., Peña-Ricardo, C., Williams, M. E., & Vanderbilt, D. L. (2018). Language barriers impact access to services for children with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 48*(2), 333–340. <https://doi.org/10.1007/s10803-017-3330-y>
- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). <https://doi.org/10.1176/appi.books.978089042559>
- Argumedes, M., Lanovaz, M. J., & Larivée, S. (2018). Brief report: impact of challenging behavior on parenting stress in mothers and fathers of children with autism spectrum

- disorders. *Journal of Autism and Developmental Disorders*, 48(7), 2585–2589.
<https://doi.org/10.1007/s10803-018-3513-1>
- Argumedes, M., Lanovaz, M. J., Larivée, S., & Giannakakos, A. R. (2021). Using the Prevent-Teach-Reinforce model to reduce challenging behaviors in children with autism spectrum disorder in home settings: A feasibility study. *Research in Autism Spectrum Disorders*, 86, 101804. <https://doi.org/10.1016/j.rasd.2021.101804>
- Bailey, K. M., & Blair, K.-S. C. (2015). Feasibility and potential efficacy of the family-centered Prevent-Teach-Reinforce model with families of children with developmental disorders. *Research in Developmental Disabilities*, 47, 218–233.
<https://doi.org/10.1016/j.ridd.2015.09.019>
- Baweja, R., Soutullo, C. A., & Waxmonsky, J. G. (2021). Review of barriers and interventions to promote treatment engagement for pediatric attention deficit hyperactivity disorder care. *World Journal of Psychiatry*, 11(12), 1206-1277.
<https://doi.org/10.5498/wjp.v11.i12.1206>
- Barnes, S. A., Iovannone, R., Blair, K.-S., Crosland, K., & George, H. P. (2020). Evaluating the Prevent-Teach-Reinforce (PTR) model in general education settings. *Preventing School Failure: Alternative Education for Children and Youth*, 64(2), 128–141.
<https://doi.org/10.1080/1045988x.2019.1688228>
- Beach Center on Disabilities. (2015). Family Quality of Life. Beach Center on Disabilities, Lawrence, KS, USA.
- Bearss, K., Burrell, T. L., Challa, S. A., Postorino, V., Gillespie, S. E., Crooks, C., & Scahill, L. (2018). Feasibility of parent training via telehealth for children with autism spectrum

- disorder and disruptive behavior: A demonstration pilot. *Journal of Autism and Developmental Disorders*, 48(4), 1020–1030. <https://doi.org/10.1007/s10803-017-3363-2>
- Benish, S. G., Quintana, S., & Wampold, B. E. (2011). Culturally adapted psychotherapy and the legitimacy of myth: a direct-comparison meta-analysis. *Journal of Counseling Psychology*, 58(3), 279–289. <https://doi.org/10.1037/a0023626>
- Bernal, G., Bonilla, J., & Bellido, C. (1995). Ecological validity and cultural sensitivity for outcome research: Issues for the cultural adaptation and development of psychosocial treatments with Hispanics. *Journal of Abnormal Child Psychology*, 23(1), 67–82. <https://doi.org/10.1007/bf01447045>
- Bernal, G., & Rodríguez, M. M. D. (2009). Advances in Latino family research: cultural adaptations of evidence-based interventions. *Family Process*, 48(2), 169–178. <https://doi.org/10.1111/j.1545-5300.2009.01275.x>
- Bernal, G., & Sáez-Santiago, E. (2006). Culturally centered psychosocial interventions. *Journal of Community Psychology*, 34(2), 121–132. <https://doi.org/10.1002/jcop.20096>
- Berry, J. O., & Jones, W. H. (1995). The Parental Stress Scale: Initial Psychometric Evidence. *Journal of Social and Personal Relationships*, 12(3), 463–472. <https://doi.org/10.1177/0265407595123009>
- Blacher, J., & McIntyre, L. L. (2006). Syndrome specificity and behavioural disorders in young adults with intellectual disability: cultural differences in family impact. *Journal of Intellectual Disability Research*, 50(3), 184–198. <https://doi.org/10.1111/j.1365-2788.2005.00768.x>

- Brady, L., Padden, C., & McGill, P. (2019). Improving procedural fidelity of behavioural interventions for people with intellectual and developmental disabilities: A systematic review. *Journal of Applied Research in Intellectual Disabilities*, 32(4), 762–778. <https://doi.org/10.1111/jar.12585>
- Breitenstein, S. M., Gross, D., Fogg, L., Ridge, A., Garvey, C., Julion, W., & Tucker, S. (2012). The Chicago Parent Program: Comparing 1-year outcomes for African American and Latino parents of young children. *Research in Nursing & Health*, 35(5), 475–489. <https://doi.org/10.1002/nur.21489>
- Calzada, E. J., Tamis-LeMonda, C. S., & Yoshikawa, H. (2013). Familismo in Mexican and Dominican families from low-income, urban communities. *Journal of Family Issues*, 34(12), 1696–1724. <https://doi.org/10.1177/0192513x12460218>
- Campbell, J. M. (2003). Efficacy of behavioral interventions for reducing problem behavior in persons with autism: a quantitative synthesis of single-subject research. *Research in Developmental Disabilities*, 24(2), 120–138. [https://doi.org/10.1016/s0891-4222\(03\)00014-3](https://doi.org/10.1016/s0891-4222(03)00014-3)
- Carbone, P. S., Young, P. C., Stoddard, G. J., Wilkes, J., & Trasande, L. (2015). A comparison of ambulatory care sensitive hospitalizations among children with and without autism spectrum disorder. *Academic Pediatrics*, 15(6), 626–635. <https://doi.org/10.1016/j.acap.2015.07.006>
- Caron, V., Bérubé, A., & Paquet, A. (2017). Implementation evaluation of early intensive behavioral intervention programs for children with autism spectrum disorders: A

- systematic review of studies in the last decade. *Evaluation and Program Planning*, 62, 1–8. <https://doi.org/10.1016/j.evalprogplan.2017.01.004>
- Carr, T., & Lord, C. (2016). A pilot study promoting participation of families with limited resources in early autism intervention. *Research in Autism Spectrum Disorders*, 25, 87–96. <https://doi.org/10.1016/j.rasd.2016.02.003>
- Carter, R. T., Mazzula, S., Victoria, R., Vazquez, R., Hall, S., Smith, S., Sant-Barket, S., Forsyth, J., Bazelaïs, K., & Williams, B. (2013). *Race-Based Traumatic Stress Symptom Scale (RBTSSS)* [Database record]. APA PsycTests.
- Castro, F. G., Barrera, M., & Martinez, C. R. (2004). The cultural adaptation of prevention interventions: resolving tensions between fidelity and fit. *Prevention Science*, 5(1), 41–45. <https://doi.org/10.1023/b:prev.00000013980.12412.cd>
- Centers for Disease Control and Prevention. (2014). Prevalence of autism spectrum disorder among children aged 8 years – Autism and Developmental Disabilities Monitoring Network Sites, United States, 2010. *Surveillance Summaries*, 63, 1-21.
- Center for Disease Control and Prevention. (2020). Prevalence of autism spectrum disorder among children aged 8 years – Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2016. *Surveillance Summaries*, 69(4), 1-12.
- Chacko, A., Jensen, S. A., Lowry, L. S., Cornwell, M., Chimklis, A., Chan, E., Lee, D., & Pulgarin, B. (2016). Engagement in behavioral parent training: Review of the literature and implications for practice. *Clinical Child Family Psychology Review*, 19, 204-215. <https://doi.org/10.1007/s10567-016-0205-2>

- Chacko, A., Wymbs, B. T., Flammer-Rivera, L. M., Pelham, W. E., Walker, K. S., Arnold, F. W., ... & Herbst, L. (2008). A pilot study of the feasibility and efficacy of the Strategies to Enhance Positive Parenting (STEPP) program for single mothers of children with ADHD. *Journal of Attention Disorders*, 12(3), 270-280.
- Chacko, A., Wymbs, B. T., Wymbs, F. A., Pelham, W. E., Swanger-Gagne, M. S., Girio, E., ... & O'Connor, B. (2009). Enhancing traditional behavioral parent training for single mothers of children with ADHD. *Journal of Clinical Child & Adolescent Psychology*, 38(2), 206-218.
- Chacko, A., Wymbs, B. T., Chimiklis, A., Wymbs, F. A., & Pelham, W. E. (2012). Evaluating a comprehensive strategy to improve engagement to group-based behavioral parent training for high-risk families of children with ADHD. *Journal of abnormal child psychology*, 40(8), 1351-1362.
- Cheng, W. M., Smith, T. B., Butler, M., Taylor, T. M., & Clayton, D. (2023). Effects of Parent-Implemented Interventions on Outcomes of Children with Autism: A Meta-Analysis. *Journal of Autism and Developmental Disorders*, 53(11), 4147–4163.
<https://doi.org/10.1007/s10803-022-05688-8>
- Chlebowski, C., Magaña, S., Wright, B., & Brookman-Frazee, L. (2018). Implementing an Intervention to Address Challenging Behaviors for Autism Spectrum Disorder in Publicly-Funded Mental Health Services: Therapist and Parent Perceptions of Delivery With Latinx Families. *Cultural Diversity & Ethnic Minority Psychology*, 24(4), 552–563.
<https://doi.org/10.1037/cdp0000215>

- Chowdhury, M., Aman, M. G., Lecavalier, L., Smith, T., Johnson, C., Swiezy, N., McCracken, J. T., King, B., McDougle, C. J., Bearss, K., Deng, Y., & Scahill, L. (2016). Factor structure and psychometric properties of the revised Home Situations Questionnaire for autism spectrum disorder: The Home Situations Questionnaire-Autism Spectrum Disorder. *Autism*, 20(5), 528–537. <https://doi.org/10.1177/1362361315593941>
- Christ, T. J. (2007). Experimental control and threats to internal validity of concurrent and nonconcurrent multiple baseline designs. *Psychology in the Schools*, 44(5), 451–459. <https://doi.org/10.1002/pits.20237>
- Choi, G. (2023). *A mixed method study of Prevent, Teach, and Reinforce for Families: The effectiveness for culturally diverse families*. [Doctoral dissertation, University of Washington]. ProQuest Dissertations & Theses Global. <https://www.proquest.com/docview/2836760381>
- Christani, E., Revetti, L., Young, A. S., & Larwin, K. H. (2015). Effects of School Absences on GPAs for Disabled Students. *International Journal of Evaluation and Research in Education (IJERE)*, 4(4), 165–169. <https://doi.org/10.11591/ijere.v4i4.4507>
- Chung, K.-M., Chung, E., & Lee, H. (2024). Behavioral Interventions for Autism Spectrum Disorder: A Brief Review and Guidelines With a Specific Focus on Applied Behavior Analysis. *Journal of the Korean Academy of Child and Adolescent Psychiatry*, 35(1), 29–38. <https://doi.org/10.5765/jkacap.230019>
- Conrad, C. E., Rimestad, M. L., Rohde, J. F., Petersen, B. H., Korfitsen, C. B., Tarp, S., Cantio, C., Lauritsen, M. B., & Händel, M. N. (2021). Parent-Mediated Interventions for Children and Adolescents With Autism Spectrum Disorders: A Systematic Review and

- Meta-Analysis. *Frontiers in Psychiatry*, 12, 773604.
<https://doi.org/10.3389/fpsy.2021.773604>
- Constantino, J. N. & Gruber, C. P. (2012). *Social Responsiveness Scale – Second Edition (SRS-2)*. Torrance, CA: Western Psychological Services.
- Conroy, M. A., Dunlap, G., Clarke, S., & Alter, P. J. (2005). A Descriptive Analysis of Positive Behavioral Intervention Research With Young Children With Challenging Behavior. *Topics in Early Childhood Special Education*, 25(3), 157–166.
<https://doi.org/10.1177/02711214050250030301>
- Croen, L. A., Grether, J. K., Hoogstrate, J., & Selvin, S. (2002). The Changing Prevalence of Autism in California. *Journal of Autism and Developmental Disorders*, 32(3), 207–215.
<https://doi.org/10.1023/a:1015453830880>
- Dababnah, S., Shaia, W. E., Kim, I., & Magaña, S. (2021). Parents Taking Action: Adapting a Peer-to-Peer Program for Parents Raising Black Children With Autism. *Inclusion*, 9(3), 205–224. <https://doi.org/10.1352/2326-6988-9.3.205>
- Daniels, A. M., Rosenberg, R. E., Anderson, C., Law, J. K., Marvin, A. R., & Law, P. A. (2012). Verification of Parent-Report of Child Autism Spectrum Disorder Diagnosis to a Web-Based Autism Registry. *Journal of Autism and Developmental Disorders*, 42(2), 257–265. <https://doi.org/10.1007/s10803-011-1236-7>
- David, M., Rispoli, M., Gregori, E., Lory, C., Kim, S. Y., & Wang, D. (2021). A Quality Review of School-Based Challenging Behavior Interventions for Adolescents with Developmental Disabilities. *Review Journal of Autism and Developmental Disorders*, 8(2), 145–169. <https://doi.org/10.1007/s40489-020-00207-w>

- Denusik, L., Glista, D., Servais, M., Friesen, J., Oram, J., & Cunningham, B. J. (2024). “We were the best people to do the job”: Caregivers’ reported outcomes of a virtual caregiver-delivered program for autistic preschoolers. *Autism & Developmental Language Impairments*, 9, 23969415241244767. <https://doi.org/10.1177/23969415241244767>
- DiGennaro Reed Florence, D., Blackman, A. L., Erath, T. G., Brand, D., & Novak, M. D. (2018). Guidelines for using behavioral skills training to provide teacher support. *Teaching Exceptional Children*, 50(6), 373-380.
- Ding, H., & Hargraves, L. (2008). Stress-Associated Poor Health Among Adult Immigrants with a Language Barrier in the United States. *Journal of Immigrant and Minority Health*, 11(6), 446. <https://doi.org/10.1007/s10903-008-9200-0>
- Dishion, T., Forgatch, M., Chamberlain, P., & Pelham, W. E. (2016). The Oregon Model of Behavior Family Therapy: From Intervention Design to Promoting Large-Scale System Change. *Behavior Therapy*, 47(6), 812–837. <https://doi.org/10.1016/j.beth.2016.02.002>
- Domenech-Rodriguez, M., & Wieling, E. (2004). Developing culturally appropriate, evidence-based treatments for interventions with ethnic minority populations. In M. Rastogi & E. Wieling (Eds.), *Voices of color: First-person accounts of ethnic minority therapists* (pp. 313–333). Thousand Oaks, CA: Sage
- Doubet, S. L., & Ostrosky, M. M. (2015). The Impact of Challenging Behavior on Families. *Topics in Early Childhood Special Education*, 34(4), 223–233. <https://doi.org/10.1177/0271121414539019>
- DuBay, M. (2022). Cultural Adaptations to Parent-Mediated Autism Spectrum Disorder Interventions for Latin American Families: A Scoping Review. *American Journal of*

- Speech-Language Pathology*, 31(3), 1517–1534. https://doi.org/10.1044/2022_ajslp-21-00239
- Dunlap, G., Iovannone, R., Wilson, K. J., Kincaid, D. K., & Strain, P. (2009). Prevent-Teach-Reinforce. *Journal of Positive Behavior Interventions*, 12(1), 9–22. <https://doi.org/10.1177/1098300708330880>
- Dunlap, G., Strain, P., Lee, J. K., Joseph, J. D., Vatland, C., & Fox, L. (2017). Prevent-Teach-Reinforce for Families: A model of individualized positive behavior support for home and community. In Dunlap, G. (Ed.). *Prevent-Teach-Reinforce for Families: A Model of Individualized Positive Behavior Support for Home and Community*. Brookes Publishing.
- Dunlap, G., Strain, P., Lee, J. K., Joseph, J., & Leech, N. (2018). A Randomized Controlled Evaluation of Prevent-Teach-Reinforce for Young Children. *Topics in Early Childhood Special Education*, 37(4), 195–205. <https://doi.org/10.1177/0271121417724874>
- Emerson, E., & Bromley, J. (1995). The form and function of challenging behaviours. *Journal of Intellectual Disability Research*, 39(5), 388–398. <https://doi.org/10.1111/j.1365-2788.1995.tb00543.x>
- Emerson, E., Kiernan, C., Alborz, A., Reeves, D., Mason, H., Swarbrick, R., Mason, L., & Hatton, C. (2001). The prevalence of challenging behaviors: a total population study. *Research in Developmental Disabilities*, 22(1), 77–93. [https://doi.org/10.1016/s0891-4222\(00\)00061-5](https://doi.org/10.1016/s0891-4222(00)00061-5)
- Estes, A., Olson, E., Sullivan, K., Greenson, J., Winter, J., Dawson, G., & Munson, J. (2013). Parenting-related stress and psychological distress in mothers of toddlers with autism

- spectrum disorders. *Brain and Development*, 35(2), 133–138.
<https://doi.org/10.1016/j.braindev.2012.10.004>
- Fernandez, M. A., Butler, A. M., & Eyberg, S. M. (2011). Treatment outcome for low socioeconomic status African American families in parent-child interaction therapy: A pilot study. *Child & Family Behavior Therapy*, 33(1), 32-48.
- Fuller, E. A., & Kaiser, A. P. (2020). The Effects of Early Intervention on Social Communication Outcomes for Children with Autism Spectrum Disorder: A Meta-analysis. *Journal of Autism and Developmental Disorders*, 50(5), 1683–1700.
<https://doi.org/10.1007/s10803-019-03927-z>
- Fung, J., Wong, M. S., & Park, H. (2018). Cultural background and religious beliefs. In M. R. Sanders & A. Morawska (Eds.), *Handbook of parenting and child development across the lifespan*. Springer. <https://doi.org/10.1007/978-3-319-94598-9>
- Gardner, F., Montgomery, P., & Knerr, W. (2016). Transporting Evidence-Based Parenting Programs for Child Problem Behavior (Age 3–10) Between Countries: Systematic Review and Meta-Analysis. *Journal of Clinical Child & Adolescent Psychology*, 45(6), 749–762. <https://doi.org/10.1080/15374416.2015.1015134>
- Garwood, J. D. (2023). Special Educator Burnout and Fidelity in Implementing Behavior Support Plans: A Call to Action. *Journal of Emotional and Behavioral Disorders*, 31(2), 84–96. <https://doi.org/10.1177/10634266221099242>
- Gast, D. L., & Ledford, J. R. (2018). *Single case research methodology: Applications in special education and Behavioral Sciences* (3rd ed.). Routledge.

- Goldstein, S., & Naglieri, J. A. (2009). *Autism spectrum rating scales (ASRS)*. North Tonawanda, NY: Multi-Health System.
- Harvey, H., Dunlap, G., & McKay, K. (2021). Primary and Secondary Effects of Prevent-Teach-Reinforce for Young Children. *Topics in Early Childhood Special Education*, 41(2), 100–114. <https://doi.org/10.1177/0271121419844315>
- Hedges, L. V., Pustejovsky, J. E., & Shadish, W. R. (2012). A standardized mean difference effect size for single case designs. *Research Synthesis Methods*, 3(3), 224–239. <https://doi.org/10.1002/jrsm.1052>
- Hemmeter, M. L., Fox, L., Snyder, P., Algina, J., Hardy, J. K., Bishop, C., & Veguilla, M. (2021). Corollary child outcomes from the Pyramid Model professional development intervention efficacy trial. *Early Childhood Research Quarterly*, 54, 204–218. <https://doi.org/10.1016/j.ecresq.2020.08.004>
- Hemmeter, M. L., Snyder, P. A., Fox, L., & Algina, J. (2016). Evaluating the Implementation of the Pyramid Model for Promoting Social-Emotional Competence in Early Childhood Classrooms. *Topics in Early Childhood Special Education*, 36(3), 133–146. <https://doi.org/10.1177/0271121416653386>
- Hendrix, N. M., & O'Brien, M. J. (2022). *Handbook of Autism and Pervasive Developmental Disorder, Assessment, Diagnosis, and Treatment*. 51–71. https://doi.org/10.1007/978-3-030-88538-0_3
- Heyvaert, M., Saenen, L., Campbell, J. M., Maes, B., & Onghena, P. (2014). Efficacy of behavioral interventions for reducing problem behavior in persons with autism: An

- updated quantitative synthesis of single-subject research. *Research in Developmental Disabilities*, 35(10), 2463–2476. <https://doi.org/10.1016/j.ridd.2014.06.017>
- Hoffman, L., Marquis, J., Poston, D., Summers, J. A., & Turnbull, A. (n.d.). *Beach Center Family Quality of Life Scale*. <https://doi.org/10.1037/t57297-000>
- Horner, R. D., & Baer, D. M. (1978). Multiple-probe technique: a variation of the multiple baseline. *Journal of Applied Behavior Analysis*, 11(1), 189–196. <https://doi.org/10.1901/jaba.1978.11-189>
- Horner, R. H., Carr, E. G., Strain, P. S., Todd, A. W., & Reed, H. K. (2002). Problem Behavior Interventions for Young Children with Autism: A Research Synthesis. *Journal of Autism and Developmental Disorders*, 32(5), 423–446. <https://doi.org/10.1023/a:1020593922901>
- Iadarola, S., Shih, W., Dean, M., Blanch, E., Harwood, R., Hetherington, S., Mandell, D., Kasari, C., & Smith, T. (2018). Implementing a Manualized, Classroom Transition Intervention for Students With ASD in Underresourced Schools. *Behavior Modification*, 42(1), 126–147. <https://doi.org/10.1177/0145445517711437>
- Iovannone, R., Greenbaum, P. E., Wang, W., Kincaid, D., Dunlap, G., & Strain, P. (2009). Randomized Controlled Trial of the Prevent—Teach—Reinforce (PTR) Tertiary Intervention for Students With Problem Behaviors. *Journal of Emotional and Behavioral Disorders*, 17(4), 213–225. <https://doi.org/10.1177/1063426609337389>
- Iwata, B. A., Dorsey, M. F., Slifer, K. J., Bauman, K. E., & Richman, G. S. (1982). Toward a functional analysis of self-injury. *Analysis and Intervention in Developmental Disabilities*, 2(1), 3–20. [https://doi.org/10.1016/0270-4684\(82\)90003-9](https://doi.org/10.1016/0270-4684(82)90003-9)

- Iwata, B. A., Pace, G. M., Dorsey, M. F., Zarcone, J. R., Vollmer, T. R., Smith, R. G., Rodgers, T. A., Lerman, D. C., Shore, B. A., Mazaleski, J. L., Goh, H., Cowdery, G. E., Kalsher, M. J., McCosh, K. C., & Willis, K. D. (1994). The functions of self-injurious behavior: An experimental-epidemiological analysis. *Journal of Applied Behavior Analysis*, 27(2), 215–240. <https://doi.org/10.1901/jaba.1994.27-215>
- Jones, S., Bremer, E., & Lloyd, M. (2017). Autism spectrum disorder: family quality of life while waiting for intervention services. *Quality of Life Research*, 26(2), 331–342. <https://doi.org/10.1007/s11136-016-1382-7>
- Joseph, J. D., Strain, P. S., & Dunlap, G. (2019). An Experimental Analysis of Prevent-Teach-Reinforce for Families (PTR-F). *Topics in Early Childhood Special Education*, 41(2), 115–128. <https://doi.org/10.1177/0271121419847760>
- Jukes, L. M., Di Folco, S., Kearney, L., & Sawrikar, C. (2024). Barriers and facilitators to engaging mothers and fathers in family-based interventions: A qualitative systematic review. *Child Psychiatry & Human Development*, 55(2024), 137-151. <https://doi.org/10.1007/s10578-022-01389-6>
- Karst, J. S., & Hecke, A. V. V. (2012). Parent and Family Impact of Autism Spectrum Disorders: A Review and Proposed Model for Intervention Evaluation. *Clinical Child and Family Psychology Review*, 15(3), 247–277. <https://doi.org/10.1007/s10567-012-0119-6>
- Keller-Bell, Y. D. (n.d.). Disparities in the Identification and Diagnosis of Autism Spectrum Disorder in Culturally and Linguistically Diverse Populations. *Perspectives of the ASHA Special Interest Groups*, 2(14), 68–81. <https://doi.org/10.1044/persp2.sig14.68>

- Kiresuk, T. J., & Sherman, R. E. (1968). Goal attainment scaling: A general method for evaluating comprehensive community mental health programs. *Community Mental Health Journal*, 4(6), 443–453. <https://doi.org/10.1007/bf01530764>
- Kirkpatrick, M., Akers, J., & Rivera, G. (2019). Use of behavioral skills training with teachers: A systematic review. *Journal of Behavioral Education*, 28(3). <https://doi.org/10.1007/s10864-019-09322-z>
- Korbut, S., Hedley, D., Chetcuti, L., Sahin, E., & Nuske, H. J. (2020). Temperament predicts challenging behavior in children with autism spectrum disorder at age 5. *Research in Autism Spectrum Disorders*, 71, 101492. <https://doi.org/10.1016/j.rasd.2019.101492>
- Krasny-Pacini, A., Hiebel, J., Pauly, F., Godon, S., & Chevignard, M. (2013). Goal Attainment Scaling in rehabilitation: A literature-based update. *Annals of Physical and Rehabilitation Medicine*, 56(3), 212–230. <https://doi.org/10.1016/j.rehab.2013.02.002>
- Kratochwill, T. R., Horner, R. H., Levin, J. R., Machalicek, W., Ferron, J., & Johnson, A. (2023). Single-case intervention research design standards: Additional proposed upgrades and future directions. *Journal of School Psychology*, 97, 192–216. <https://doi.org/10.1016/j.jsp.2022.12.002>
- Kreps, G. L., & Sparks, L. (2008). Meeting the health literacy needs of immigrant populations. *Patient Education and Counseling*, 71(3), 328–332. <https://doi.org/10.1016/j.pec.2008.03.001>
- Krezmien, M. P., Leone, P. E., & Achilles, G. M. (2006). Suspension, Race, and Disability: Analysis of Statewide Practices and Reporting. *Journal of Emotional and Behavioral Disorders*, 14(4), 217–226. <https://doi.org/10.1177/10634266060140040501>

- Kumpfer, K. L., Alvarado, R., Smith, P., & Bellamy, N. (2002). Cultural Sensitivity and Adaptation in Family-Based Prevention Interventions. *Prevention Science*, 3(3), 241–246. <https://doi.org/10.1023/a:1019902902119>
- Kumpfer, K., Magalhães, C., & Xie, J. (2017). Cultural Adaptation and Implementation of Family Evidence-Based Interventions with Diverse Populations. *Prevention Science*, 18(6), 649–659. <https://doi.org/10.1007/s11121-016-0719-3>
- Kunze, M. G., Machalicek, W., Wei, Q., & Joseph, S. St. (2021). Coaching via Telehealth: Caregiver-Mediated Interventions for Young Children on the Waitlist for an Autism Diagnosis Using Single-Case Design. *Journal of Clinical Medicine*, 10(8), 1654. <https://doi.org/10.3390/jcm10081654>
- Kuravackel, G. M., Ruble, L. A., Reese, R. J., Ables, A. P., Rodgers, A. D., & Toland, M. D. (2018). COMPASS for Hope: Evaluating the Effectiveness of a Parent Training and Support Program for Children with ASD. *Journal of Autism and Developmental Disorders*, 48(2), 404–416. <https://doi.org/10.1007/s10803-017-3333-8>
- Kurtz, P. F., Strohmeier, C. W., Becraft, J. L., & Chin, M. D. (2021). Collateral Effects of Behavioral Treatment for Problem Behavior on Caregiver Stress. *Journal of Autism and Developmental Disorders*, 51(8), 2852–2865. <https://doi.org/10.1007/s10803-020-04694-y>
- Landa, R. J. (2018). Efficacy of early interventions for infants and young children with, and at risk for, autism spectrum disorders. *International Review of Psychiatry*, 30(1), 25–39. <https://doi.org/10.1080/09540261.2018.1432574>

- Lim, N., O'Reilly, M., Sigafoos, J., Lancioni, G. E., & Sanchez, N. J. (2021). A Review of Barriers Experienced by Immigrant Parents of Children with Autism when Accessing Services. *Review Journal of Autism and Developmental Disorders*, 8(3), 366–372. <https://doi.org/10.1007/s40489-020-00216-9>
- Lindgren, S., Wacker, D., Suess, A., Schieltz, K., Pelzel, K., Kopelman, T., Lee, J., Romani, P., & Waldron, D. (2016). Telehealth and Autism: Treating Challenging Behavior at Lower Cost. *Pediatrics*, 137(Supplement 2), S167–S175. <https://doi.org/10.1542/peds.2015-2851o>
- Lindly, O. J., Bear, C. L. R., Henderson, D. E., Lopez, K., Nozadi, S. S., Vining, C., Bia, S., Hill, E., & Leaf, A. (2023). Adaptation of the Parents Taking Action program for Diné (Navajo) parents of children with autism. *Frontiers in Education*, 8, 1197197. <https://doi.org/10.3389/feduc.2023.1197197>
- Liston, L. (2022). ‘Prepped for prison’? Experiences of exclusionary school practices and involvement with the justice system. *Irish Journal of Sociology*, 30(3), 244–263. <https://doi.org/10.1177/07916035221108989>
- Lopez, K., Magaña, S., Morales, M., & Iland, E. (2019). Parents Taking Action: Reducing disparities through a culturally informed intervention for Latinx parents of children with autism. *Journal of Ethnic & Cultural Diversity in Social Work*, 28(1), 31–49. <https://doi.org/10.1080/15313204.2019.1570890>
- Lopez, K., Marroquin, J. M., & Gutierrez, C. (2020). Methods to Decrease Disparities in Age of Autism Diagnosis and Treatment Access among Latinx Children. *Social Work*, 65(2), 140–148. <https://doi.org/10.1093/sw/swaa012>

- Machalicek, W., Erturk, B., Gulgatch, L., Wei, Q., Alvarez, K., & Joseph, S. S. (2022). Handbook of Autism and Pervasive Developmental Disorder, Assessment, Diagnosis, and Treatment. *Autism and Child Psychopathology Series*, 1367–1388. https://doi.org/10.1007/978-3-030-88538-0_61
- Machalicek, W., Lang, R., & Raulston, T. J. (2015). Training Parents of Children with Intellectual Disabilities: Trends, Issues, and Future Directions. *Current Developmental Disorders Reports*, 2(2), 110–118. <https://doi.org/10.1007/s40474-015-0048-4>
- Machalicek, W., Raulston, T., Knowles, C., Ruppert, T., Carnett, A., & Alresheed, F. (2015). Comorbid Conditions Among Children with Autism Spectrum Disorders. *Autism and Child Psychopathology Series*, 137–170. https://doi.org/10.1007/978-3-319-19183-6_6
- MacNaul, H. L., & Neely, L. C. (2018). Systematic Review of Differential Reinforcement of Alternative Behavior Without Extinction for Individuals With Autism. *Behavior Modification*, 42(3), 398–421. <https://doi.org/10.1177/0145445517740321>
- Maenner, M. J., Warren, Z., Williams, A. R., Amoakohene, E., Bakian, A. V., Bilder, D. A., Durkin, M. S., Fitzgerald, R. T., Furnier, S. M., Hughes, M. M., Ladd-Acosta, C. M., McArthur, D., Pas, E. T., Salinas, A., Vehorn, A., Williams, S., Esler, A., Grzybowski, A., Hall-Lande, J., ... Shaw, K. A. (2023). Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2020. *MMWR Surveillance Summaries*, 72(2), 1–14. <https://doi.org/10.15585/mmwr.ss7202a1>

- Magaña, S., Lopez, K., Aguinaga, A., & Morton, H. (2013). Access to Diagnosis and Treatment Services Among Latino Children With Autism Spectrum Disorders. *Intellectual and Developmental Disabilities, 51*(3), 141–153. <https://doi.org/10.1352/1934-9556-51.3.141>
- Magaña, S., Lopez, K., & Machalicek, W. (2017). Parents Taking Action: A Psycho-Educational Intervention for Latino Parents of Children With Autism Spectrum Disorder. *Family Process, 56*(1), 59–74. <https://doi.org/10.1111/famp.12169>
- Magaña, S., Lopez, K., Salkas, K., Iland, E., Morales, M. A., Torres, M. G., Zeng, W., & Machalicek, W. (2020). A Randomized Waitlist-Control Group Study of a Culturally Tailored Parent Education Intervention for Latino Parents of Children with ASD. *Journal of Autism and Developmental Disorders, 50*(1), 250–262. <https://doi.org/10.1007/s10803-019-04252-1>
- Mandell, D. S. (2008). Psychiatric Hospitalization Among Children with Autism Spectrum Disorders. *Journal of Autism and Developmental Disorders, 38*(6), 1059–1065. <https://doi.org/10.1007/s10803-007-0481-2>
- Matson, J. L., & Nebel-Schwalm, M. (2007). Assessing challenging behaviors in children with autism spectrum disorders: A review. *Research in Developmental Disabilities, 28*(6), 567–579. <https://doi.org/10.1016/j.ridd.2006.08.001>
- Matson, J. L., Sipes, M., Fodstad, J. C., & Fitzgerald, M. E. (2011). Issues in the Management of Challenging Behaviours of Adults with Autism Spectrum Disorder. *CNS Drugs, 25*(7), 597–606. <https://doi.org/10.2165/11591700-000000000-00000>
- Matson, J. L., Wilkins, J., & Macken, J. (2008). The Relationship of Challenging Behaviors to Severity and Symptoms of Autism Spectrum Disorders. *Journal of Mental Health*

- Research in Intellectual Disabilities*, 2(1), 29–44.
- <https://doi.org/10.1080/19315860802611415>
- McCabe, K., Yeh, M., Lau, A., & Argote, C. B. (2012). Parent-Child Interaction Therapy for Mexican Americans: Results of a Pilot Randomized Clinical Trial at Follow-up. *Behavior Therapy*, 43(3), 606–618. <https://doi.org/10.1016/j.beth.2011.11.001>
- McGuire, S. N., Folkerts, R., Meadan, H., Adams, N. B., Lee, J. D., & Kaza, M. (2022). Cross Cultural Caregiver Perceptions of Challenging Behaviors and Responses. *Early Childhood Education Journal*, 50(8), 1343–1354. <https://doi.org/10.1007/s10643-021-01264-4>
- McHatton, P. A., & Correa, V. (2005). Stigma and Discrimination. *Topics in Early Childhood Special Education*, 25(3), 131–142. <https://doi.org/10.1177/02711214050250030101>
- McMaughan, D. J. (DJ), Jones, J. L., Mulcahy, A., Tucker, E. C., Beverly, J. G., & Perez-Patron, M. (2022). Hospitalizations Among Children and Youth With Autism in the United States: Frequency, Characteristics, and Costs. *Intellectual and Developmental Disabilities*, 60(6), 484–503. <https://doi.org/10.1352/1934-9556-60.6.484>
- Meek S., Smith L., Allen R., Catherine E., Edyburn K., Williams C., ...Pontier R. (2020). *Start with equity: From the early years to the early grades*. Children’s Equity Project and Bipartisan Policy Center. <https://childandfamilysuccess.asu.edu/sites/default/files/2020-07/CEP-report-071520-FINAL.pdf>
- Mejia, A., Leijten, P., Lachman, J. M., & Parra-Cardona, J. R. (2017). Different Strokes for Different Folks? Contrasting Approaches to Cultural Adaptation of Parenting

- Interventions. *Prevention Science*, 18(6), 630–639. <https://doi.org/10.1007/s11121-016-0671-2>
- Micai, M., Fatta, L. M., Gila, L., Caruso, A., Salvitti, T., Fulceri, F., Ciaramella, A., D’Amico, R., Giovane, C. D., Bertelli, M., Romano, G., Schünemann, H. J., & Scattoni, M. L. (2023). Prevalence of co-occurring conditions in children and adults with autism spectrum disorder: A systematic review and meta-analysis. *Neuroscience & Biobehavioral Reviews*, 155, 105436. <https://doi.org/10.1016/j.neubiorev.2023.105436>
- Monaco, S. D. & Wolfe, P. (2018). Comparison of individualized and non-specific video-prompts to teach daily living skills to students with autism spectrum disorders. *Education and Training in Autism and Developmental Disorders*, 53(4), 378-392. Retrieved from <https://www.jstor.org/stable/26563480>
- Morrier, M. J., & Gallagher, P. A. (2012). Racial Disparities in Preschool Special Education Eligibility for Five Southern States. *The Journal of Special Education*, 46(3), 152–169. <https://doi.org/10.1177/0022466910380465>
- Oakes, W. P., Lane, K. L., Jenkins, A., & Booker, B. B. (2013). Three-Tiered Models of Prevention: Teacher Efficacy and Burnout. *Education and Treatment of Children*, 36(4), 95–126. <https://doi.org/10.1353/etc.2013.0037>
- Oono, I. P., Honey, E. J., & McConachie, H. (2013). Parent-mediated early intervention for young children with autism spectrum disorders (ASD). *Cochrane Database of Systematic Reviews*, 2013(4), CD009774. <https://doi.org/10.1002/14651858.cd009774.pub2>
- Organization for Autism Research. (2024, September 9). *Graduate Research Grant*. <https://researchautism.org/researchers/graduate-research/>

- Pagán, A. F., Vanderburg, J. L., & Pearson, D. A. (2024). The Palgrave Encyclopedia of Disability. In G. Bennett & E. Goodall (Eds.), *The Palgrave Encyclopedia of Disability* (pp. 1–7). https://doi.org/10.1007/978-3-031-40858-8_37-1
- Parker, R. I., Vannest, K. J., & Davis, J. L. (2011). Effect Size in Single-Case Research: A Review of Nine Nonoverlap Techniques. *Behavior Modification*, 35(4), 303–322. <https://doi.org/10.1177/0145445511399147>
- Parker, R. I., Vannest, K. J., Davis, J. L., & Sauber, S. B. (2011). Combining Nonoverlap and Trend for Single-Case Research: Tau-U. *Behavior Therapy*, 42(2), 284–299. <https://doi.org/10.1016/j.beth.2010.08.006>
- Parra-Cardona, J. R., Bybee, D., Sullivan, C. M., Domenech Rodríguez, M., Dates, B., Tams, L., & Bernal, G. (2017). Examining the impact of differential cultural adaptation with Latina/o immigrants exposed to adapted parent training interventions. *Journal of Consulting and Clinical Psychology*, 85(1), 58-71. <https://doi.org/10.1037/ccp0000160>
- Parra-Cardona, R., Fuentes-Balderrama, J., Vanderziel, A., López-Zerón, G., Rodríguez, M. M. D., DeGarmo, D. S., & Anthony, J. C. (2022). A Culturally Adapted Parenting Intervention for Mexican-Origin Immigrant Families with Adolescents: Integrating Science, Culture, and a Focus on Immigration-Related Adversity. *Prevention Science*, 23(2), 271–282. <https://doi.org/10.1007/s11121-021-01317-5>
- Patterson, G. R., & Reid, J. B. (1975). A social learning approach to family intervention: Families with aggressive children (Vol. 1). Castalia Publishing Company.
- Pedersen, A., Pettygrove, S., Meaney, F. J., Mancilla, K., Gotschall, K., Kessler, D. B., Grebe, T. A., & Cunniff, C. (2012). Prevalence of Autism Spectrum Disorders in Hispanic and

- Non-Hispanic White Children. *Pediatrics*, 129(3), e629–e635.
<https://doi.org/10.1542/peds.2011-1145>
- Peters, S., Calam, R., & Harrington, R. (2005). Maternal attributions and expressed emotion as predictors of attendance at parent management training. *Journal of Child Psychology and Psychiatry*, 46(4), 436-448.
- Peterson, L. S., Villarreal, V., & Castro, M. J. (2017). Models and Frameworks for Culturally Responsive Adaptations of Interventions. *Contemporary School Psychology*, 21(3), 181–190. <https://doi.org/10.1007/s40688-016-0115-9>
- PEW Research Center. (2021). *Key facts about U.S. Latinos for National Hispanic Heritage Month*. Retrieved from https://www.pewresearch.org/fact-tank/2021/09/09/key-facts-about-u-s-latinos-for-national-hispanic-heritage-month/ft_2021-09-09_keyfactslatinos_01/
- Pustejovsky, J. E, Chen, M., Grekov, P., & Swan, D. M. (2024). Single-case effect size calculator (Version 0.7.3) [Web application]. <https://jepusto.shinyapps.io/SCD-effect-sizes/>
- Ralston, A. L., Holt, N. R., & Hope, D. A. (2020). Tele-Mental Health With Marginalized Communities in Rural Locales: Trainee and Supervisor Perspectives. *Journal of Rural Mental Health*, 44(4), 268–273. <https://doi.org/10.1037/rmh0000142>
- Randall, K. R., Lambert, J. M., Matthews, M. P., & Houchins-Juarez, N. J. (2018). Individualized Levels System and Systematic Stimulus Pairing to Reduce Multiply Controlled Aggression of a Child With Autism Spectrum Disorder. *Behavior Modification*, 42(3), 422–440. <https://doi.org/10.1177/0145445517741473>
- Ranjbar, F., Dadgar, H., Azizi, M., & Dalvand, H. (2025). The impact of parental stress, executive function and communication skills on challenging behaviors in children with

- autism spectrum disorder. *Advances in Autism*, 11(1), 38–51. <https://doi.org/10.1108/aia-06-2024-0040>
- Ratto, A. B., Reznick, J. S., & Turner-Brown, L. (2016). Cultural Effects on the Diagnosis of Autism Spectrum Disorder Among Latinos. *Focus on Autism and Other Developmental Disabilities*, 31(4), 275–283. <https://doi.org/10.1177/1088357615587501>
- Reid, J. B., & Patterson, G. R. (1991). Early prevention and intervention with conduct problems: A social interaction model for the integration of research and practice. In G. Stoner, M. R. Shinn, & H.M. Walker (Eds.), *Interventions for achievement and behavior problems* (pp. 715–739). Silver Spring, MD: National Association of School Psychologists.
- Reimers, T. M., & Wacker, D. P. (1988). Parents' Ratings of the Acceptability of Behavioral Treatment Recommendations Made in an Outpatient Clinic: A Preliminary Analysis of the Influence of Treatment Effectiveness. *Behavioral Disorders*, 14(1), 7–15. <https://doi.org/10.1177/019874298801400104>
- Reimers, T. M., Wacker, D. P., & Cooper, L. J. (1991). Evaluation of the Acceptability of Treatments for Children's Behavioral Difficulties. *Child & Family Behavior Therapy*, 13(2), 53–71. https://doi.org/10.1300/j019v13n02_04
- Resnicow, K., Soler, R., Braithwaite, R. L., Ahluwalia, J. S., & Butler, J. (2000). Cultural sensitivity in substance use prevention. *Journal of Community Psychology*, 28(3), 271–290. [https://doi.org/10.1002/\(sici\)1520-6629\(200005\)28:3<271::aid-jcop4>3.0.co;2-i](https://doi.org/10.1002/(sici)1520-6629(200005)28:3<271::aid-jcop4>3.0.co;2-i)
- Reyes-Martín, J., Simó-Pinatella, D., & Font-Roura, J. (2022). Assessment of Challenging Behavior Exhibited by People with Intellectual and Developmental Disabilities: A

- Systematic Review. *International Journal of Environmental Research and Public Health*, 19(14), 8701. <https://doi.org/10.3390/ijerph19148701>
- Rezendes, D. L., & Scarpa, A. (2011). Associations between Parental Anxiety/Depression and Child Behavior Problems Related to Autism Spectrum Disorders: The Roles of Parenting Stress and Parenting Self-Efficacy. *Autism Research and Treatment*, 2011(1), 395190. <https://doi.org/10.1155/2011/395190>
- Rios, K., & Burke, M. M. (2021). Facilitators and Barriers to Positive Special Education Experiences and Health Among Latino Families of Children with Disabilities: Two Systematic Literature Reviews. *Review Journal of Autism and Developmental Disorders*, 8(3), 299–311. <https://doi.org/10.1007/s40489-020-00220-z>
- Rivard, M., Mello, C., Mestari, Z., Terroux, A., Morin, D., Forget, J., Lefebvre, C., & Argumedes, M. (2021). Using Prevent Teach Reinforce for Young Children to Manage Challenging Behaviors in Public Specialized Early Intervention Services for Autism. *Journal of Autism and Developmental Disorders*, 51(11), 3970–3988. <https://doi.org/10.1007/s10803-020-04856-y>
- Roddy, A., & O'Neill, C. (2019). The economic costs and its predictors for childhood autism spectrum disorders in Ireland: How is the burden distributed? *Autism*, 23(5), 1106–1118. <https://doi.org/10.1177/1362361318801586>
- Rodríguez, M. M. D., Baumann, A. A., & Schwartz, A. L. (2011). Cultural Adaptation of an Evidence Based Intervention: From Theory to Practice in a Latino/a Community Context. *American Journal of Community Psychology*, 47(1–2), 170–186. <https://doi.org/10.1007/s10464-010-9371-4>

- Rogge, N., & Janssen, J. (2019). The Economic Costs of Autism Spectrum Disorder: A Literature Review. *Journal of Autism and Developmental Disorders*, 49(7), 2873–2900. <https://doi.org/10.1007/s10803-019-04014-z>
- Ross, S. W., Romer, N., & Horner, R. H. (2012). Teacher Well-Being and the Implementation of School-Wide Positive Behavior Interventions and Supports. *Journal of Positive Behavior Interventions*, 14(2), 118–128. <https://doi.org/10.1177/1098300711413820>
- Rubio-Stipec, M., Bird, H., Canino, G., & Gould, M. (1990). The internal consistency and concurrent validity of a Spanish translation of the Child Behavior Checklist. *Journal of Abnormal Child Psychology*, 18(4), 393–406. <https://doi.org/10.1007/bf00917642>
- Safer-Lichtenstein, J., Hamilton, J. C., & McIntyre, L. L. (2019). Examining Demographics in Randomized Controlled Trials of Group-Based Social Skills Interventions for Individuals with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 49(8), 3453–3461. <https://doi.org/10.1007/s10803-019-04063-4>
- Salas, L. (2004). Individualized Educational Plan (IEP) Meetings and Mexican American Parents: Let's Talk About It. *Journal of Latinos and Education*, 3(3), 181–192. https://doi.org/10.1207/s1532771xjle0303_4
- Santiago, M. (2018). Using the Prevent-Teach-Reinforce for Families (PTR-F) with Hispanic families of young children with autism. [Master's thesis, University of South Florida]. Retrieved from <https://scholarcommons.usf.edu/etd/7567>
- Sato, S. K., Plattner, C., Leaf, J. B., Oppenheim-Leaf, M. L., Cihon, J. H., Driscoll, M., Leaf, R., Unumb, L. S., & Weiss, M. J. (2022). Handbook of Autism and Pervasive Developmental

- Disorder, Assessment, Diagnosis, and Treatment. *Autism and Child Psychopathology Series*, 209–234. https://doi.org/10.1007/978-3-030-88538-0_8
- Scherer, N., Verhey, I., & Kuper, H. (2019). Depression and anxiety in parents of children with intellectual and developmental disabilities: A systematic review and meta-analysis. *PLoS ONE*, 14(7), e0219888. <https://doi.org/10.1371/journal.pone.0219888>
- Schopler, E., & Reichler, R. J. (1971). Parents as cotherapists in the treatment of psychotic children. *Journal of Autism and Childhood Schizophrenia*, 1(1), 87–102. <https://doi.org/10.1007/bf01537746>
- Schott, W., Tao, S., & Shea, L. (2022). Emergency Visits for Autistic Children and Children With ADHD. *Pediatrics*, 149(Supplement 4). <https://doi.org/10.1542/peds.2020-049437v>
- Sears, K. M., Blair, K.-S. C., Iovannone, R., & Crosland, K. (2013). Using the Prevent-Teach-Reinforce Model with Families of Young Children with ASD. *Journal of Autism and Developmental Disorders*, 43(5), 1005–1016. <https://doi.org/10.1007/s10803-012-1646-1>
- Shadbolt, H. (2018). The effects of the Prevent-Teach-Reinforce for families (PTR-F) intervention with three young children. [Master's thesis, University of Canterbury]. Retrieved from <https://ir.canterbury.ac.nz/handle/10092/15435>
- Shalev, R. A., Lavine, C., & Martino, A. D. (2020). A Systematic Review of the Role of Parent Characteristics in Parent-Mediated Interventions for Children with Autism Spectrum Disorder. *Journal of Developmental and Physical Disabilities*, 32(1), 1–21. <https://doi.org/10.1007/s10882-018-9641-x>
- Sikora, D., Moran, E., Orlich, F., Hall, T. A., Kovacs, E. A., Delahaye, J., Clemons, T. E., & Kuhlthau, K. (2013). The relationship between family functioning and behavior problems

- in children with autism spectrum disorders. *Research in Autism Spectrum Disorders*, 7(2), 307–315. <https://doi.org/10.1016/j.rasd.2012.09.006>
- Simó-Pinatella, D., Mumbardó-Adam, C., Alomar-Kurz, E., Sugai, G., & Simonsen, B. (2019). Prevalence of Challenging Behaviors Exhibited by Children with Disabilities: Mapping the Literature. *Journal of Behavioral Education*, 28(3), 323–343. <https://doi.org/10.1007/s10864-019-09326-9>
- Smilkstein, G., Ashworth, C., & Montano, D. (1982). Validity and reliability of the family APGAR as a test of family function. *The Journal of Family Practice*, 15(2), 303–311.
- Smith, K. A., Gehricke, J.-G., Iadarola, S., Wolfe, A., & Kuhlthau, K. A. (2020). Disparities in Service Use Among Children With Autism: A Systematic Review. *Pediatrics*, 145(Supplement 1), S35–S46. <https://doi.org/10.1542/peds.2019-1895g>
- Stahmer, A. C., Schreibman, L., & Cunningham, A. B. (2011). Toward a technology of treatment individualization for young children with autism spectrum disorders. *Brain Research*, 1380, 229–239. <https://doi.org/10.1016/j.brainres.2010.09.043>
- Stanforth, A., & Rose, J. (2020). ‘You kind of don’t want them in the room’: tensions in the discourse of inclusion and exclusion for students displaying challenging behaviour in an English secondary school. *International Journal of Inclusive Education*, 24(12), 1253–1267. <https://doi.org/10.1080/13603116.2018.1516821>
- Strain, P. S., Wilson, K., & Dunlap, G. (2011). Prevent-Teach-Reinforce: Addressing Problem Behaviors of Students with Autism in General Education Classrooms. *Behavioral Disorders*, 36(3), 160–171. <https://doi.org/10.1177/019874291003600302>

- Steinbrenner, J. R., Hume, K., Odom, S. L., Morin, K. L., Nowell, S. W., Tomaszewski, B., Szendrey, S., McIntyre, N. S., Yücesoy-Özkan, S., & Savage, M. N. (2020). *Evidence-based practices for children, youth, and young adults with autism*. The University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Institute, National Clearinghouse on Autism Evidence and Practice Review Team.
- <https://ncaep.fpg.unc.edu/sites/ncaep.fpg.unc.edu/files/imce/documents/EBP%20Report%202020.pdf>
- Sullivan, K., Crosland, K., Iovannone, R., Blair, K.-S., & Singer, L. (2021). Evaluating the Effectiveness of Prevent–Teach–Reinforce for High School Students With Emotional and Behavioral Disorders. *Journal of Positive Behavior Interventions*, 23(1), 3–16.
- <https://doi.org/10.1177/1098300720911157>
- Summers, J. A., Poston, D. J., Turnbull, A. P., Marquis, J., Hoffman, L., Mannan, H., & Wang, M. (2005). Conceptualizing and measuring family quality of life. *Journal of Intellectual Disability Research*, 49(10), 777–783. <https://doi.org/10.1111/j.1365-2788.2005.00751.x>
- Sundell, K., Beelmann, A., Hasson, H., & Schwarz, U. von T. (2016). Novel Programs, International Adoptions, or Contextual Adaptations? Meta-Analytical Results From German and Swedish Intervention Research. *Journal of Clinical Child & Adolescent Psychology*, 45(6), 784–796. <https://doi.org/10.1080/15374416.2015.1020540>
- Sutherland, R., Trembath, D., & Roberts, J. (2018). Telehealth and autism: A systematic search and review of the literature. *International Journal of Speech-Language Pathology*, 20(3), 324–336. <https://doi.org/10.1080/17549507.2018.1465123>

- Tarver, J., Palmer, M., Webb, S., Scott, S., Slonims, V., Simonoff, E., & Charman, T. (2019). Child and parent outcomes following parent interventions for child emotional and behavioral problems in autism spectrum disorders: A systematic review and meta-analysis. *Autism*, 23(7), 1630–1644. <https://doi.org/10.1177/1362361319830042>
- Terol, A. K., Meadan, H., Gómez, L. R., & Magaña, S. (2024). Cultural adaptation of an intervention for caregivers of young autistic children: Community members' perspectives. *Family Process*, 63(2), 691–710. <https://doi.org/10.1111/famp.12999>
- Tint, A., Palucka, A. M., Bradley, E., Weiss, J. A., & Lunsky, Y. (2017). Correlates of Police Involvement Among Adolescents and Adults with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 47(9), 2639–2647. <https://doi.org/10.1007/s10803-017-3182-5>
- Travers, J. C., Krezmien, M. P., Mulcahy, C., & Tincani, M. (2014). Racial Disparity in Administrative Autism Identification Across the United States During 2000 and 2007. *The Journal of Special Education*, 48(3), 155–166. <https://doi.org/10.1177/0022466912454014>
- Tsami, L., Lerman, D., & Toper-Korkmaz, O. (2019). Effectiveness and acceptability of parent training via telehealth among families around the world. *Journal of Applied Behavior Analysis*, 52(4), 1113–1129. <https://doi.org/10.1002/jaba.645>
- Turcotte, P., Shea, L. L., & Mandell, D. (2018). School Discipline, Hospitalization, and Police Contact Overlap Among Individuals with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 48(3), 883–891. <https://doi.org/10.1007/s10803-017-3359-y>

- Valicenti-McDermott, M., Hottinger, K., Seijo, R., & Shulman, L. (2012). Age at Diagnosis of Autism Spectrum Disorders. *The Journal of Pediatrics*, 161(3), 554–556.
<https://doi.org/10.1016/j.jpeds.2012.05.012>
- Vannest, K. J., & Ninci, J. (2015). Evaluating Intervention Effects in Single-Case Research Designs. *Journal of Counseling & Development*, 93(4), 403–411.
<https://doi.org/10.1002/jcad.12038>
- Vasilopoulou, E., & Nisbet, J. (2016). The quality of life of parents of children with autism spectrum disorder: A systematic review. *Research in Autism Spectrum Disorders*, 23, 36–49. <https://doi.org/10.1016/j.rasd.2015.11.008>
- Verdugo, M. A., Schalock, R. L., Keith, K. D., & Stancliffe, R. J. (2005). Quality of life and its measurement: important principles and guidelines. *Journal of Intellectual Disability Research*, 49(10), 707–717. <https://doi.org/10.1111/j.1365-2788.2005.00739.x>
- Virues-Ortega, J., Martin, N., Schnerch, G., García, J. Á. M., & Mellichamp, F. (2015). A General Methodology for the Translation of Behavioral Terms into Vernacular Languages. *The Behavior Analyst*, 38(1), 127–135. <https://doi.org/10.1007/s40614-014-0025-y>
- Wehby, J. H., Maggin, D. M., Partin, T. C. M., & Robertson, R. (2012). The Impact of Working Alliance, Social Validity, and Teacher Burnout on Implementation Fidelity of the Good Behavior Game. *School Mental Health*, 4(1), 22–33. <https://doi.org/10.1007/s12310-011-9067-4>
- William, R. A. (2009). Routines-based early intervention. Baltimore, MD: BrookesPublishing.

- Worley, J. A., & Matson, J. L. (2012). Comparing symptoms of autism spectrum disorders using the current DSM-IV-TR diagnostic criteria and the proposed DSM-V diagnostic criteria. *Research in Autism Spectrum Disorders*, 6(2), 965–970.
<https://doi.org/10.1016/j.rasd.2011.12.012>
- Xu, Y., Chen, F., Mirza, M., & Magaña, S. (2023). Culturally adapting a parent psychoeducational intervention for Chinese immigrant families of young children with autism spectrum disorder. *Journal of Policy and Practice in Intellectual Disabilities*, 20(1), 58–72. <https://doi.org/10.1111/jppi.12432>
- Zeidan, J., Fombonne, E., Scora, J., Ibrahim, A., Durkin, M. S., Saxena, S., Yusuf, A., Shih, A., & Elsabbagh, M. (2022). Global prevalence of autism: A systematic review update. *Autism Research*, 15(5), 778–790. <https://doi.org/10.1002/aur.2696>
- Zetlin, A. G., Padron, M., & Wilson, S. (1996). The Experience of Five Latin American Families with the Special Education System. *Education and Training in Mental Retardation and Developmental Disabilities*, 31(1), 22. JSTOR. <http://www.jstor.org/stable/23879020>
- Zhu, J. (2024). *Remote delivery of culturally adapted Prevent-Teach-Reinforce for Families (PRT-F) program with Chinese American families of young children with intellectual and developmental disability*. [Doctoral dissertation, University of Oregon]. ProQuest Dissertations & Theses Global. <https://scholarsbank.uoregon.edu/items/92c856f4-1c0f-4d19-a8bf-4349184b5351/full>