University of Nevada, Reno

A Behavior Analytic Evaluation of a Cultural Adaptation of Acceptance and Commitment Training (ACTr) for Latinx Parents of Children with Autism Spectrum Disorders (ASD)

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in
Psychology

by

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May, 2022

THE GRADUATE SCHOOL

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prepared under our supervision by

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entitled

A Behavior Analytic Evaluation of a Cultural Adaptation of Acceptance and Commitment Training (ACTr) for Latinx Parents of Children with Autism Spectrum Disorders (ASD)

be accepted in partial fulfillment of the
requirements for the degree of

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Abstract

An area that is growing in the field of behavior analysis is in the domain of cultural and language adaptations. Despite the substantial evidence to support the use of cultural adaptations in evidence based treatments (e.g., Griner & Smith, 2006; Healey et al., 2017), more research is needed on how to adapt culturally responsive interventions for diverse populations. Acceptance and Commitment Therapy (ACT), a contemporary form of behavior therapy has shown to be effective in addressing various areas of psychological distress for parents of children with autism spectrum disorder (ASD; Blackledge & Hayes, 2006; Fung et al, 2018; Hahs et al., 2019). The present research examined the effects of a culturally adapted ACT training (ACTr) to improve the psychological flexibility, quality of life and value-directed behaviors for Latinx parents of children with ASD. First, we conducted a series of focus groups and structured interviews with Latinx families of children with ASD to identify cultural values and barriers to treatment. Next, we delivered an intervention that included Latinx cultural values, such as familismo (familism) and personalismo (interpersonal relationships) that were taken from the focus groups and interviews. Results showed all participants demonstrated an increased rate of value-directed behaviors from baseline to the training phase. Specifically, increases in value-directed behaviors were observed when the training phase was put in place, thus demonstrating that the culturally adapted ACTr resulted in increases in value-based behaviors for these participants.

Keywords: Latinx, cultural values, Acceptance and Commitment training, autism spectrum disorder

Dedication

To both of my parents, Gilberto and Francisca Castro. *Por siempre darme fuerza y fe para seguir adelante y siempre luchar.*

Acknowledgements

I would first like to thank my advisor, Dr. Bethany P. Contreras. Thank you for being dedicated to learn more with me about areas that I was passionate about and supporting me in endless endeavors. You were a compassionate mentor and I only wish I would have had more time to continue to learn from you. You truly lit a fire under me and this would not have been possible without your support and guidance.

I would also like to thank Dr. W. Larry Williams, my former advisor and the individual who first taught me about behavior analysis. You inspired my passion for the field and I am forever grateful for the opportunities you have given me.

To the rest of my committee, I would like to thank each of you for your role on this project. Dr. Hayes, I consider myself fortunate to have learned so much from you as my professor. Thank you for pushing me and constantly making me think outside the box. Dr. Pérez, your support has been invaluable since my first semester as a freshman to continue to reach this goal. Dr. Cañon, thank you for sharing your knowledge and welcoming me with open arms.

A special thank you to all of the families who dedicated their time to participate in this study. I was thankful to learn about their experiences and share it with others.

I would also like to thank my Applied Behavior Science lab mates for your feedback on this project and the endless opportunities to practice with you all. Ircia Kille and Lizbeth Vega Lopez-thank you both for all your contributions for the pilot and dissertation process.

Finally, I could not imagine reaching this goal without the love and support of my husband, Andrew Hostetler. Thank you for always believing in me, even when I didn’t

believe in myself. For all the nights you stayed up with me, along with all the positive reinforcers you planned in between for us to get here.

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Introduction

As one of the fastest growing communities, it is expected that by 2045, the Latinx population will grow up to 24.6% (Frey, 2018). For the purposes of this study, the term Latinx is used to refer to individuals of Latin American origin who identify with a Latin American, South or Central American, Mexican, or other Spanish culture. Latinx is used as a gender-neutral alternative to the term Latino/a to encompass the intersecting identities of Latin American descendants (Ramirez & Blay, 2016). [1]

As the Latinx population continues to grow, it is expected that the individuals needing behavioral and mental health services will also increase (Castro-Hostetler et al., 2021). Despite the large representation in numbers, Latinxs continue to face barriers in access to healthcare, including behavioral services. The Latinx population, among other marginalized groups such as Black, Indigenous, and People of Color (BIPOC), are less likely to receive or seek services in comparison to non-Latinx Whites (Yeh et al., 2003). In addition, the quality of services is often lacking once services have been attained (Cabassa et al., 2012; Dahne et al., 2019; Lagomasino et al., 2005). In some cases, a lack of knowledge of available services accounts for the lower utilization of behavioral services for Latinx families (Biegel et al., 1997); Bridges et al., 2012; Magaña et al., 2013). The literature demonstrates that the number is even higher with the Latinx population when they are less acculturated, recently immigrated to the US, or monolingual Spanish speakers (Alegría et al., 2007; Cabassa et al., 2006).

Researchers have attempted to understand the differences in the prevalence of Autism Spectrum Disorder (ASD) between Latinx children and non-Latinx White children by

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[1] According to a recent Pew Research Center survey, 23% of Hispanic respondents have heard the term *Latinx*, but only 3% reported using it to describe themselves. 61% and 29% reported preferring the terms *Hispanic* or *Latino*, respectively (Noe-Bustamante et al., 2020). The term *Latinx* is used in this paper as it is currently considered to be a more progressive and inclusive identifier (Scharrón-del Rio & Aja, 2020).

investigating barriers to accessing services (Magaña, 2020; Zuckerman et al., 2017). A prevalent barrier among the Latinx population is obtaining an ASD diagnosis for their children in order to receive behavioral services. As of 2016, the national prevalence of ASD is currently 1 in 54 children (1.5% of the total child population) and the current estimate for Latinx children is lower (Maenner et al., 2020). According to Maenner et al. (2020), prevalence estimates were approximately identical for non-Hispanic White, non-Hispanic Black, and Asian Pacific Islander children (18.5, 18.3, and 17.9, respectively). While the gap in ASD diagnosis among White and Latinx children has narrowed over the past years (CDC, 2020; Maenner et al., 2020; Pedersen et al., 2012), Hispanic children face lower prevalence estimates (15.4), due to misdiagnosis or underdiagnoses. Latinx children are more likely to receive an ASD diagnosis later in their lives in comparison to non-Latinx children (Becerra et al., 2014; Magaña et al., 2013).

Once diagnosed, other barriers can persist for Latinx families such as barriers related to legal and economic issues (e.g., immigration status), health insurance, and reliable transportation (Becerra et al., 2014; Chen & Vargas-Bustamante, 2011; Ijalba, 2016). Additional barriers may include beliefs, knowledge, language, and trust in receiving professional services (Iland et al., 2012, Magaña et al., 2013). Furthermore, the COVID-19 Pandemic has brought additional social and racial disparities in healthcare access, including access to and utilization of behavioral services.

Steps can be taken by behavior analysts to minimize barriers and provide effective services. Despite the number of Latinx children diagnosed with ASD, there are few service delivery models and interventions that are tailored to meet the needs of the Latinx parents of children with ASD (Lopez, 2014). One way to improve equity of access to services and inclusion in service delivery, is to incorporate cultural and linguistic adaptations to tailor interventions to the needs of Latinx parents. Indeed, behavior analysts have the responsibility to address barriers and make culturally and linguistically appropriate services available to the Latinx population to ensure equitable access to meet the needs of all consumers (Brodhead, 2019; Castro-Hostetler et al., 2021; Fong et al., 2016; Miller et al., 2019; Rosenberg & Schwartz, 2019; Wright, 2019). Research from related fields, predominantly psychology, have demonstrated that cultural and linguistic adaptations can increase engagement with treatment as well as treatment efficacy (e.g., Bernal & Adames, 2017; Domenech Rodríguez et al., 2011; Mendez & Westerberg, 2012; Smith, Domenech Rodríguez, et al., 2011). The field of behavior analysis has yet to propose a model for the systematic adaptation of applied behavior analysis (ABA) treatment that is both technically adequate and culturally responsive. Some areas that have gained attention in the field are considerations related to cultural and linguistic diversity (Brodhead et al., 2014; Fong et al., 2017). Due to the demanding need from the Latinx population, having culturally adapted treatments for parents of children with ASD may enhance the utilization of services (Smith et al., 2011).

Cultural adaptations have been defined generally as “the systematic modification of an evidence-based treatment (EBT) or intervention protocol to consider language, culture, and context in such a way that it is compatible with the client’s cultural patterns, meanings, and values” (Bernal et al., 2009, p. 362). Research suggests that culturally adapted interventions are more effective to non-adapted interventions when used with BIPOC populations (Cabral & Smith, 2011; Smith et al., 2011, Smith & Trimble, 2016). In the context of behavior analytic EBTs, several modifications can be made in the context of service delivery (Castro-Hostetler et al., 2021). Castro-Hostetler et al. (2021) provided recommendations for modifications to include those related to a) the behavior targeted for change, b) the methods used to change behavior, and c) how treatment choices are communicated to the families we serve.

Other ways treatments can be modified include cultural/linguistic modifications in relation to EBTs and variables of treatment engagement. McCabe (2002) suggests that cultural responsiveness could be augmented by engagement in an individualized manner with consumers. McCabe (2002) conducted focus groups and interviews with Mexican American parents to gather perspectives on the implementation of an adapted intervention for this population. Some of the recommendations from parents included having a treatment model that was flexible and could accommodate differences in familial attitude and acculturation levels.

Research in the field of behavior analysis is growing in the domain of cultural and language adaptations. An area of research that is emerging is in language training (Wang et al., 2019). While other studies have evaluated the effects of language in instructional context during assessment and treatment phases (Lang et al., 2011; Padilla et al., 2011; Rispoli et al., 2011). Although this literature base is growing, more research is needed to provide evidence-based guidance to practitioners.

Parent training is another area of research that can provide guidance for practitioners working with the Latinx population. In general, parent training is a fundamental aspect during treatment of children with ASD and other developmental disabilities and can result in improved intervention outcomes (Haine-Schlagel & Walsh, 2015; Sanders & Kirby, 2012). Parent training often focuses on supporting parents in addressing challenging behaviors from their children and teaching new skills in the home. While the implementation of parent training is utilized to help address the needs of children with ASD, the psychological needs of parents are not often addressed (Blackledge & Hayes, 2006).

Acceptance and Commitment therapy (ACT), a contemporary form of behavior therapy, is rooted in the philosophy of functional contextualism (Biglan & Hayes, 1996). The ACT perspective holds that "human suffering predominantly emerges from normal psychological processes, particularly those involving human language" (Hayes et al., 2012, p.11). A goal of ACT is to bring language under greater contextual control in order to promote more open, centered, and engaged responding in life. ACT consists of six interrelated process and core intervention strategies to address an individual's needs: acceptance, present moment awareness, defusion, values, committed action, and self as context (Hayes et al., 1999). Outcome focused research has supported ACT treatment to a wide variety of populations, including but not limited to: anxiety and depression (Coto-Lesmes et al., 2020) improving academic performance (Chase et al., 2013), and substance abuse (Luoma et al., 2012).

In particular, ACT is an intervention that has shown to be effective in addressing various areas of psychological distress for parents of children with ASD (Blackledge & Hayes, 2006; Fung et al, 2018; Gould et al., 2018; Hahs et al., 2019). Blackledge and Hayes (2006) conducted the first ACT workshop with parents of children with ASD. The researchers conducted a two-day workshop and evaluated the effects of a group training workshop that emphasized activities and metaphors around values, acceptance, and defusion with parents of children with autism. Results of the study demonstrated an improvement on psychological outcomes across families. Gould et al. (2018) further evaluated the effects of ACT on values-directed behavior in parents of children with ASD. This was one of the first studies to directly measure the effects of ACT on overt behaviors. Findings demonstrated that ACT increased parent engagement in values directed behavior and gains were maintained post-training. The results of these studies demonstrate progress towards understanding the relationship between experiential avoidance and undesirable parenting practices and reducing experiential avoidance toward their children. Furthermore, parents reported other collateral effects from the training, such as improved relationships with their partners.

The literature has demonstrated the importance of considering culture in developing parenting education programs (Barker et al., 2010; Calzada, 2010). An approach to addressing the needs for Latinx families of children with ASD is the utilization of ACT with an adapted parent training model. One way to achieve this is by considering a family's cultural values and how they may capture both a utility for Latinx parents and the utilization of engagement with behavioral services. To date, there have only been two studies developed to target cultural adaptations of ACT with Latinx parents of children with ASD (Baires, 2020; Cañon Garzon, 2012).

In an unpublished dissertation, Baires (2020) culturally adapted ACT metaphors and exercises to include sociocultural factors and Hispanic/Latinx cultural values. The culturally adapted training was provided in Spanish and evaluated the effects on parents' statements of psychological flexibility, statements of psychological inflexibility, and self-report scores on Spanish-validated measures across various areas (e.g., cognitive fusion, mindfulness awareness). Findings demonstrated higher percentages of statements of psychological flexibility across all parents, suggesting the efficacy of a culturally adapted training on participants. Implications from Baires (2020) support the need and demonstrate the effects of culturally adapted interventions for Latinxs families receiving behavior analytic services. Further research is needed within the field of behavior analysis to guide practitioners to culturally adapt treatments for the Latinx population and other BIPOC.

In summary, Lau (2006) discusses the challenge of adapting EBTs to specific populations, given the lack of research. Therefore, there is a need for systematically assessing cultural adaptations in the context of service delivery for the Latinx families of children with ASD. However, there is little known regarding how to develop and implement effective culturally adapted interventions for Latinx families with children with ASD. Below, we summarize research on methods to adapt culturally sensitive interventions for Latinx families with children with ASD generally, and then research on culturally adapted ACT specifically. We then present the purpose of our pilot study, along with our findings. Next, we present the current study, along with specific research questions. We describe our method for this study, followed by the results. In conclusion, we provide our discussion and future research.

Literature Review

Latinx in the US

As one of the fastest growing communities, it is expected that by 2045, the Latinx population will grow up to 24.6% (Frey, 2018). As a population, it is projected that Latinxs will make up 28% of the total US population by 2060 (US Census Bureau, 2015). The Latinx population represents a large group originating from over 20 countries in Central and South America, Spain, and the Caribbean (Añez et al., 2008). In the US the majority of Latinx subgroups include those who identify as Mexicans (64%), followed by Puerto Ricans (9.4%), Salvadorans (3.8%), Cubans (3.7%), Dominicans (3.1%), Guatemalans (2.3%), and Latinxs from other areas across Latin America (13.7%; Motel & Patten, 2012).

For the purposes of this study, the term Latinx is used to refer to individuals of Latin American origin who identify with a Latin American, South or Central American, Mexican, or other Spanish culture. Latinx is used as a gender-neutral alternative to the term Latino/a to encompass the intersecting identities of Latin American descendants (Ramirez & Blay, 2016).

Latinx Underutilization of Behavioral Services

As the Latinx population continues to grow, it is expected that the individuals needing behavioral and mental health services will also increase (Castro-Hostetler et al., 2021). Despite the large representation in numbers, Latinxs continue to face barriers in access to healthcare, including behavioral services. It is important for professionals in the field, such as behavior analysts, to be prepared and organized to support Latinx families in different areas. According to the BACB (2020), most certified behavior analysts work in the area of autism providing behavioral services. However, it is unclear how many of the services that are being provided by behavior analysts are being accessed by the Latinx community. To begin, behavior analysts can start by having a clear understanding of the needs from the Latinx community who are receiving behavioral services.

The Latinx population, among other marginalized groups such as Black, Indigenous, and People of Color (BIPOC), are less likely to receive or seek services in comparison to non-Latinx White children (Yeh et al., 2003). For example, Latinx children with ASD have lower rates of receiving specialty services, such as behavioral interventions, occupational therapy, and social skills training in comparison to their White, non-Latino peers (Broder-Fingert et al., 2013; Magaña et al., 2013). Research demonstrates the quality of services is often lacking once services have been attained (Cabassa et al., 2012; Dahne et al., 2019; Lagomasino, 2005). In addition, services may be limited depending on where in the US families live. In some cases, a lack of knowledge of available services accounts for the lower utilization of behavioral services for Latinx families (Biegel et al., 1997; Bridges et al., 2012; Magaña et al., 2013). The literature demonstrates that the number is even higher among the Latinx population when individuals are less acculturated, recently immigrated to the US, or monolingual Spanish speakers (Alegría et al., 2007; Cabassa et al., 2006). Many Latinx families and their young children experience significant barriers when accessing healthcare, including delayed diagnoses in ASD (Broder-Fingert et al., 2013).

Autism Spectrum Disorder

According to the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013) ASD is defined in terms of a) persistent deficits in social communication and social interactions, b) restricted, repetitive patterns of behaviors and interests c) symptoms existing in early childhood d) symptoms impairing areas of functioning and e) impairment that are not explained by an intellectual disability or global developmental delay. In order to diagnose an individual with ASD, all of the five criteria listed above must be met. According to the Centers for Disease Control and Prevention (2020), data from 2016 state that 1 in every 54 children in the US are diagnosed with (ASD). The most recent revision to the ASD diagnosis includes a focus on social communication/interactions and restricted and repetitive behaviors (American Psychiatric Association, 2013). A medical diagnosis of ASD involves an assessment process that includes the completion of a developmental screening assessment and a comprehensive diagnostic evaluation.

The cognitive and intellectual abilities of individuals with ASD can range on a large spectrum. While reports of ASD symptoms can vary slightly among different cultures, there are no clear differences in the severity of challenging behaviors across cultures (Chung et al., 2012). Some individuals with ASD may require substantial assistance in their daily lives, while others may need less support.

ASD in the Latinx population

According to Maenner et al. (2020), prevalence of Autism Spectrum Disorder (ASD) estimates were approximately identical for non-Hispanic White, non-Hispanic Black, and Asian Pacific Islander children (18.5, 18.3, and 17.9, respectively). While ASD is prevalent across all racial and ethnic groups, prevalence estimates were lower for Latinx children in comparison to other groups (CDC, 2016; Mandell et al., 2009; Maenner et al., 2020). Prevalence estimates are about 3% lower for Hispanic children (15.4). While the gap in ASD diagnosis among White and Latinx children has narrowed over the past years, Latinx children remain under diagnosed with ASD compared to non-Hispanic/Latinx children (CDC, 2020; Maenner et al., 2020; Pedersen et al., 2012). Recently, researchers have found that almost one quarter of children with documented signs and symptoms of ASD are undiagnosed, a circumstance that is 1.6 times more likely for

Hispanic children in comparison to White children (Wiggins et al., 2020). Researchers have attempted to understand the differences in the prevalence of ASD between the Latinx children and non-Latinx White children by investigating barriers to accessing a proper diagnosis (Magaña, 2020; Zuckerman et al., 2017).

Barriers for Accessing Services

A prevalent barrier among the Latinx population is obtaining an ASD diagnosis for their children in order to receive behavioral services. As mentioned previously, that while the national prevalence of ASD is currently 1 in 54 children in 2016 (1.5% of the total child population) the the current estimate for Latinx children is lower (Maenner et al., 2020). The process of obtaining an ASD diagnosis can be difficult and stressful for some Latinx families (Zuckerman et al., 2017). Magaña et al. (2013) investigated the disparities in ASD diagnosis and treatment services between 48 Latino and 56 non-Latino children. Findings indicated that Latino children were diagnosed with ASD approximately one year later in comparison to non-Latino children. There are some relevant factors for the disparity in diagnoses in Latinx children. Some factors include inconsistencies across doctors (Magaña et al., 2015), a lack of trust and relationship between Latinx families and medical providers (Magaña et al., 2013), and a lack of access to information about ASD (Zuckerman et al., 2013). Families have often expressed the limited time and attention they have received from doctors (Zuckerman et al., 2014). This limitation can affect the time doctors spend on observing child behaviors and families expressing the concerns they have seen in the home. Language can furthermore play a critical role in this setting. For example, issues may arise if Latinx families are trying to communicate their concerns in the Spanish language, and professionals are unable to comprehend family concerns. For instance, describing what they are seeing in the home or expressing their needs. Ultimately, this can result in a child receiving a delayed diagnosis or misdiagnosis.

Early identification and diagnosis of ASD is essential for long term benefits and outcomes (Casillas et al., 2017; Howard et al., 2005). For example, this can help families learn about the milestones their kids should be meeting. Families may also delay seeking services because of the stigma associated with ASD (Gordillo et al., 2020; Zuckerman et al., 2014). Harmful effects from stigma existing in a community can also result in a family choosing harmful, ineffective, or unreliable treatments (Slim & Celiberti, 2021). Latinx families have described stigma from their community and own family members. DuBay et al. (2018) discusses that parents will often hide their child's diagnosis from family members in order to avoid conflict.

Another barrier that is often faced by Latinx families is a lack of knowledge and information about ASD (Zuckerman et al., 2014). Increasing Latinx families' knowledge of ASD can also guide families to find EBT's such as applied behavior analysis (ABA). Children with ASD who participate in early intervention services before the age of three have significantly larger outcomes than those who do later in life (Zwaigenbaum et al., 2009). However, if the knowledge about treatment benefits is not disseminated to families, this can delay the use of ASD services.

Once a family receives an ASD diagnosis further challenges can be encountered for the next steps to take. For example, guidance on how to seek and attain ASD related services. These can often be observed as transitional events that may often leave families feeling stressed or worried about the unknown (Degrace et al., 2014). With unknown of what to do next, families may take a longer time to create an appropriate action plan. There is also research to suggest that children with lower socioeconomic status (SES) backgrounds in general may experience inequality in obtaining an ASD diagnosis (Durkin et al., 2010; Ferguson & Vigil, 2019). SES factors can include wealth, income, and parent education levels (Durkin et al., 2010).

Finally, the COVID-19 Pandemic has brought additional social and racial disparities in healthcare access, including access to and utilization of behavioral services. Across the country, there were a significant number of cases and deaths due to COVID-19 (Valenzuela et al., 2020). However, according to the CDC (2021), BIPOC have been disproportionately affected by the pandemic by contracting and dying from the disease at a higher rate. Similarly, access to psychological and social services were reduced or suspended for safety and precautions (Cox et al., 2020; Frederick et al., 2021; Kornack et al., 2019; Manning et al., 2021).

Language

Language plays a significant role in service access for the Latinx population (August 2011; Pineros-Leano et al., 2017). Differences in language proficiency between practitioners and Latinx families can be a barrier and limit effective communication. The term limited English proficiency (LEP) describes “individuals who do not speak English as a primary language and who have a limited ability to read, speak, write, or understand English” (LEP.gov, n.d.). LEP affects the ability for families to understand the process of obtaining services and the overall knowledge of availability of services. For example, individuals with LEP have lower odds of receiving ASD services than their English-speaking counterparts (Kornack et al., 2019; Zuckerman et al., 2017). The issue of LEP is multifold, bringing other barriers for families to access services. Zuckerman et al. (2017) conducted a mixed-model survey of families of children with ASD among non-Latinx White families, Latinx families with English proficiency, and Latinx families with LEP. The most common barrier found among Latinx families with LEP and

English proficiency was limited knowledge about ASD. The findings in this study confirmed other qualitative studies on Latinx Spanish speaking communities having low awareness of ASD and ASD symptoms (Zuckerman et al., 2014; Zuckerman et al., 2017).

It is important to stress that LEP and bilingualism are not inherently barriers in and of themselves. The barrier arises when there are differences in language proficiency between the practitioner and the family receiving services. Thus, the barrier lies within the service delivery system, as there are not enough bilingual professionals to help guide families who need support in the Spanish language (Lanesskog et al., 2015; Ruiz-Adams, 2019). Similarly, Latinx families have reported a lack of bilingual healthcare providers (DuBay, 2018) to guide them in this process. Latinx families can experience negative impacts such as an inability to build relationships with their providers, extended wait times to see Spanish speaking professionals, and unable to get clear guidance on their treatment plan.

Slim & Celiberti (2021) provide cultural recommendations for behavior analysts in delivering treatment and increasing opportunities for working with culturally and linguistically diverse (CLD) families. One recommendation is to consider the native language spoken in the home. Furthermore, they report that knowing “how to read or translate words into a different language is not synonymous with being an expert in the nuances of the language, culture, or home environment, nor does it guarantee an equal understanding of the intended meaning,” (p. 97). This example illustrates the importance of using language that is understood by all family members, including avoiding behavioral jargon.

While not ideal, challenges that are related to language can be facilitated by the use of an interpreter (Castro-Hostetler et al., 2021). Using a multilingual translator who has a background of the family’s culture can be beneficial, as the interpreter can be utilized beyond language translation. However, this can be an issue when interpreters are not always readily available when providers need to communicate with families, and vice versa. Another issue is being able to ensure that the meaning of service providers' words are adequately translated and understood into the family's language (Brodhead et al., 2018; Dennison et al., 2019), as many behavioral concepts do not always translate directly.

Culture

Culture is not a static set of values, norms, and practices that reside solely within the individual; it is dynamic, as it is learned, transmitted and transformed by social interactions, conflicts and power relations (Alegría et al., 2010; Kleinman & Benson, 2006; Castro et al., 2004). Culture is more than race and ethnicity, as it encompasses a shared way of being and interacting that shapes lifestyle patterns and structures, human thoughts, emotions, interactions, social norms, and behaviors (Singer, 2012). In a broader sense of terms, culture is a person's worldview that is shaped by life's experiences (Pedersen & Ivey, 1993). From a behavior analytic perspective, culture can be defined as behaviors of a particular group that are maintained as a result of social reinforcement (Skinner, 1984). Culture impacts the way we use the science of behavior, such as changes in the topography of our interventions. Furthermore, individuals can use their culture to adapt and transform their environment (Lavenda & Schultz, 2010).

Cultural values and beliefs are often part of the context in which behaviors occur, and thus, influences patterns of behavior. Research on Latinx families who care for a child with a disability report using spirituality for coping and conceptualizing their new role (Herrera et al., 2009). For example, some Latinx mothers hold religious beliefs that having a child with an intellectual disability is a blessing from God (Ferguson & Vigil, 2019; Salkas et al., 2016). Pitten (2008) suggests that culture may affect how parents view signs and symptoms of ASD.

Cultural Values in the Latinx Community

Culture is always changing and influences families differently (Magaña, 2000). Cultural values may influence how families interpret their child's diagnosis, decisions regarding whether or not to pursue treatment, the selection of and preference for treatment providers, methods, and goals, and the continuation of services once initiated (Buzhardt et al., 2016; Smith, Domenech Rodríguez et al., 2011; Pitten, 2008). In addition, cultural values and practices are critical during the intervention process as they may influence adherence to treatment (Slim & Celiberti, 2021). Cultural values only become a barrier in service delivery when a system is unable to readily adapt to cultural differences (Ferguson & Vigil, 2019).

Understanding cultural values in the Latinx community can be critical when providing behavioral services. Learning about a family's culture can help practitioners, such as behavior analysts, with understanding how certain set of values and beliefs fit within their broader context (Neely et al., 2019; Slim & Celiberti, 2021). In addition, by recognizing a family's cultural values, behavior analysts can address disparities in access to services (Castro-Hostetler et al., 2021; Neely et al., 2019). Each family brings their own set of cultural values that is unique for their environment, underscoring the importance of service provides developing flexibility skills (i.e., cultural responsiveness) and learning to apply what is needed within the context for each family (Williams, 2021). While behavior analysts should avoid stereotyping cultural beliefs with families or assuming families hold certain cultural values based on their racial and ethnic identity (Neely et al., 2019), there is also risk in ignoring cultural values in service delivery.

Casillas and colleagues (2017) conducted a study to understand the cross-cultural perspective on the importance of understanding how culture affects Latinx parents' view on raising a child with ASD in comparison to non-Latinx parents. They used qualitative research methods to provide a platform for parents to discuss their views in an open format. In addition, the study included both mother and father perspectives, providing a unique perspective on how both parents relied on each other to develop their thoughts and share how ASD had impacted their lives. One theme that emerged included the importance of extended family support as a critical component of their lives that served as a coping mechanism. Another theme that emerged was the importance of collaborative relationships between integral team members such as school personnel, interventionists, and themselves. Parents reported these collaborations were beneficial for their children once they had created a more personal relationship with the values and concepts of *confianza* (trust)*, respeto* (respect)*, and familismo* (familism).

Given the diversity and different subgroups in Latinx families, there is no ‘set list’ of values that will apply to all groups. However, there are some cultural values and practices that may be shared across Latinx families (Garcia-Preto, 2005; Santiago-Rivera et al., 2003). The literature demonstrates a tendency for more collectivist values than individualistic centered values (Dingfelder, 2005). As a note, some of the cultural values that are further discussed and examined were taken from the pilot study conducted and will be discussed. Research suggests that some of those shared values and constructs include *familismo* (familism), *personalismo* (friendliness), *confianza* (trust), and *respeto* (respect; Añez et al., 2005; Juckett, 2013; Magaña, 2020). Although this is not an exhaustive list, these values, we will briefly discuss these values here and will explore how they can pertain in the context of delivery of ASD services for Latinx families.

Familismo (Familism)

The value of familismo refers to values and behaviors around inclusiveness, participation, and a strong bond in nuclear and extended family networks that reflect the way family ties are prioritized (Falicov,1998; Hernández & Bámaca-Colbert, 2016). Research suggests that the value of familismo is passed across generations through cultural socialization (Umaña-Taylor et al., 2009). Familismo can include sharing critical responsibilities such as involvement in important decision making, caretaking, and emotional support (Sabogal et al., 1987). In addition, this can include family members who may want to be involved in the treatment process (Añez et al., 2005). According to Gelman (2004), it is important to ask questions about immediate and extended family members, as it can affect treatment planning. Therefore, when providing behavioral services, Latinx families may request for extended family members (e.g., grandparents) to be included in meetings and parent trainings. Furthermore, Latinx families may also request goals that are centered around family traditions or values.

Personalismo (interpersonal relationships)

Personalismo can be discussed as creating a personal relationship rather than an institutional relationship (Añez et al., 2005; Magaña, 2020; Juckett, 2017). In efforts to establish an interpersonal connection, Latinx families will often engage in 'small talk' with their service providers (Paniagua, 1994). While 'small talk' cannot be operationally defined, Latinx families will often ask about personal hobbies, favorite foods, etc. Añez et al. (2005) recommends that throughout treatment, providers spend at least 5 min at the beginning of session getting to know the client as an individual. An additional way of including the value of personalismo into services, is by listening to families concerns/updates prior to starting the session. Ultimately, this concept will begin to establish a sense of respect from the family's point of view and understanding of the working relationship moving forward.

A lack of personalismo can often negatively impact a family's satisfaction and treatment adherence (Añez, 2008; Flores, 2000). In addition, a poor parent-provider relationship can be associated with lower utilization of ASD services (Parish et al., 2012) and retention of services. A potential barrier with respect to behavior analysts adhering and fostering to this cultural value can be due to interpretations of past versions of the Behavior Analyst Certification Board's (BACB's) Ethics Code (i.e., the Professional and Ethical Compliance Code for Behavior Analysts; BACB, 2014). One example includes BACB Code 1.06 *Multiple Relationships and Conflicts of Interest* (BACB, 2014). Bailey and Burch (2016) report that accepting small gifts can resemble the onset of a friendship or dual relationship. However, other researchers in the field have supported the importance that culture plays in ethical service delivery (Brodhead, 2019; Witts et al., 2018). Further, the current Ethics Code (i.e., Ethics Code for Behavior Analysts; BACB, 2020) now includes multiple code items that support practitioners in engaging in behaviors related to personalismo, including code items 1.07, *Cultural Responsiveness and Diversity*, and 1.12, *Giving and Receiving Gifts*.

Confianza (trust and intimacy in a relationship)

The value of confianza is often built into the other discussed values held by Latinxs and can be essential to clinical engagement practices (Falicov, 1998; Santiago-Rivera et al., 2003). Confianza refers to a sense of trust and intimacy within the created interpersonal relationships (Bracero, 1998). While the value of personalismo may focus more on the interpersonal relationship itself, confianza is the attributed part brought to the relationship. Añez et al. (2008) discusses confianza being present in many aspects of Latinxs daily life experiences and will often describe their relationships in relation to their sense of trust with individuals (e.g., they are a *trustworthy* doctor). Additionally, families who adhere and describe having confianza with individuals, often make decisions based on the trust they have built (Añez et al., 2008). In the context of providing ABA services, this can present itself by families coming in and requesting services from a specific practitioner because of a family or friend recommendation. Service providers should be aware that building trust can take time develop, and is an ongoing building experience.

Respeto (respect)

Respeto is another value that is shared across the Latinx culture. The value of respect is based on the importance of respect and obedience of authority figures (Gonzalez-Ramos et al., 1998). Healthcare professionals, such as behavior analysts, are often viewed as authority figures due to their expertise in their respected field. Similarly, in working with a family from any background, respect can look differently for different families. The value of respect can also influence the goals created around treatment planning. For instance, Latinx families can often create expectations around their children showing respect for their elders. The value of respect can also be expected on a reciprocal basis (Carteret, 2011). For example, a Latinx family may demonstrate their form of respect by being hesitant to ask questions or even questioning a behavior analysts' recommendations. While families may be fearful of being disrespectful toward professionals, creating a safe and comfortable environment will help families have an openness in the relationship between them and the practitioner.

CULTURAL ADAPTATIONS

There is substantial evidence to support the use of cultural adaptations (Castellanos et al., 2020; Griner & Smith, 2006; Healey et al., 2017). Across different fields, there are a variety of frameworks on ways to make modifications to an intervention (Resnicow et al., 1999). Cultural adaptations have been defined generally as "the systematic modification of an evidence-based treatment (EBT) or intervention protocol to consider language, culture, and context in such a way that it is compatible with the client's cultural patterns, meanings, and values" (Bernal et al., 2009, p. 362). Cultural adaptations provide steps and guidelines for identifying how culture influences EBT without compromising their effectiveness (Bernal et al., 2009).

Research suggests that culturally adapted interventions are more effective to non-adapted interventions when used with BIPOC populations (Cabral & Smith, 2011; Smith et al., 2011, Smith & Trimble, 2016). Benefits of culturally adapted treatments are driven by treatment modifications related to treatment goals, content, and the use of metaphors in treatment that match the client's cultural worldview (Huey & Polo, 2008). Similarly, Bernal et al. (2009) demonstrated how the importance of adapting an intervention to the client's cultural values can help achieve successful treatment outcomes, including an increase in attendance and engagement. In addition, culturally adapted interventions can improve recruitment, retention, participant satisfaction, treatment adherence, and treatment effects (e.g., Cabassa & Baumann, 2013; Cardona et al., 2012; Lau, 2006). The development of culturally sensitive and adapted intervention can not only increase the effectiveness of treatment, but could further reduce the distress that some Latinx families experience when they first seek services (Añez et al., 2005).

There have been several models to clarify what constitutes as a cultural adaptation (Bal & Trainor, 2016; Bernal et al., 1995; Healey et al., 2017). These examples of adaptations can be surface level (e.g., only translations) or can include a more in-depth adaptation (e.g., including cultural practices). Bernal and colleagues (1995) proposed specific guidelines for creating culturally sensitive treatments with Hispanic communities. They included the following: language (e.g., culturally syntonic language), persons (e.g., client and therapist variables), metaphors (e.g., sayings or concepts shared with the population), content (applying knowledge of the culture), concepts (e.g., cultural knowledge), goals, methods (development of cultural adaptation to the method), and context (e.g., consideration of the impact of contextual processes).

Castellanos et al. (2020) conducted a systematic review on cultural adaptation of mindfulness-based interventions (MBI) for Hispanic/Latinx populations. This study aimed to (1) evaluate the current state of the literature on cultural adaptations of MBIs for Hispanics, (2) review the outcomes that have been associated with culturally adapted MBIs for Hispanics, (3) provide information whether culturally adapted MBIs are effective for Hispanics, (4) evaluate the methodological rigor, and (5) make recommendations on what cultural adaptations are important to consider when working with Hispanic populations. Results from this review indicated that language was the most frequently used adaptation. While it is important to have materials translated, it may not be sufficient to ensure a cultural adaptation (Cardona et al., 2012; Hall et al., 2016). Other areas that were frequently adapted in the review included metaphor and method adaptations. The findings from this study further provide evidence that cultural adaptations can improve evidence-based treatment among Hispanics; however, there is still a need to further identify how to adapt and which outcomes are most effective when adapted.

Other ways treatments can be modified include cultural/linguistic modifications in relation to EBTs and variables of treatment engagement. McCabe (2002) suggests that cultural responsiveness could be augmented by engagement in an individualized manner with consumers. McCabe (2002; 2005) conducted focus groups and interviews with Mexican American parents to gather perspectives on the implementation of an adapted intervention for this population. Some of the recommendations from participants included having a treatment model that was flexible and could accommodate differences in familial attitude and acculturation levels.

Research is still limited regarding information on what constitutes as an appropriate and effective cultural adaptation for the Latinx population amongst other BIPOC (Benuto et al., 2020). Benuto and colleagues (2020) conducted a mixed methods study to investigate if and how clinicians integrate cultural factors into treatment. In particular, the study examined what specific ‘culturally sensitive’ practices clinicians utilize and who clinicians utilize these practices with. The findings from the study were conceptualized as a process model. First, the process began with clinicians being aware of cultural factors being present and using this awareness to guide the assessment process. From the assessment results, clinicians reported to tailor services to the unique characteristics of their clients. The majority of clinicians indicated that they had engaged in culturally sensitive clinical practices regardless of a client’s background. However, it was reported that clinicians tend to only engage in certain culturally sensitive practices such as accommodating for language differences, assessment of client acculturation, and English language proficiency.

An important consideration is to maintain fidelity to the core intervention when adapting to a cultural context (Lau, 2006; Rathod et al., 2019). There are some that argue that adapting evidence-based interventions for populations with different cultural backgrounds can bring risks, such as upholding efficacy for the original intervention (Elliott & Mihalic, 2004; Smith et al., 2011). While the debate remains of the benefits from cultural adaptations (Piña et al., 2019), there is still significant research supporting systematic frameworks and research on different forms of adaptations that are crucial for ensuring intervention integrity (Chelebowski et al., 2019).

Behavior Analysis and Cultural Adaptations

After the publication of the Special Issue on Diversity and Inclusion in *Behavior Analysis in Practice* (Zarcone et al., 2019) research and discussion pieces followed to promote cultural humility (Wright, 2019), developing awareness skills (Fong & Tanaka, 2013), and ethical obligations in working with clients of diverse backgrounds (Castro-Hostetler et al., 2021; Fong et al., 2016; Fong et al., 2017; Kornack et al., 2019). The conceptualization and importance of culture in the field has been discussed (Fong & Tanaka, 2013, Brodhead et al., 2014) and applying behavioral strategies with culturally linguistically diverse populations (Neely et al., 2019; Padilla Dalmau et al., 2011; Rispoli et al., 2011). In addition, behavior analysts are increasingly acknowledging the importance and need for more training in the domains of diversity and cultural competence (Beaulieu et al., 2018; Conners et al., 2019; Fong et al., 2015; Fong et al., 2016; Zarcone et al., 2019). It has been acknowledged that behavior analytic practices need to move beyond "buy-in" strategies for the families that are being served and evolve toward practices that acknowledges participant's experiences and contingencies to affect behavior change (Miller et al., 2019). Miller et al. (2019) discusses taking into consideration variables such as individual perspectives and cultural identification.

To date, there are still no clear guidelines from the BACB of what parts of an intervention are necessary to adapt in order to achieve cultural relevance and treatment efficacy. In the context of behavior analytic EBTs, several modifications can be made in the context of service delivery (Castro-Hostetler et al., 2021). Castro-Hostetler et al. (2021) provided recommendations for modifications to include those related to a) the behavior targeted for change, b) the methods used to change behavior, and c) how treatment choices are communicated to the families we serve. In addition, there has not been a standardized cultural assessment for evaluating individuals in standard behavior change programs (Williams, 2021).

One area where research in the field is growing, is in the domain of cultural and language adaptations. For example, a starting point has been researchers providing more demographic information about participants in research studies (i.e., Jones et al., 2020; Li et al., 2017). Providing information such as race or ethnicity, gender, and cultural/language background allows for an assessment of the extent to which particular EBTs are effective with individuals from different groups and allows for further replication with other groups (Castro-Hostetler et al., 2021). Brodhead et al. (2014) reported that only 9 of the 103 articles they reviewed from *Journal of Applied Behavior Analysis* (*JABA*) and *The Analysis of Verbal Behavior (TAVB)* from 2001-2011 included information regarding the cultural background of participants, and only one reported information regarding language background. They recommended replications and extensions across cultural and/or linguistic groups to expand the generality of behavior-analytic research and assessment.

Jones et al. (2020) assessed the extent to which publications in *JABA* for the years 2013-2019 reported the demographic information of participants. They found that age was reported most frequently (88% of studies), followed by diagnosis (77% of studies). All other types of demographic information were reported in less than 75% of studies. Other demographic information included gender or sex (73%), developmental and/or functioning level (54%), education level (33%), race or ethnicity (7%), language (4%), and socioeconomic status (2%). While the rate of reporting demographic information is still low, it is encouraging to see recommendations for the literature in this area.

An area of research that is also emerging in the field is language training (Wang et al., 2019). Studies examining the effects of language on discrete trial instruction (Lang et al., 2011), the acquisition of play skills (Lim & Charlop, 2018), the recovery of extinguished problem behavior following functional communication training (Padilla Dalmau et al., 2011; Neely et al., 2020), and assessments of behavior function (Rispoli et al., 2011) have demonstrated that the language used during instruction or assessment can have important effects on the outcomes obtained. Research in this domain is relevant for Latinx families who either live in multilingual households, those whose English is not their primary language, or for those that want to teach their children to be bilingual. While language can be discussed as a potential barrier for Latinx families who are trying to get ASD services or when they are receiving services, the positive impact of families who are bilingual should also be considered. There are several advantages of being bilingual that can bring positive effects to the services behavior analysts are providing for children with ASD. For example, increased functional skills (Blom et al., 2017; Fan et al., 2015) and communication in multiple language environments (Lund et al., 2017). A few studies have evaluated the importance of assessing language preferences in the context of providing treatment and overall services to families (Aguilar et al., 2016; Durán & Pollard-Durodola, 2016; Lund et al., 2017). Potential benefits in this area of research may include more accurate assessment results, improvements on individualized programming, and stronger rapport between families and practitioners.

Neely and colleagues (2019) investigated the application of modifications within a behavioral consultation framework to school educators working with Latinx students. The training included discussion of the influence of culture on student behavior, individual student cultural linguistic differences, and examples of culturally responsive instructional and classroom management practices (e.g., cultural adaptations to instructional practices). This study provided behavior analysts with examples of surface level adaptations (e.g., language matching, embedding stimuli from the cultural class into instructional materials) in behavioral practice. Results of the study demonstrated how surface modification facilitated educator behavioral changes and served as an instrument to guide the performance feedback portion of the behavioral skills training (BST). Although this literature base is growing, more research is needed to provide evidence-based guidance to practitioners.

ACCEPTANCE AND COMMITMENT TRAINING

Parent training is a fundamental aspect of treatment of children with ASD and other developmental disabilities and can result in improved intervention outcomes (Haine-Schlagel & Walsh, 2015; Sanders & Kirby, 2012). Parent training often focuses on addressing challenging behaviors from their children and teaching new skills in the home. While the implementation of parent training is utilized to help address the needs of children with ASD, the psychological needs of parents are not often addressed (Blackledge & Hayes, 2006). In behavior analysis, research in parent training is often focused on the implementation of behavioral interventions (e.g., Reagon & Higbee, 2009), rather than stress reduction for parents (e.g., Gould et al., 2018). Improved outcomes for parents and children can be achieved through incorporating strategies centered around parent's covert and overt behaviors into parent training programs (Coyne & Wilson, 2004).

Acceptance and Commitment Training (ACT), a contemporary form of behavior therapy, is rooted in the philosophy of functional contextualism, stressing the analysis of events in terms of their relationship to and within the environment (Biglan & Hayes, 1996). The core analytic unit of contextualism is the ongoing act-in-context (Pepper, 1942). Contextualism is a Holistic approach where the whole event is primary and the other parts are derived or abstracted (Pepper, 1942).

The ACT perspective holds that "human suffering predominantly emerges from normal psychological processes, particularly those involving human language" (Hayes et al., 2012, p.11). From this perspective, it asserts that this type of suffering is unique to humans who have language because of the occurrence of derived relational responding. A goal of ACT is to bring language under greater contextual control in order to promote more open, centered, and engaged responding in life. Instead of changing the events themselves, ACT focuses on working to change the function of those events instead (Stoddard & Afari, 2014). Additionally, ACT looks at psychological events as ongoing events of the organism interacting with contexts that are defined by history and situations (Hayes & Smith, 2005).

The theoretical foundations of ACT are attributed to Relational Frame Theory (RFT; Hayes et al., 2001). RFT is a psychological account of human language and cognition that develops through multiple exemplar exposure of relational responses (Hayes et al., 2001). RFT offers different ways in which humans acquire language and relate stimuli such as frames of deictic (e.g., you, me, here, and there), comparison (e.g., bigger, smaller), and sameness.

RFT emphasized nonarbitrary and arbitrary relations among stimuli (Barnes-Holmes & Barnes-Holmes, 2000; Healy et al., 2000). Nonarbitrary relational responding involves responding to the physical properties of a stimulus in terms of physical properties of other stimuli (e.g., a dime is smaller than a quarter). Arbitrarily applicable relational responding (AARR) occurs “when one individual responds to one stimulus in terms of another not solely based in the formal, physical features of two or more stimuli, but rather to the contextual cues that can be modified on the basis of social whim,” (Dixon et al., 2020, p. 561). For example, an individual can respond in terms of non-arbitrary features, such as indicating that a nickel is “bigger than” a dime from a size perspective. As an individual begins to demonstrate AARR, any stimulus can be related to any stimulus (Hayes et al., 2001). Within this account, individuals can respond contextually to include “bigger than,” “different than”, and “smaller than” which fall under different relational frames.

According to Hayes and colleagues (2012), humans learn to relate events along dimensions in mutual (bidirectional) and combinatorial (multidirectional) ways. In this context, these are applied as relational frames which as behavioral events characterized by: mutual entailment, combinatorial entailment, and transformation of the stimulus functions (Hayes et al., 2001). Mutual entailment is the process between the relation in one direction between two stimuli that entail a relation in the opposite direction. For example, when training that A is smaller than B, then it can be derived that B is larger than A. If an individual learns that the vocal word “CAT” is the same as the written word *CAT*, that individual will derive that the written word is the same as the spoken word “CAT.” When two or more stimulus relations mutually combine, this process is called combinatorial entailment. For instance, when adding to the previous example, C is introduced and directly trained that C is larger than B. From this information, we can derive that C is larger than A in this context. The remaining component of verbal behavior is the transformation of stimulus function. Transformation of stimulus function occurs when the function of one stimulus is altered based on the functions of related stimuli in accordance with a derived relation between those stimuli (Dymond & Rehfeldt, 2000).

Transformation of stimulus function, a feature of verbal learning, is implicated in a class of psychological suffering that only humans with a verbal capacity experience (Tarbox et al., 2020). ACT uses the transformation of function of stimuli to connect contingencies to particular stimuli (Hayes et al., 2013) and is designed to deal with the psychological problems that human language produces (McEnteggart, 2018). As a result, procedures used in ACT are facilitated through different foundational strategies that are described from an RFT perspective. Outcome focused research has supported ACT treatment to a wide variety of populations, including but not limited to: anxiety and depression (Coto-Lesmes et al., 2020), improving academic performance (Chase et al., 2013), and substance abuse (Lee et al., 2015; Luoma et al., 2008; Luoma et al., 2012)

ACT adheres to the goal of promoting psychological flexibility. According to ACT, psychological flexibility is the ability of an individual to accept aversive emotional experiences in the moment while maintaining engagement in value-based behaviors (Hayes et al., 2006). For instance, a parent may continue to present new food items during dinner time to their child who is a picky eater. While this can cause the parent to feel uncomfortable or anxious because their child gets upset and cries at the presentation of new foods, the parent continues, as they find value in promoting healthy eating habits in their child's life. Psychological flexibility can be conceptualized in six ACT interrelated processes: Acceptance, present moment awareness, defusion, values, committed action, and self as context (Hayes et al., 1999). Each of these processes plays a role in determining and understanding how well individuals are able to adapt to change and challenging circumstances in life (Hayes et al., 2012).

Core processes of ACT

Acceptance

Acceptance is defined as the "voluntary adoption of an intentionally open, receptive, flexible, and nonjudgmental posture with respect to moment-to-moment experiences" (Luoma et al., 2007, p.17). Acceptance is also referred to as willingness to experience unpleasant thoughts and events without attempting to change them (Stoddard & Afari, 2014). It is important to note that in this context, it does not necessarily mean that individuals have to accept or tolerate uncomfortable/negative feelings or bad situations. Instead, acceptance and willingness is a skill that has to be learned in choosing to experience difficult thoughts, feelings, and emotions. For example, a parent can experience the aversive thought and frustration, "Work has been taking up all my time and I think I'm not doing enough to be a good mom." With the skill of acceptance, a parent would observe the feelings and thoughts that work is currently taking more time than normal or more than they would like it to, but that does not make them a “bad” parent. Instead, they can begin to find ways to incorporate ways to spend more time with their kids the following week.

Present Moment Awareness

Present moment awareness (often referred to as “mindfulness”) involves attending to and strengthening one's awareness to internal and external experiences as they occur in the present moment (Luoma et al., 2007; Hayes et al., 2012). Furthermore, it is our ability to allocate our attention to focus and flexibly experience the world around us without judgment. It is very common for individuals to spend time paying attention to something other than the present (Tarbox & Rodriguez, 2021). In practice, individuals would pay attention to their own attending behavior to what is happening here and now, instead of having wandering thoughts about the past or the future (Tarbox et al., 2020). For example, a parent can practice being aware during their child’s sporting event in the present time, instead of thinking about work related tasks that need to be completed the next day, “Right now I'm content watching my child having fun at soccer practice.”

Cognitive Defusion

According to ACT, it becomes problematic when we spend too much time in our negative thoughts and begin to believe them, rather than looking at or observing them (Luoma et al., 2007). This is referred to as “fusion” in the literature and can often lead to individual’s being overly rigid about their negative thoughts (Tarbox et al., 2020). Cognitive defusion procedures attempt to alter the function of these thoughts and allow us to build a more flexible repertoire of responding to them (Tarbox & Rodriguez, 2021). For parents, fused thoughts may often be, “I’m not doing enough as a parent” or “I’m a bad parent because I am always late to drop off sessions.” When some parents become fused with these thoughts, they often engage in avoidance behaviors (i.e., distancing themselves further) rather than engaging in behaviors that would improve their relationship as a parent. A defused repertoire would include parents stating, “I am noticing that I have a lot going on right now.”

Self as Context

The process of self as context describes an awareness that can be examined through different senses of self: self as content (the conceptualized self), self as context, and self as process (Hayes et al., 2001). First, self as content, describes an individual’s view about their own psychological content. According to Hayes et al. (2012) this is acquired early during our childhood stage when we begin to acquire language and are taught to categorize our own reactions and behavioral dispositions. For instance, an individual would evaluate their own personal “I” statements. For instance, a parent may state, “I am a hard working father.” Associated with the self as content are all types of images, thoughts, and behaviors that make someone believe they are true (Luoma et al., 2007). While these verbal processes can help build our identities, they can also be problematic when they are negative or unworkable thoughts. For example, when a parent states, “I am an incompetent father.” This thought can keep him from doing activities or being around his child because he is fused with thoughts that he is not a good enough father.

Self as context examines our perspectives from the ones we perceive, speak, act, and live (Luoma et al., 2007). In addition, it takes into account the deictic frame “I/here/now” about events happening there/then. This is often referred to as perspective taking, in which individuals are able to observe different content of their lives such as thoughts, feelings, and memories (Luoma et al., 2007). For example, “I felt so tired taking my child to therapy and swim classes on the weekends early on when they were younger, but I love seeing him compete now as a teenager."

Self as process is described as an "ongoing verbal description, based on the simple relational actions of noting what is present, without fusion or needless defense" (Hayes et al., 2012, p. 84). From this process, an individual is able to respond from one's own responding (Hayes et al., 2012). The concept of self knowledge, allows individuals to respond to questions as "How are you feeling?" "What are you doing tomorrow?" For instance, a parent with a child with ASD may state, "I am experiencing loneliness from my friends."

Values

Values are "freely chosen, verbally constructed consequences of ongoing dynamic, evolving patterns of activity" (Hayes et al., 2012, p. 298). A value is an abstract construct that individuals are constantly striving toward. An important characteristic of values is that they are freely chosen rather than those that are forced or deemed as important by others (Hayes et al., 2012). Values are unique to individuals and can include different domains of our lives. This can include but is not limited to work, spirituality, education, family, leisure, and intimate relationships (Wilson et al., 2010). An important component of values is that contrary to goals, they can never be achieved or attained. Once a value has been identified, goals can also be individualized in order to live in line with those values. For example, a value that is often overtly stated by parents is being a supportive and loving parent to their children. A goal that can be established around this value is spending 20 minutes with their children in the evening. While goals can be flexible and pragmatic, they are likely to lead to effective action across time (Luoma et al., 2007). In this example, the process of being a loving and caring parent is never complete, but instead is an ongoing process and living in the present moment.

Committed Action

Committed action is directly aimed at socially meaningful overt behavior change (Tarbox & Rodriguez, 2021). Unlike values, which may never be achieved due to being an ongoing process, concrete goals that are values-consistent can actually be achieved through committed actions (Hayes et al., 2012). For example, engaging in positive related valued behaviors would require creating small goals around the overall value of being a more present and involved parent. For example, a parent may create actionable goals such as making a meal with their family, attending their child's sport practice, or helping with homework at night. Each completed goal brings individuals closer to their individualized selected values.

These ACT processes can work individually or as a collective when applied to parents to address the overall goal of promoting psychological flexibility. While ACT was developed and has been predominantly used by those practicing psychotherapy, it has increasingly been adapted to fit the scope and practice of other professions including behavior analysts (Szabo, 2019; Tarbox et al., 2020). Acceptance and Commitment Training (ACTr) is a verbally-based intervention that alters the functions of private events by strengthening perspective taking and contact with the internal and external environment (Dixon et al., 2020). It is important to note that there are some differences between ACT and ACTr. ACTr is applied in non-psychotherapeutic settings (Hayes et al., 2012; Hayes et al., 2004) and within the scope and practice of behavior analysts (Tarbox et al., 2020). Interest and application of ACT from within the ABA community has continued to grow and has been integrated into behavior analytic practice by behavior analysts (Dixon et al., 2020; Tarbox et al., 2020). For example, the new edition of Cooper et al. (2019) *Applied Behavior Analysis*, contains multiple sections devoted to RFT and ACT. ACT itself has become more plausible for behavior analysts working with families and individuals with intellectual and developmental disabilities (Dixon et al., 2020). In particular the application of ACT to parents, staff, and clients in the area of developmental disabilities (Blackledge & Hayes, 2006; Brazeau et al., 2017; Castro et al., 2016; Chancey et al., 2019; Dixon, 2014; Gould et al., 2018; Szabo, 2019).

ACTr and Parents of Children with ASD

Raising a child with ASD can have a significant outcome on the family system, including the promotion of the parent and child well-being (Robinson & Weiss, 2020). Raising a child with ASD involves learning new teaching strategies and learning about challenging behaviors for their children. Families are often not prepared in how to address these challenges. The utility of ACT has been examined addressing challenges faced by individuals with developmental and intellectual disabilities, as well as their parents and caregivers (Blackledge & Hayes, 2006; Eilers & Hayes, 2015; Gould et al., 2018; Hahs et al., 2019).

Parents of children with ASD report several challenges including higher levels of anxiety (Falk et al., 2014), stress (Alnazly & Abojedi, 2019; Dabrowska & Pisula, 2010; Falk et al., 2014; Hayes & Watson, 2013), depression (Falk et al., 2014; Padden & James, 2017) compared to parents of children without ASD or other developmental disabilities. Parental stress can impact both the parent and child directly. Parental stress can come at different stages for children with ASD. As mentioned previously, obtaining a diagnosis can be very stressful for Latinx families (Zuckerman et al., 2014). However, stressful factors such as fear and worry continue for families as their children continue to age. For example, parental stress can often interfere with the effectiveness of treatments for children with ASD (Osborne et al., 2008) and overall the child's quality of life (Aran et al., 2007).

While evidence-based practices of ABA have demonstrated to be effective for children with ASD (National Autism Center, 2015), there may be some variables that increase family stress when participating in behavioral services (Hastings & Beck, 2004). For example, taking into consideration a family's resources (e.g., time, skills), demands (e.g., work) and how services fit into their family routine (McConnell et al., 2015). In particular, Latinx families must often navigate their psychological stress with limited resources and family support (Magaña & Smith, 2006). One way behavior analysts can support families who have children with ASD is by practicing ACT strategies to reduce stress. ACT focuses on the psychological context for parents, increasing psychological flexibility, and increasing their skills in stressful situations (Jones et al., 2014; Whittingham et al., 2015). An area that can target parents' difficulty is by utilizing ACT to target experiential avoidance and cognitive defusion in the context of supporting their child with ASD (Coyne et al., 2011). ACT has shown to be effective in addressing various areas of psychological distress for parents of children with ASD (Blackledge & Hayes, 2006; Fung et al., 2018; Hahs et al., 2019).

Whittingham and colleagues (2015) examined the use of a combined ACT intervention and parenting intervention to assess the impact of Quality of Life (QOL) for parents of children with cerebral palsy. In the study 67 parents participated in a randomized controlled trial with three groups: the waitlist control, Stepping Stones Triple P (SSTP; a parenting Intervention) and SSTP + ACT. Findings from the study demonstrated improvements in parent-reported child functional performance and reductions in depressive and stress symptoms in the SSTP + ACT intervention group in comparison to the other two groups. This study offers implications for utilizing an ACT intervention to enhance parent and child outcomes and quality of life for families of children with disabilities.

Blackledge and Hayes (2006) was one of the first studies to evaluate the effects of a two-day workshop aimed to teach ACT components to parents of children with ASD. The study used a within-subject, repeated measures design to test the effects of a 2-day group workshop on 20 parents. Assessments used for the study consisted of two self-report instruments measuring therapeutic mechanisms of change through ACT (e.g., The Acceptance and Action Questionnaire; AAQ-II; Bond et al., 2011) and four measured outcomes in the domains of general distress, depression, and perceived control over child behavior (e.g., The Beck Depression Inventory). Each two-day workshop involved a total of 14 hours of instruction, group participation, and experiential exercises (focused around values, acceptance, and defusion with parents of children with autism). Results of the study demonstrated an improvement on psychological outcomes across families, including a reduction in experiential avoidance and cognitive fusion. Most of the gains achieved in the study were retained over a 3-month period. These findings provide preliminary support for both ACT as a technology that can help the psychological distress of parents with children with ASD and the model of distress that underlies ACT.

Gould et al. (2018) further evaluated the effects of an ACTr on values-directed behavior in parents of children with ASD. It was one of the first studies to directly measure the effects of ACT on overt behaviors; previous studies have primarily used self report measures. The researchers measured values-directed behaviors for three mothers of children with ASD. The mothers learned about ACT skills (values identification, mindfulness, defusion, acceptance, committed action) across six-training sessions. A non-concurrent multiple baseline across participants was used, consisting of four phases: baseline, training, post-training, and follow-up. The dependent variable was frequency of values-directed parent behaviors per calendar day.

Each of the value-based behaviors were individualized and selected by each participant based on their individual values and goals. For example, one parent focused on instances where they made a choice about their future or engaged in self-care activities. Behavior data were collected by parents outside of the training using a journal or specific data collection sheets.

Findings demonstrated that ACT increased parent engagement in values directed behavior and gains were maintained post-training. The results of these studies demonstrate progress towards understanding the relationship between experiential avoidance and undesirable parenting practices and reducing experiential avoidance toward their children. Furthermore, parents reported other collateral effects from the training, such as positive changes in their relationships with their spouse. Overall, the findings support the literature that ACT can have a positive impact on overt parent behavior (Blackledge & Hayes, 2006) and that ACT may be a beneficial complement to community-based ABA service delivery models. Gould and colleagues provided several recommendations for future researchers, including further replication and extension across more diverse parent populations.

Another example of parents of children with ASD benefitting from an ACT intervention is the work presented in Hahs et al. (2019). Hahs and colleagues (2019) examined the effect of a randomized control trial of ACTr on the psychological flexibility and well-being of 18 parents of children with ASD. All of the participants' children received ABA therapy between 150 and 300 min per week. The participants completed eight self-report measures, including the AAQ-II. A between-subjects pretest/posttest experimental design with matched assignment into the treatment and control groups was used. After participants had completed the assessments, they were randomly sorted into groups based on the scores from their depressive symptoms and psychological flexibility. Nine participants were assigned to the ACT group intervention and the other nine were in the control group.

The ACT group intervention consisted of a variety of ACT-based training strategies that targeted the six processes of the hexaflex. The content for the workshop was divided into the following six components: introduction to ACT, creative hopelessness, cognitive defusion, acceptance, self-as-context, and values/committed actions. For each component, a description of the overall processes was described using metaphor exercises. Participants engaged in two, 2-h training sessions. Participants completed post-test measures upon the conclusion of the second session. In the control group participants only completed the pre- and post-test measures. Statistical analyses were conducted following group randomization to assess the differences between the two groups. Results from the treatment group demonstrated statistically significant improvements and large effect sizes on six of the eight self-report measures following treatment. Findings from the study demonstrate that the intervention could be effective for increasing elements of psychological flexibility and mindfulness, as well as decreasing reports of depression and shame.

Despite the growing evidence for ACTr with parents of children with ASD, the generalizability of these findings is limited by either not including complete demographic information from participants or not including participants from marginalized groups. While research in this area is growing, specific research aimed toward the relevance and acceptability of ACT treatment with "individuals from nondominant, traditionally underserved backgrounds is in its infancy," (Fuchs et al., 2013, p. 2). It is important that evidence-based treatments are used flexibly and attentively to ensure the clients' needs are met (Fuchs et al., 2013). One way to achieve this is by taking consideration of cultural values and how they may capture both a utility for Latinx parents and the utilization of engagement with behavioral services. To date, there have only been two studies developed to target cultural adaptations of an ACTr with Latinx parents of children with ASD (Baires, 2020; Cañon Garzón, 2012).

In an unpublished dissertation, Cañon Garzón (2012) conducted a two-day workshop with 20 Latinx parents of children with ASD. This study included a surface level adaptation by translating and delivering the training in Spanish. The purpose of the study was to determine if ACT produced a change in the psychological distress experienced by Latinx parents of children with ASD. A pretest posttest design was utilized in the study. The dependent variable examined psychological stress from parents. Participants completed self-report measures for depression, anxiety, and psychological flexibility/experiential avoidance. The training components used were adapted in Spanish from Blackledge and Hayes (2006). Two 7-hour workshops were delivered that provided an overview of ACT, along with didactic material and experiential exercises.

Similar to the results presented in Blackledge and Hayes (2006), levels of distress experienced by Latinx parents decreased from the pre-treatment to post-treatment phase. A limitation identified by Cañon Garzon (2012) was a lack of Latinx cultural elements included in the intervention. This intervention served as a preliminary model, as no studies had been conducted exclusively as an ACTr model with the Latinx population and in the Spanish language. Future recommendations discussed modifying the content of the experiential exercises and metaphors to include Latinx cultural values.

In another unpublished dissertation, Baires (2020) expanded the literature in this area by evaluating the effects of culturally adapted ACT on statements of psychological flexibility, statements of psychological inflexibility, and self-report measures for Spanish-speaking Latinx caregivers of children with ASD. This study included surface level and in-depth adaptations by including Latinx cultural values and sociocultural factors within the metaphors, exercises, and activities that were used. Dependent measures for the study included the percentage of Statements of Psychological Flexibility (SPF) and percentage of Statements of Psychological Inflexibility (SPIF) reported responses from participants. Questions were created in order to assess participants' responses in all parts of the ACT processes (e.g., acceptance, values, committed actions). For example, for the values question, "Why did you decide to attend today's session?" was asked.

A non-current multiple baseline across participants design was used that included baseline, culturally adapted ACT, and follow-up phases. During baseline, participants completed Spanish versions of self-report measures (i.e., AAQ-II). In addition, responses to the SPF and SPIF were obtained. After three baseline sessions were completed, participants completed the culturally adapted ACT sessions. Each session began with a brief overview of each process, followed by two exercises, activities, or metaphors. Latinx values that were integrated in the exercises included familism and religion/spirituality. At least three follow-up sessions were conducted after the last culturally adapted ACT session and procedures were identical to baseline.

Results from the study indicated that all participants reported higher percentages of SPF than SPIF across all conditions. In addition, positive changes were demonstrated across all participants in the self-report measures post-treatment. The results from Baires (2020) are important as they support the need and demonstrate the effects of culturally adapted interventions for Latinxs families. However, the cultural adaptation demonstrated in this study is only one to adapt an intervention. As discussed previously, Latinxs come from different countries, therefore having different sets of values. Baires (2020) discusses the effects of the researcher’s experience in creating the adaptations in the exercises, as well as differences for the participants to whom it is delivered. For example, accounting for differences across participants such as country of origin, Spanish language dialect, and sensitivity to their personal experiences. Thus, it would be beneficial to continue research on cultural adaptations of ACT from different perspectives.

First, we conducted a pilot study to identify and learn about the cultural and language barriers that Latinx families in Nevada face when accessing ABA services for their children with ASD. The information provided from the survey and focus groups was to obtain preliminary information to create a culturally adapted intervention. Specifically, the findings from the pilot study examined the role of cultural values played in family centered planning and treatment services for Latinx parents.

The goal of this current was to continue this line of research by providing an ACTr to Latinx families that are currently on a waitlist to receive ABA related services. Specifically, we extended this line of research by creating our own adaptations for some of the ACT exercises that were delivered in Baires (2020) and extended the research to include additional Latinx cultural values from the findings from the pilot study. Furthermore, we included an additional educational component in training due to the literature often discussing Latinxs limited knowledge of ASD (Chlebowski et al., 2019; Zuckerman et al., 2014), which also aligned with the results of the pilot.

Pilot Study: Understanding the Role of Cultural Values in ABA Service Delivery from Latinx Families

Rationale

The purpose of this qualitative pilot study was to identify and learn about the cultural and language barriers that Latinx families in Nevada face when accessing ABA services for their children with ASD. The information provided from the survey and focus groups yield information to create a culturally adapted intervention, as well as providing information for practitioners to help bridge gaps and provide more effective and quality services for the Latinx population. This was a two-part study; part one was the Participant Demographic and Experience Survey and part two was centered on the structured interviews and focus groups. The aim of the focus groups was to explore the quality of behavioral services Latinx families are receiving in Nevada. Specifically, it aimed to examine the role that cultural values played in family centered planning and treatment services for Latinx parents. The results of this pilot study were used to guide the development of the current study.

Research Questions

1. What cultural values and beliefs are held by the Latinx population with respect to accessing and receiving ABA services?
2. What barriers are faced by the Latinx population when accessing ABA services?

Study 1: Demographic and Experience Survey

Recruitment and Participants

Inclusion Criteria

We recruited participants through local community partners, ABA-based agencies, and organizations that serve children and families with developmental disabilities. We distributed recruitment flyers directly with families and through online platforms such as social media pages (i.e., Facebook) and community pages. We distributed flyers in English and Spanish. In addition, we sent recruitment information via email to community partners to be shared with families. Families were included to participate in the survey if they met the following criteria: 1) respondent was 18 years or older, 2) identified as Hispanic/Latino/a/x, 3) have at least one child diagnosed with any developmental disability, and 4) currently receive or had received ABA services in the past.

Participants

18 Latinx parents participated in the Demographic and Experience Survey. Eight (45%) of the participants completed the survey in English and 10 (55%) completed the survey in Spanish. Aggregated participant demographics are presented in Table 1, including the parents' cultural identity, their primary language spoken in the home, and parent educational level. The majority of parents (89%) reported as Mexican being their cultural identity. Ages ranged from 25-44 with an average age of 36 years old. Parents reported a range of responses for their primary language spoken in the home; (39%) of parents reported speaking English and Spanish, followed by primarily Spanish (33%) and then English (28%).

Researcher Demographics and Characteristics

All focus groups and structured interviews were conducted by the researcher who is bilingual (English-Spanish) and identifies as Latina. The independent researchers who assisted with the survey/focus group coding process and treatment fidelity identified as Hispanic/Latina and are both bilingual (English-Spanish). The Spanish quotations for this manuscript were translated by the primary bilingual researcher and verified by the second bilingual researcher.

Setting, Materials, and Apparatus

All surveys were collected through an online platform (Qualtrics). We housed the online survey in Qualtrics.

Survey Instrument and Data Collection

Participant Demographic and Experience Survey. In the Participant Demographic section (see Appendix A for the English version and Appendix B for the Spanish version), we asked participants about their gender identity, age, what primary language is spoken in the home, county of Nevada residence, Ethnicity, Hispanic/Latino origin, and highest level of education. The design of the survey incorporated both closed and open-ended questions. The second part of the questionnaire asked the participants to share their experiences in receiving ABA services and the extent to which those services were received. The survey also included questions asking what cultural values (if any) were important to them in the process of receiving services. Upon completion of the survey, we asked participants if they wanted to be further contacted to participate in either a focus group or interview. The focus group was an opportunity for families to further describe their experiences in a group setting, while the interview was a 1:1 opportunity to discuss their experiences further. The method and results of the interviews and focus groups are described below under Study 1.

Coding and Data Analysis

We used the Qualtrics software to obtain frequency counts for all selection-based questions (i.e., Likert-scale questions). To analyze the responses to the open-ended questions, the research team used qualitative methods to code responses according to themes. Two researchers independently reviewed each response, created a code, and placed it in a category based on similar patterns of responding. Once the questions had been reviewed, we used a frequency count for similar codes using Google Sheets due to similar responses across participants for the following questions: “How long have you had or did you have ABA services?”; “How did you find out about services?”; “What do you value around your child’s services?”; and “Were there any barriers in receiving services?” For example, to the question, “Were there any barriers in receiving ABA services?” a participant responded with “Issues with insurance and cost of services.” From this response, we categorized it under ‘insurance/funding’ for reporting purposes.

For the other open-ended questions, we took a more in-depth process due to varying responses. These questions included the following: “When you started ABA services, how much did you know about ABA or about your child’s diagnosis?”; “What are some cultural values that you hold that are important for your child’s provider to know?” and “What did you find to be the most helpful/effective in receiving ABA services?” For these questions, we independently read the survey responses and created our own summary based on whether there were frequent responses to the questions or similarities across the responses. We met to discuss our own summaries and created an aggregate product to report from the findings.

Results

We will include direct quotes from the participants throughout our results. For participants who responded in Spanish, we will present the Spanish quotes first, followed by an English translation in brackets.

Table 2 contains a summary of the open-ended questions collected through the Participant Demographic and Experience Survey. The majority of participants (n=7) indicated that they received ABA services for more than three years. Across participants, the most common reported initial barriers to begin ABA services were the waitlist, issues around insurance/funding, and the COVID-19 Pandemic. Other barriers that parents indicated were the lack of providers who were providing therapy for their child's age and the lack of flexibility in scheduling to attend both school and ABA related services. Several participants (n=6) reported learning about ABA services through community resources. Community resources included statewide organizations such as Nevada PEP (parents encouraging parents), Families for Effective Autism Treatment (FEAT) of Southern Nevada, and Nevada's Autism Treatment Assistance Program (ATAP). When we asked parents what they valued around ABA Services they reported: treatment planning, individualized planning, data progress, and involvement. For example, one parent stated, "I like the planning of all his programs. They push him to do it even when he gets frustrated. He gets challenged, but I know he can do it." Another parent brought attention to values she held for service providers and her child, "*Valoro la privacidad y confidencialidad de la información de mi hijo y su seguridad física y emocional. Valoro la profesionalidad de la compañía y la elaboración de un plan establecido para trabajar en los retos que enfrenta mi hijo y nuestra familia para ayudarlo a ser más independiente.*" [I value the privacy and confidentiality of my child 's information, as well as his his physical and emotional security. I value the professionalism of the company and the development of an established plan to work on the challenges my son and our family face to help him become more independent].

Table 3 provides a summary of parent's experiences around ABA services. Parents responded on a Likert-type scale for the following questions: "Do you feel included around treatment planning for your child?"; "Do you feel that the ABA services took cultural considerations in treatment planning for your family?"; "Does your service provider speak Spanish or was there someone you could communicate your needs to?" The Likert scale was based on a five-point scale on responses to include *always, often, sometimes, rarely, and never*. Overall, the majority (82%) of parents reported always feeling included around treatment planning, followed by 12% reporting that they *often* felt included. Similarly, the majority (53%) of parents reported ABA agencies were *always* taking cultural considerations around treatment planning, followed by 24% of parents reporting cultural considerations were considered often. However, one family rated “rarely” for agencies taking cultural considerations. Finally, the majority of parents (77%) reported either always or often having someone available to communicate their needs in Spanish if needed, while two parents reported “rarely” or “never” having someone available to communicate with in Spanish.

For the remainder of the open-ended questions we were unable to create repetitive themes around some of the responses due to the varying responses. However, there are implications from the collected results; which are outlined here. In response to “When you started ABA services, how much did you know about ABA or about your child’s diagnosis?” -- all families reported very minimal to no knowledge of what ABA services were or the effects it would bring to their family. One parent reported that they “Did not know all the benefits from ABA, and would have enrolled sooner if they had.” In addition, another parent reported that since they “did not know much about their child’s diagnosis, a lot of research had to be done on their own. In response to the next question -- “What are some cultural values that you hold that are important for your child’s provider to know?” -- some parents identified some of the following values: trust, respect, open communication, personal cultural practices and family. Finally, in response to “What did you find to be the most helpful/effective in receiving ABA services?” half of the participants (n = 9) reported that they found the individualized treatment and the skills that were being taught to their children (“regulating emotions,” “social skills” and “developmental skills”) to have the most impact when receiving ABA services. One parent reported that, *“Lo más útil para mi fue todo, descubrí técnicas que no sabía, me empapé de mucha información nueva actualizada y* *verificada. Esto me ayudó a llevar los servicios del aprendizaje de mi hijo al máximo."* [The most useful thing for me was everything, I discovered techniques that I did not existed, I soaked up a lot of new information that is updated and verified. This helped me maximize my child's learning].

Study 2: Structured Interviews and Focus Groups

Recruitment, Participants, Setting, and Materials

Once surveys were completed, we contacted families (with their preference of contact) that indicated an interest to participate in either an individual structured interview or in a focus group within a week to follow-up; thus, all participants for Study 2 were pooled from those who participated in Study 1. Based on the participants availability and language preference, we organized two interviews to take place over the phone and two focus groups to take place online. Offering the interviews and focus groups over the phone and online allowed participants across the state to participate and ensure appropriate safety precautions due to this study taking place during the COVID-19 Pandemic.

Two Latinx parents participated in the structured interviews. Seven Latinx parents participated across two focus groups. Focus Group 1, conducted in English, included a married couple and an additional participant. Focus Group 2, conducted in Spanish, included four Latinx parents as participants. The majority of parents were still currently receiving ABA services (n=5), while the other participants had received services in the past (n=4). Aggregated participant demographics are presented in Table 4, including the parents' cultural identity, their primary language spoken in the home, and parent educational level. All participants reported as Mexican being their cultural identity. Parents reported a range of responses for their primary language spoken in the home; (62%) of parents reported speaking English and Spanish, followed by primarily English (25%) and then Spanish (13%).

Procedures

All interviews and focus groups were conducted by the first author. As stated above, we conducted two separate interviews: one in English and one in Spanish. The one-on-one interviews were conducted for families who did not select to participate in a focus group and provided additional flexibility for families to discuss their experiences. The interview was structured similarly to the focus group (outlined below), including the purpose and general overview for the interview at the start. The semi structured interviews were conducted over the phone and lasted approximately 20 to 45 min.

Structured Interviews

We conducted two separate interviews: one in English and one in Spanish. The one-on-one interviews were conducted for families who did not select to participate in a focus group and provided additional flexibility for families to discuss their experiences. This method also allowed for the researchers to ask follow-up questions and receive further context to the parent's answers in the Demographic and Experience Survey that had been collected from Study 1. Prior to starting the interview, the researcher asked for verbal consent to audio record. The interview was structured similarly to the focus group, including the purpose and general overview for the interview at the start (see Appendix C for English version and Appendix D for the Spanish version). The semi structured interviews were conducted over the phone and lasted approximately 20 to 45 minutes.

Focus Groups

We conducted two separate focus groups: one in English and one in Spanish. We conducted all focus groups online via the Zoom platform and each lasted approximately 90 minutes. At the beginning of each focus group, the moderator (first author) described the purpose and general overview of the focus group (see Appendix E for the English version and Appendix F for the Spanish version). We reminded participants that participation was voluntary and asked for permission to audio record the session in order to capture accurate data. After all participants provided verbal consent, the moderator began the discussion (for the outlined agenda, see Appendix G for the English version and Appendix H for the Spanish version).

Following the introduction, we introduced a group activity, The ACT Matrix (Polk & Schoendorff, 2014). The ACT Matrix is a tool used to track short term and long-term outcomes of an individual's behavior and determine the behavior's function (see Polk & Schoendorff, 2014). The purpose of running The ACT Matrix was to identify parents' values and actions to take in order to move toward those values. Ultimately, The ACT Matrix can help identify what actionable items individuals can do to move toward their values (i.e., spending quality time together). For the purpose of this study, the ACT Matrix served as a tool to help identify values held by the participants.

We began The ACT Matrix activity by discussing the difference between values and goals. This was illustrated by using an example of having a value centered around '*health'* (see Figure 1 for a completed example). While we can set *goals* around a healthier lifestyle (i.e., exercising three times per week, eating vegetables), we are constantly working toward the value of 'health.' Thus, while the goals can be completed (e.g., an individual can exercise three times a week), "living by our values" is never fully completed or achieved. Next, we demonstrated a picture of a blank ACT Matrix on our screen. We explained each of the ACT Matrix quadrants, as well as demonstrating how the discussed example (value around health) would fit in each area.

Next, we opened up the discussion for the group by asking: “What are things you value/are important to you?” We waited to obtain responses from the majority of participants and allowed for the group discussions to occur. We proceeded by guiding the group around the different areas of the matrix and moderated the group in order to allow all participants to share their experiences. During this activity, several values were identified by the group that helped with further discussion during the session. At the end, we provided parents with a copy of a blank matrix to complete independently and track their own changes for future use.

At the conclusion of the focus groups, we provided participants with additional resources for support groups and parent training opportunities in the state. In addition, participants were encouraged to further contact the moderator/researchers if they had additional questions or comments that were not addressed in the group context. A treatment fidelity checklist was scored by a separate researcher to ensure the moderator included the same guiding questions and protocol for both focus groups (see Appendix I for the English version and Appendix J for the Spanish version). Items on the treatment fidelity checklist included the moderator stating the purpose of the focus group and ensuring the activity was presented. Treatment fidelity was scored at 100% across both focus groups.

Coding, Data Analysis, and Inter-rater Reliability

We used qualitative research methods to code and analyze the responses from the structured interviews and focus groups. Qualitative research is a “systematic approach to understanding qualities, or the essential nature, of a phenomenon within a particular context” (Brantlinger et al., 2005, p. 195). Qualitative methods are empirical, involve observation and experience, and allow us to address complex issues of practice including working with diverse individuals. In addition, qualitative methods can be useful during pre-intervention stages to gather perspectives from the population and examine the acceptability of an intervention (Hitchcock et al., 2010). The outcomes of qualitative research can inform practices to provide a detailed description of a given problem. Qualitative methods can be conceptualized as a form of systematic descriptive assessment of social validity. In this study, we were evaluating the social validity of ABA from the perspective of Latinx families using three coding cycles (see*,* Saldaña, 2021 for more detail).

For the first cycle of coding, elemental coding methods were utilized (see Table 5 for definition of key terms). Elemental coding methods are “primary approaches to qualitative data analysis,” (Saldaña, 2021, p. 129). In particular, in vivo coding methods were used during the first cycle of coding. In vivo methods is a form of qualitative data analysis that places emphasis on the actual spoken words of the participants (Manning, 2017; Saldaña, 2021). For the second cycle of coding, focused coding was used. Focused coding searches for the most frequent or significant codes from in vivo coding to develop salient categories in the data and “requires decisions about which initial codes make the most analytic sense” (Charmaz, 2014, p. 138). The third and final cycle of coding used was codeweaving. Codeweaving is “the actual integration of key code words and phrases into a narrative form to see how the puzzle pieces fit,” (Saldaña, 2021, p. 345).

Coding (see Figure 2 for a process diagram)

We audio recorded all focus groups and interviews. We used a transcription company to produce the initial transcription, then manually compared the transcription to the audio recording to ensure it was correct. We edited some words from the initial transcriptions that did not translate appropriately (e.g., use of slang terms, ‘Spanglish’, or acronyms). In addition, a separate researcher listened to and verified the transcription from the Spanish-speaking focus group to ensure the context was transcribed appropriately. We proceeded to the coding process using the three cycles of coding as outlined by Saldaña (2021).

In vivo coding methods were used for the first cycle of coding. The first cycle involved listening to and reading all of the focus group transcripts to review the overall content. This initial process allowed us to become familiar with the collected data. As we listened to the audio recordings, we took notes and began to highlight important areas on the participant’s experiences. Next, as suggested by Creswell (2007), two researchers individually read and manually coded the transcripts. This first cycle allowed for researchers to get familiarized with the content and apply initial codes to the relevant areas. We utilized in vivo coding methods in order to best capture the meaning of participant’s experiences and identify open codes. In addition, in vivo coding can be helpful when researchers are interacting with participants from a particular culture and better understand stories or phrases used throughout (Manning, 2017; Manning & Kunkel, 2014). For the application process, “in vivo codes can be applied with less frequency, such as one word or phrase for every three to five sentences,” (Saldaña, 2021, p. 139). For example, the codes “communication between spouses”[1] and “frightening because son can’t talk”[2] were created from the following interview excerpt:

“So it just took a lot of [1] communication between me and my husband to decide that factor and then, once we started it was really hard because I had never been separated from my son. When I had early intervention services they actually came to my house, so I never had to leave him. So it was very [2]frightening because he can't talk, he can't tell me anything of what's going on or how he was treated and yeah, I was more mortified.”

The aim of the second cycle of coding that we used, focused coding, is to connect statements and experiences across all of the focus groups. For example, we provide below some of the most frequent codes from the data that started the process in creating themes across groups from the first cycle of coding. All five of the below listed themes came up across both focus groups and both structure interviews.

1 “ABA places give you hope”
2 “So much hearsay of ABA”
3 “learned to say eat”
4 “Make ABA a priority”
5 “Communicate more of his needs”

From these codes, the researcher started to analyze the significance of these codes and began to create themes. For this example, the significance and impact of ABA became salient and worth noting. Initial ideas for themes surrounding these codes included ‘*experiences with ABA’* and ‘*positives of ABA*.’ Next, as Creswell (2007) recommended, each researcher coded and created separate themes. Once this was complete, all researchers met to discuss the themes and categories they had created. Furthermore, they agreed/disagreed on themes and categories that would be presented and further analyzed (Creswell, 2007). On items where there was a disagreement on either themes/categories, further discussions were had between all researchers until an agreement was reached.

Upon agreement, the themes were defined (see Figure 3, for an example of a diagram) to increase reliability and improve the validity and credibility of the data as a whole and what codes would meet criteria. In addition, a third researcher coded the data without seeing the themes that had been finalized. This allowed for further reliability to decrease possible researcher bias and make sure no further themes had been missed (Luker, 2008).

The third and final cycle of coding consisted of codeweaving. Part of the final post-coding process was to jointly review the significant overlap in themes into comprehensive categories. The list of themes was ultimately jointly reviewed by all the researchers. This collaboration helped to clarify and refine the specific themes. The number of codes were not specifically counted for reliability as “counting conveys a quantitative orientation of magnitude and frequency contrary to qualitative research,” (Creswell, 2013, p. 185). While counting the codes across all groups was a useful indicator of the importance of those codes, the context was considered.

Results

The overall goal of this qualitative approach to coding the participants’ discussions was to identify themes within and across their responses than can then provide information to help practitioners move towards culturally responsive service provision for Latinx families. Therefore, we will present the results in terms of themes and subcategories identified within and across their responses. Similar to above, we will include direct quotes from the participants to illustrate the themes and subcategories that we identified during the coding process. As we present the results, the Spanish quotes will be provided first in italics followed by the English translation in brackets.

While we identified some themes that were more frequently discussed in one focus group than the other (and vice versa), we identified consistent themes and categories across both focus groups and the structured interviews. We identified four main themes that emerged across the focus groups and structured interviews, which are outlined in Table 6. These themes included: (1) family and cultural values; (2) reaction to receiving a diagnosis; (3) impact of ABA services (4) future recommendations for the field of ABA. Each theme comprised two to three subcategories. For each theme we describe the characteristics of the parents' responses followed by illustrative quotes. We provide additional illustrative quotes for each theme in the supplementary tables (Tables 7-10).

Family and Cultural Values

Family

Several parents described the importance of family (*familismo*) across different lenses. First, parents described the importance of family as doing the best they could for their child. For instance, to ensure their children have the appropriate support system to be successful in the future, as well as to support everyone else in the household. For example, at the start of the English-speaking focus group an overarching value that a parent reported and others agreed on was for their "kids to do well in life." Parents expressed the different ways this looked like in their household. For instance, one parent described the importance of communication and flexibility that needed to happen in their household, "I'll just work, you know, cleaning jobs, fast food jobs, whatever it is just so that the schedule is flexible for therapies-pick up drop-offs whatever it needed to be like. I was a hundred percent and I still am a hundred percent dedicated to whatever my boys need. That always comes first. So it just took a lot of communication between my husband and I to decide that factor."

Similarly, other parents described the importance as it pertains to spending quality time together such as doing activities. One parent stated, "I wanted to go out in the community with my kids more like festivals and stuff, and before we couldn't do that. I talked to my provider and I told them that I want to go out more in public and be able to enjoy things. So we started making programs [to have them to be able to go]."

Trust and Friendliness in Therapeutic Relationships

Similarly aligning with the literature, the value of *confianza* (trust) and *personalismo* (friendliness) were discussed (Magaña, 2020). With some families having their children enrolled in 20-35 hours of ABA therapy, many are left with faith and trust that their child is getting the best treatment and care possible. One parent stated, "Sometimes they [children] cry at drop off, sometimes they don't and then you're wondering. I think what helps with the parent classes is being able to see how my kids interact with the therapists." Another parent discussed the importance of trust with their service provider, "I wanted there to be honesty of what was going on with my child's progress, so I could really know how well or not well he was doing."

Due to parents having little information about ASD when they first started ABA therapy, building therapeutic and open communication relationships with their child's therapists was important. One parent agreed that she always felt comfortable sharing her concerns with maladaptive behaviors she was seeing in the home, "They let you know when you bring up these issues. They're like this is normal, this is what we're seeing here, this is what we're gonna work on or this is how we're gonna track this and that I need. You don't feel crazy when you're around them." Not only does building a therapeutic relationship help families gain trust with services, but it may also help providers have better communication with families.

Role as a Parent

Another clear value that was present was their active and engaging role as a parent. Across the different stages of raising their children, parents were often questioning if they were doing enough or the right thing (e.g., decisions regarding treatment, engaging with other family members). One parent from the Spanish-speaking focus group stated, *"Yo me sentía muy mal. Yo creía que yo era la responsable de muchas cosas que le pasaban a mi hijo, porque no le enseñé a defenderse. Pero yo siento que en el momento hacemos lo que sentimos, qué es lo mejor para ellos y nuestro instinto de mamá."* [I felt really bad. I thought that I was responsible for many things that happened to my son, because I did not show him how to stand up for himself. But I feel that in the moment we do what we feel is best for them and trust our motherly instinct]. For other parents it was difficult when therapists would come into their home and see their children struggle with presented tasks. One parent stated, "It was heartbreaking to see my boy screaming on the toilet because he didn't want to be on the toilet. You feel like hitting those people [behavioral technicians] because I mean, they're doing their job, but you feel that you can't do anything for your boy." See Table 7 for additional illustrative quotes.

Reaction to Receiving a Diagnosis

Perspectives/Knowledge of Receiving a Diagnosis

A commonality across many of the participants was their shared experience of when their child was first diagnosed with autism. Several parents described how they were initially ignorant of what autism was, and even in denial that their child had autism. One mother stated, *"Al principio cuando me dijeron que mi hijo tenia autismo, a ratos se le va a ir; vino la ignorancia* *de uno como Latino. Yo creo, que la comunidad Latina es muy ignorante en ese aspecto, deberíamos estar más educados.*" [At first when I was told my son had autism, I thought it'd go away; here came the ignorance of one as a Latino came. I believe that the Latino community is very ignorant in this respect, we should be more educated [about autism]. Similarly, another parent stated, "We kind of held back a little bit when it came to getting him tested and then starting services again because in the beginning it was a lot of denial. We just weren't ready to believe that something could be different about our kids."

Other parents were not prepared to receive the information that their child has autism. Families discussed that receiving an ASD diagnosis was stressful for their family and they needed time to adapt emotionally. A parent from the English-speaking focus group stated, "For me the diagnosis was a traumatic experience. I wish we were guided to some type of family counselor. At that point I could not handle it."

Lack of Support

The term "stigma" was never utilized by either the moderator or parents during the discussion, however the context of stigma was related to a lack of support from the community/service providers and isolation from family members. As mentioned earlier, while participants identified 'family' as a value, the effects of the lack of support they had received from extended family members were emphasized as well, "*Yo en lo personal me alejé de mis amistades y de mi propia familia por pensar que van a juzgar, van a criticar, y no entender la condición de mi hijo*." [Personally, I distanced myself from my friends and my own family because I thought they would judge, criticize, and not understand my son 's condition]. Several participants described struggling to maintain strong family relationships and overall feeling isolated, "Outside family doesn't understand what it is like to have our kids, they don't know what our daily struggles or challenges are. As much as they want to be supportive, they just don't get it." Even within their household, parents recognized the difficulties they faced at the beginning of receiving and understanding what the diagnosis meant, "*Mi esposo batalló aceptar que su hijo, su único varón y que tiene un hijo con una discapacidad. Yo estuve sola lidiando con él hasta los 10 o 11 años. Fue después que él se metió y se empezó a involucrar, pero desde los 3 a los 11 yo estuve solita, yo estuve batallando y tratando de encontrarle servicios para el. Ahora él [mi esposo] es el que se pelea por él y eso me gusta porque no me siento sola."* [My husband struggled to understand that his son, his only male son, had a disability. I was alone dealing with him until he was 10 or 11-years-old. It was later that he started to get involved, but since [my son] was 3 to 11-years-old I was by myself, I struggled and tried to find my services for him. Now he [my husband] is the one who fights for him and I like that because I do not feel alone]. See Table 8 for additional illustrative quotes.

Impact of ABA Services

Positive Outcomes

All parents (n=9) reported positive impacts from receiving ABA services. Some areas of importance included teaching daily living skills, independent skills, and developmental skills. One parent from the structured interview stated, "He's not head banging as much and he's learning to say words. I remember crying just because he learned to say 'eat.' They are little milestones!" Another parent from the Spanish-speaking focus group shared a similar positive outcome for her child, *"Ha pasado muchas horas en terapia [ABA], pero pienso que pues sí le ha ayudado mucho porque ahora come, come comida. Creo que a los 4 años empezó a comer chicken nuggets. A los cuatro años que empezamos me dio un beso porque no daba besos, no hacía nada. Sólo pasaba metido debajo de la cama y en el closet."* [He has been through many hours of therapy [ABA], but I think it has helped him a lot because now he eats food. I think at 4 years-old he started eating chicken nuggets. At 4-years-old when we started [therapy] he gave me a kiss; he did not kiss, he did not do anything. He would only hide under his bed and in the closet].

Other effects were improvements in quality of life for both parents and children due to ABA services. The activity presented at the beginning for the focus groups provided guidance for families to identify what they valued for both themselves and their families. A parent from the English-speaking focus group stated, “The behavioral team went out to different locations and I thought that was really life changing for my family because now we can go to restaurants, we can go to the grocery store, and we do a lot better with meltdowns at those different places. Because it was not possible to walk into Walmart and my child would start screaming at the top of her lungs for reasons I don't know and so now we can...life is better.”

Barriers

The time from the initial ASD diagnosis to the time of receiving services varies for each family and can depend on several external factors to start services for instance, the number of providers in the area, insurance/funding that are in network with providers, and whether providers have the capacity with staff to provide services to an incoming family. As mentioned above, while parents saw the impact of ABA services, a barrier that many families discussed was the initial wait for services to become available. One parent stated, “The wait list was very scary because although they told me I was going to get help I sat there alone for 8 months before I got it.” Similarly, another parent agreed on the difficulties of being on a waiting list, “First, the waitlist was a big barrier. I wish there would have been something available to start with while we waited for services.”

Language Barrier

A significant difference and added subcategory that emerged from the focus group conducted in Spanish, was the presence of a language barrier in order to receive an ASD diagnosis and ultimately ABA services. One parent stated, "*Ha sido un poco difícil en parte, porque también como latina no hablo mucho inglés*." [It has been a little difficult in [art, because as a Latina, I do not speak English]. Similarly, another parent stated, "*Pero si era muy difícil encontrar quien hablara español, pues yo como podía yo les decía mi hijo necesitaba y así fue como que a ellos me refirieron a los servicios de ABA*." [It was very difficult to find someone who spoke Spanish. As I could, I told them my son needed services and that's how they referred me to ABA services]. For another parent, communication was similarly a present barrier to being involved once services were attained, "*No creo que me sentía muy incluida por ser parte de esas conversaciones para estar involucrada [planificación del tratamiento], sin embargo, pero sentía la necesidad de involucrarme. No hablo muy bien el inglés, pero lo entiendo bien. Así que solo miraba en casa cómo trabajaban con mi hijo y luego hacía lo mismo*." [I don't think I felt very included to be part of those conversations to be involved [regarding treatment planning], however I still felt the need to involve myself. I do not speak very good English, but I understand it well. So I would just watch at home how they worked with my son and then did the same thing]. This barrier was less evident from the English-speaking group.

Experiences with primary care providers were mixed for the process of receiving an initial ASD diagnosis. However, several of the parents did report positive experiences in being able to communicate their needs currently where their child was receiving ABA services. One parent stated that communication was no longer a barrier because there was always a Spanish-speaking therapist available if she had questions, "*Me han apoyado mucho con esa parte porque* *tengo siempre a alguien quien me ayuda en Español.*" [They have supported me a lot with that part [communication] because I always have someone who helps me in Spanish]. See Table 9 for additional illustrative quotes.

The Future of ABA and Recommendations

The Need for Resources and Further Education

Across both focus groups and interviews, the greatest area of need reported by parents was the importance of providing learning opportunities about ASD and ABA. While some parents had heard about the positives and negatives of ABA prior to starting services, they really did not know what ABA therapy was and why it would be the best fit for their child. One parent stated, "Both therapists [from early interventions] brought up ABA early on and at first I didn't know if it was something I was comfortable with. Yeah, it was just something that I didn't know. Because there was so much hearsay that it's like basically you're putting your kids or this program to shut off all his emotions or to tell him that you know his stems or this and that are not okay." Others had expressed wanting to receive more training on the techniques and explaining the rationale behind the behavioral strategies, "I had to watch without understanding, so that can definitely be changed with more understanding and education." Although parents now feel more comfortable and confident on what autism is, they knew very little about ABA when they initially received a diagnosis. One parent stated, "I wish there would have been more information about what ABA was. At the time, I barely knew what it meant that my child has autism."

In both focus groups, parents offered recommendations for providers to consider, especially with families who are newly diagnosed with ASD. One parent stated, "*Necesitamos un entendimiento de lo que es ABA para nuestra comunidad y yo creo que es importante para los papás que vienen en este nuevo ciclo a los que están recientemente siendo diagnosticados, que hubiera un manual* *o algo en una introducción mejor."* [We need a better understanding of what ABA is for our community and I believe is important for parents who come into this new cycle of being recently recently diagnosed, there should be a manual or something for a better introduction].

Transitional Services (Aging out)

A concern/worry that was brought up during the English-speaking focus group was the availability of services after their children turn 18 years old. Many parents were already aware that in their area there are little to no services available for adults with ASD, "There's so much for the little babies and there's nothing for you know, those little babies. They grow up of course and there's no continuation. We're parents, we're not going be here forever. There's going be times when our children are here without us and there's just such a lack of services for that point. It's just like it's really scary." While many ABA organizations do not provide services after children turn 18 years old, a common process is working on individualized skills to prepare them for their next phase of life (i.e., job searching, independent living). While there is still much work to be done in this area and creating these services, further support is also needed for parents to navigate the continuation of services. See Table 10 for additional illustrative quotes.

Discussion

The aim of this study was to identify and learn about the cultural values and beliefs held by Latinx families in Nevada. In addition, we also examined barriers faced by Latinx families when accessing ABA services. In Study 1, we distributed the Participant Demographic and Experience Survey to Latinx families who were currently receiving ABA services or had received services in the past. The survey included questions about the families' cultural identity, their primary language spoken in the home, and parent educational level. The second part of the questionnaire asked the parents to share their experiences in receiving ABA services and the extent to which those services were received. In Study 2, we conducted structured interviews and focus groups with some of the families who participated in Study 1. From the structured interviews and focus groups, we identified four main themes: (1) family and cultural values; (2) reaction to receiving a diagnosis; (3) impact of ABA services (4) future recommendations for the field of ABA. From these themes, we found what aspects were meaningful in receiving ABA services, as well as barriers that families faced when seeking services.

An initial barrier is that 28% of families reported being on an extended waitlist for services. Similarly, a survey conducted as part of the Nevada Legislative Counsel Bureau Audit Division (2021) found that waitlist issues were the most frequently mentioned barrier. They found that 55% of providers had a 4-month waitlist for their practice and 18% had a waitlist of over a year. It is estimated that for Nevada in 2020, there were only enough providers to serve about two out of every three children who needed ABA services (Legislative Counsel Bureau Audit Division, 2021). While the number of ABA providers in Nevada has significantly increased, it is still insufficient to meet the needs of children who need services. The wait time to receive treatment is even longer for low income households in comparison to families with private insurance (Legislative Counsel Bureau Audit Division, 2021). While extended time on a waitlist is a common barrier for Latinx families (Magaña, 2020; Rosales et al., 2021), ways behavior analysts can address this are limited in the literature. From the results of this study, an aim of the proposed intervention is to provide at least some level of support for Latinx families on a waitlist. Having supplemental information for families on a waitlist can serve as a resource and for families to gain information prior to starting ABA services.

Another initial barrier that families faced were the effects brought by the COVID-19 Pandemic. Some providers had to limit the number of clients they were able to serve due to safety precautions, thus increasing waitlist times. During the structured interviews, one family reported services were completely terminated without a transition plan due to the company no longer being able to provide services.

An interesting aspect worth noting from both studies were the implications regarding language and barriers around language. First, when analyzing the data completed from the English and Spanish forms. In general, we found no differences in some of the general demographic data (e.g., age, gender, Hispanic/Latinx origin). However, there were meaningful differences to the following question, “What is your primary language spoken at home?” From the participants who completed the form in Spanish, 60% reported primarily speaking Spanish in the home, while no participants who completed the form in English reported Spanish being the primary language spoken in the home. These data demonstrate how much language matters. When given the option between Spanish and English, the families that primarily speak Spanish in the home, chose to complete the study in Spanish. This lends support to the assertion that given the option of having a part of services and information available in Spanish is important to families.

As discussed in the literature review, language barriers play a critical role in developing and maintaining a good therapeutic relationship between families and providers (Ferguson & Candib, 2002). A difference that emerged between the focus group conducted in Spanish in comparison to the focus group conducted in English, was the presence of a language barrier when seeking services. This can be a call for service providers to ensure their services are modified to meet the needs of the Latinx community. For example, ensuring paperwork and communication is in language that families will completely understand. This feedback aligns with the subsection of the current Ethics Code for Behavior Analysts (BACB, 2020) under section 2.08 Communicating about Services:

> *2.08 Behavior analysts use understandable language in, and ensure comprehension of, all communications with clients, stakeholders, supervisees, trainees, and research participants.*

Across both focus groups and interviews, the greatest area of need reported by parents was the importance of providing learning opportunities about ASD and ABA services. In another of our open-ended questions in Study 1, 34% of families reported learning about ABA services through community resources. This number could be a good indicator of where and how service providers can disseminate general information about services. As noted in the results of Study 2, several families indicated an overall lack of knowledge about ASD and how to attain information about ABA services. The findings of Latinx families having limited knowledge about ASD are consistent with the literature (Chlebowski et al., 2020; Zuckerman et al., 2014). However, to our knowledge, available information for Latinx families about their awareness in ABA related services is limited in comparison to Latinxs knowledge about ASD in general. Families in this study reported that even when they started ABA services, they still had several questions about ABA (i.e., the evidence support) and wished they had more knowledge about their child's ASD diagnosis. One recommendation offered by parents in the English-speaking group was for service providers to give families more information about the time commitment needed for ABA services. Future collaborations with outside community agencies would be beneficial to create an easier referral process for families or another resource for information. In addition, this would also help build a trusting relationship between families and service providers from the initial start of services.

Overall, families responded positively to being included in treatment planning for their child. While the majority (n=9, 53%) of families reported ABA agencies always taking cultural considerations around treatment planning, some families (n=3, n=1) indicated that ABA agencies sometimes or never took cultural considerations in treatment planning, respectively. This question was asked on a Likert-type scale and did not allow participants to add follow up with additional information. While 'cultural considerations' were not defined for participants, it is still an indication that there are still ways behavior analysts should be mindful and open to learning about a family's cultural values and practices. For families who did respond that culture was considered, a further follow up would aid the analyses of what exact considerations were taken from providers. For example, examining if families were given the opportunity to select goals that are culturally relevant (e.g., mealtime prayer) or whether onboarding paperwork was translated to their language of preference.

A strength from the interviews and focus groups were the inclusion of different experiences from families that had gone through the process of receiving ABA services. For instance, participants were able to share a range of experiences due to the large spectrum of their children's ages and duration of experience with ABA. The participants had children ages 0-6 years old (n=3), 6-15 years old (n=2), and 16-18 years old (n=3). This also allowed the focus groups to serve as a support network for families who were in their first year of services, while others were looking for support to transition services once their children turned 18 years old. The themes that were created from the results demonstrated the importance of those topics across groups, as each family offered different viewpoints.

In general, the discussion of values aligned very similarly with the literature reviewed above, specifically with the values of familismo (familism) and personalismo (interpersonal relationships). Although, the presentation of these values was somewhat different. In the literature, the value of familismo is typically focused on the engagement and inclusion of extended family members during treatment planning. For our participants, the value of familismo was centered more toward the well-being of their child and the role of the nuclear family members in the household to be supportive as a unit. For instance, goals were centered for their child to gain independence and be part of the community. In addition, families discussed the changes and sacrifices that had to be made for their family in order to integrate ABA services into their lives. Our results suggest an emphasis on persistence and grit from their family values to reach those goals. This included working additional jobs to support their family and maintaining jobs that offered flexibility for their children's schedule. On the other hand, familismo was also discussed as a value that was there for their nuclear family, but was not demonstrated from their extended family. Participants discussed how their relationships with family members had negatively shifted and the difficulties they faced from the family's lack of understanding what their child needed.

Our results also expand on current knowledge about the decision-making roles Latinx families, particularly the roles that Latinx mothers take during this experience. Across both focus groups, all but one participant was a mother of a child with ASD. The one participant that identified as male, was part of a dyad couple; no fathers of children with ASD participated on their own. A challenge that mothers expressed was feeling that they had to make the "right" decision of care for their child. Many of the mothers discussed the constant questioning of whether they were doing the right thing in having their kids in ABA services and the unknown if they were doing the best that they could. For one parent, her decision was not clear for her until years later. However, whether to begin services or not was only the start for some families taking the best care of action for their child with ASD. Parents often struggled with their own personal thoughts if they were doing enough for their children and relating it back to struggling if they were a good enough parent. This is not a unique aspect for Latinx families, but it is an important issue that needs to be addressed. While not discussed in depth in this study, the cultural construct of gender roles can be prevalent in the Latinx community. This value also extended to their other children in the home. Parents often recognized that much more of their time was spent on their child with ASD, in comparison to their other children.

Understanding how these cultural values impact ABA services may help service providers foster a better therapeutic relationship that can ultimately lead to better service outcomes. For example, promoting values such as personalismo (interpersonal relationships) can facilitate conversations, in which expectations for services and treatment can be discussed (Chlebowski et al., 2020; Hackethal et al., 2013). In the context of bringing the value of personalismo to families during the focus group session, the researcher initiated separate conversations and ensured confidentiality for families to feel more comfortable. While the researcher had limited rapport built with participants, service providers can ensure the value of personalismo continues to build across meetings or sessions. Furthermore, creating an interpersonal relationship and discussing treatment expectations can often be built into cultural adaptation frameworks (Domenech Rodríguez et al., 2011). Thus, including cultural values are a vital component when creating in-depth adaptations for treatment services, specifically when adapting parent training programs.

Limitations and Future Research

There are some limitations from the study that should be noted. First, the sample size is small, especially given the total Latinx population in Nevada (29.2%, n=918,045; US Census Bureau, 2021). As such, the data collected from this small sample is likely not representative of the total population of Latinx families receiving services in the state of Nevada. The extent to which our study is representative of Latinx families within the state is that participants in this study resided within two of Nevada's 16 counties, Washoe and Clark County (72% and 28% respectively). Both of these counties are the largest metropolitan areas in Nevada. Participation from other rural counties would provide more insightful information due to rural populations being less diverse, both racially and ethnically. Future research can investigate and compare the needs of Latinx families living in rural Nevada to Latinx families receiving services in larger metropolitan areas. Similarly, the diversity of families that participated in the study was limited with 89% of participants identified as Mexican as their Hispanic/Latino origin. As discussed previously, there are several subgroups within the Latinx population and values can vary across each group. Future research can investigate other regions of the country and compare their experiences receiving ABA services.

Another limitation was the accessibility and distribution of the survey. Due to recruitment taking place during the COVID-19 Pandemic, recruitment and dissemination of the study primarily took place online. While we shared recruitment flyers with ABA providers who were currently working with Latinx families and posted on ASD community websites, we were still unable to yield a higher representative sample. Future studies may expand recruitment strategies by sharing at community events in Latinx communities. A final limitation of the study was not including a question in the survey regarding how many years families had lived in the US.

Responses to this question may provide better information as to whether these perspectives and values align with a specific generation for Latinx families or if values mentioned came from across generations. The number of years living in the US may also be correlated with their knowledge about ASD and accessibility for services (Rosales et al., 2021). Future research may include adding a question on how many years they have lived in the US and/or how many generations their family has lived in the US.

The results of Study 1 and Study 2 provide some implications for future research to address the needs of Latinx families receiving ASD services. While research in the field is starting to explore ABA service delivery to Latinx families with children with ASD (see Rosales et al., 2021), there is still limited research focused on experiences with Latinx families receiving ABA services and how to culturally adapt treatments. Findings from this study can help further identify the different contexts and methods that can be adapted for a given community. The data from this study also suggest that there is still work that needs to be done from a service provider's standpoint. For example, even when Latinx families receive ABA services there are still questions regarding the purpose of treatment procedures and knowledge of other resources. Behavior analysts should continue to work on learning about different family cultures and practice cultural humility across all families that they serve.

In summary, we were able to identify important cultural values for a small sample Latinx families receiving services for ASD and other related developmental disabilities. In addition, findings from this study provided an opportunity for families to share their experiences about receiving ABA services. Overall, families responded positively with the services they received, however there is still much work to be done in order to provide high quality ABA services to Latinx families with children with ASD. This pilot study offers support to what cultural values are important to the Latinx community in Nevada and can be used to culturally adapt interventions.

A Behavior Analytic Evaluation of a Cultural Adaptation of Acceptance and Commitment Training (ACTr) for Latinx Parents of Children with Autism Spectrum Disorders (ASD)

Rationale

The purpose of this intervention was to evaluate the effects of a culturally adapted ACTr for Latinx parents of children with ASD. We created an intervention that was culturally sensitive and included in-depth adaptations based on the results from the pilot study. We provided the training in either English or Spanish, targeting Latinx families on ABA waitlists due to the increased number of families in Nevada experiencing delays or access to services. For the intervention, we included surface level (e.g., translations) and in-depth adaptations, such as cultural values to be incorporated to the ACT exercises and metaphors. In addition, based on the findings from the pilot study, we included an educational component that was centered on providing general information about ASD and ABA services.

Research Questions

1. To what extent will a culturally adapted ACTr intervention improve the psychological flexibility, family quality of life, and values-directed behaviors of Latinx parents of children with ASD?
2. To what extent will an online intervention increase parent knowledge of ASD and ABA?

Recruitment and Participants

We recruited through established local community partners, including ABA-based agencies, along with organizations that serve Latinx families and children with ASD and related developmental disabilities. In addition, we recruited Latinx families who intended to receive services, but had not yet (i.e., are currently on a waitlist, limited access).

To be included in this study, participants needed to be a) a parent/caregiver of a child with an autism diagnosis, b) at least 18 years of age, c) identify as Hispanic/Latino/a/x, d) have access to email, internet connection and a computer with a web camera and microphone, and (e) have not received intensive ABA services.

We recruited six Latinx parents to participate. However, one participant dropped out of the study during baseline measures. During this process, the participant stopped submitting data to the researcher. The researcher contacted the participant to follow up and provide assistance if needed. Following this, the researcher did not not receive a response from the participant for 2 weeks. The researcher contacted the participant one last time and reminded them that there would be no penalties for withdrawing from the study, and they would still receive the same resources. Upon not receiving a response, the participant was no longer contacted. This participant's information was not included in the overall sociodemographic information or further discussed as part of the included participants.

Five Latinx parents participated in the ACTr and follow-up phases. Four (80%) of the participants completed the training in Spanish and one (20%) completed the training in English. Aggregated participant demographics are presented in Table 11, including the parents' cultural identity, their primary language spoken in the home, and parent educational level. The majority of parents (80%) reported as Mexican being their cultural identity. Ages ranged from 25-54 with an average age of 42 years-old. The majority of parents reported Spanish being the primary language spoken in the home (80%) followed by English (20%).

Liliana was a 37-year old, Latinx married mother of a 4-year-old boy diagnosed with ASD. At the time of participating in study, Liliana had been on a waitlist for ABA services for 6 months-1 year. Liliana was born in Cuba, and had lived in the US for 5 years.

Sabrina was a 43-year old, Latinx married mother of a 16-year-old boy diagnosed with ASD. At the time of participating in study, Sabrina had been on a waitlist for ABA services less than 6 months. Sabrina was born and raised in the US.

Sofia was a 52-year old, Latinx married mother of a 14-year-old boy diagnosed with ASD. At the time of participating in study, Sofia had been on a waitlist for ABA services less than 6 months. Sofia was born in Mexico, and had lived in the US for 6 years.

Isabella was a 31-year old, Latinx married mother of a 3-year-old boy diagnosed with ASD. At the time of participating in study, Isabella had been on a waitlist for ABA services for 1.5 years. Isabella was born in Mexico, and had lived in the US for 6 years.

Olivia a 47-year old, Latinx married mother of a 14-year-old boy diagnosed with ASD. At the time of participating in study, Olivia had been on a waitlist for ABA services for 1.5 years. Olivia born in Mexico, and had lived in the US for 26 years.

Setting, Materials, and Apparatus

We conducted the study via Telehealth. This setting allowed participants from across the state to participate. Furthermore, this setting allowed for flexibility to schedule during times that were convenient for families. We compensated participants with a $50 gift card of their choice (e.g., Walmart, Target, fast food places) upon completion of the training. We housed the indirect assessments in Qualtrics.

Measures and Data Analysis

Indirect Measures

All questionnaires were available online in English and Spanish. In addition, participants had the option to complete all measures in a written or oral format (i.e., interview with the researcher). The following indirect measures were collected: the parent demographic questionnaire, the Acceptance and Action Questionnaire-II (AAQ-II), the Parental Stress Scale (PSS), the Family Quality of Life Scale (FQOL), a parent knowledge test, and a social validity questionnaire.

Parent Demographic Questionnaire. In the Parent Demographic Questionnaire (see Appendix K for the English version and Appendix L for the Spanish version), we asked participants about their gender identity, age, the primary language spoken in the home, county of Nevada residence, Ethnicity, Hispanic/Latino origin, the number of years they have lived in the United States, and their highest level of education. We administered this questionnaire once during the study, prior to collecting baseline measures.

Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011). The AAQ-II (see Appendix M for the English version and Appendix N for the Spanish version) was originally a 10-item Likert scale designed to measure psychological flexibility in adults. Psychological flexibility allows individuals to contact the present moment and the thoughts and feelings it contains while maintaining value-based behaviors (Hayes et al., 2006). The scale was reduced to 7-items, due to having better psychometric consistency. Responses range from 1 (“never true”), to 7 (“always true”), and are added together to yield a total score. Higher overall scores on the AAQ-II suggest increased psychological inflexibility or greater experiential avoidance, whereas lower scores equate to greater levels of psychological flexibility or acceptance. We administered this questionnaire twice during the study, during the pre-assessment and during follow up.

The Parental Stress Scale (**PSS**; Berry & Jones, 1995). The PSS is an 18-item questionnaire assessing parents’ feelings about their parenting role and explores both positive and negative aspects of parenthood (see Appendix O for the English version and Appendix P for the Spanish version). It contains various measures of stress including evaluating parents’ emotion, role satisfaction, and guilt in the context of their role as a parent. The PSS was developed to be used to assess outcomes of interventions designed to support parenting efficacy of mothers, fathers, and/or caregivers of children across a wide age range. In addition, this measure has been used with parents of children with ASD (Pennefather et al., 2018). We administered this questionnaire twice during the study, during the pre-assessment and during follow up.

Family Quality of Life Scale (**FQOL**; Hoffman et al., 2006). The FQOL is a 25-item inventory rate on a 5-point Likert-type scale (see Appendix Q for the English version and Appendix R for the Spanish version). The purpose is to measure several aspects of families' perceived satisfaction in terms of quality of family life. The FQOL contains five domains: family interaction, parenting, emotional well-being, physical well-being, and disability related support. We administered this questionnaire twice during the study, during the pre-assessment and during follow up.

Parent Knowledge Test. We assessed the effects of the training intervention with participants. We created a pre and post-knowledge test to evaluate parents' knowledge of ASD and ABA services (see Appendix S for the English version and Appendix T for the Spanish version). We administered this questionnaire twice during the study, during the pre-assessment and during follow up.

Parent Social Validity Survey. We created and distributed a social validity questionnaire at the end of the training program (see Appendix U for the English version and Appendix V for the Spanish version). We asked families to self-report their satisfaction about the training content, recommendations on the training for future families, and applicability of ACT strategies used outside of meeting sessions. We administered this questionnaire twice during the study, prior to collecting baseline measures and during follow up.

Direct Measures

The primary dependent variable was the frequency of values-directed parent behaviors per week. Values-directed behavior was defined as any action resulting in an objectively observable behavior directly related to an individualized parent identified value. The topography of behavior representing values-directed actions varied across participants. Similar to Gould et al. (2018), the specific participant values and goals were identified during the initial interview, prior to collecting baseline data. We identified specific behaviors by asking families what things were important to them, as well as what activities they wish they could do more of. Values-directed parent behaviors were collected by the participants using self-monitoring procedures. Table 12 provides a summary of values-directed actions for all participants.

Self-monitoring. Behavior data was collected by the participants outside of training sessions using their preference for data collection systems. Prior to data collection, the participant and the researcher set up the best method for data collection. All participants (n=100%) selected to collect their data online using Google Forms. All participants were instructed and trained on how to record daily occurrences of engagement in their selected values-directed behaviors.

Liliana selected ‘personal growth’ as a value to focus on during the training. The value of personal growth was defined as any instance of engaging in self-improvement skills and increasing ability of understanding and speaking English. During the pre-assessment, Liliana stated that she wanted to engage in more activities of personal growth and this was something that had been difficult to balance with child responsibilities. For Liliana, feelings of guilt would often come up when she wanted to focus on goals/activities that were centered outside of her role as a parent. Some examples that Liliana determined were taking time to learn more English and engaging in exercise.

Sabrina selected ‘self-care’ as a value to focus on during the training. The value of self-care was defined as any instance of engaging in a leisure, social (with friends), or self-care activity without the kids. During the pre-assessment, Sabrina stated that taking time for herself was often difficult due to having three other children to take care of and working full time. While she was able to recognize that doing small things for herself would improve her overall parenting strategies, she had a difficult time disconnecting from her parenting responsibilities. Other barriers that were present to live in line with her values were moving to a new area in town (away from her friends) and adjusting to their ‘new normal’ after challenges faced from COVID-19. Some examples of self-care activities proposed were taking time to read and going shopping.

Sofia selected ‘personal health’ as a value to focus on during the training. This value was defined as any instance of engaging in physical well-being (e.g. exercise). During the pre-assessment, Sofia stated she would often find herself making excuses on why she did not have time to dedicate for exercise, although she knew it would benefit her health overtime. Sofia determined that some examples of her values included going on a walk for at least 20 min or going to the gym for at least 20 min.

Isabella selected ‘having an increase level of autism knowledge’ as a value to focus on during the training. This value was defined as any instance of engaging in a learning opportunity focused on increasing knowledge on autism. Isabella reported she had already been on a waitlist for an extended time (about 1.5 years), and was trying to find other ways to support her son as much as possible while she waited for services. Ways to primarily support her child included forms of communication and activities of daily living. During the pre-assessment, Isabella shared that she struggled to consistently achieve this value as she struggled to communicate and understand resources that were not provided in Spanish. Isabella reported feelings of hopelessness and confusion when trying to find relevant and accurate information for her child. Some examples Isabella proposed to increase her value-directed behaviors were reading at least 15 min from book materials and attending informational workshops focused on ASD.

Olivia selected ‘supporting child independent skills’ as a value to focus on during the training. This value was defined as any instance of Olivia’s youngest child (child who was diagnosed with ASD) engaging in an activity independently in the home and Olivia following through with home expectations. Olivia stated that she often struggled with having her child complete age-appropriate tasks and she would often give into helping him when she knew he could complete tasks on his own. In addition, Olivia stated that completing tasks for her child in the moment were ways she showed her love toward him, although she knew she wanted him to be more independent. Furthermore, Olivia stated that working on this value may also help build resilience and help with his own self-esteem. Some examples Olivia proposed were teaching her child a new skill and having her child complete activities of daily living (e.g., chores, food preparation).

Reliability and Integrity Measurements

Researcher’s Treatment Integrity. We used a treatment integrity measure to determine whether the intervention was delivered consistently across participants (see Appendix W). A separate research assistant scored whether the primary researcher implemented the correct outlined ACT processes and the predetermined exercises. Two research assistant independently scored each item on a number scale as the following: “0” (the researcher did not cover the outlined materials), “1” (the researcher covered some of the outlined materials), and “2” (the researcher covered all of the outlined materials). The measure calculated the total number of correct implemented steps divided by the total number of steps, multiplied by 100% to yield a percentage.

Interobserver Agreement (IOA). Interobserver agreement was obtained for parent-collected behavior data. Due to being unable to monitor value-directed behaviors outside of sessions, verification occurred through journal descriptions that were sent to the researcher or via forms of permanent products (i.e., pictures of activities). Data were compared to the parent submitted data and the permanent products submitted. For each participant, IOA was calculated by the number of trials in agreements divided by the total number of trials multiplied by 100%.

Experimental Design

We used a non-concurrent multiple baseline across participants’ design to evaluate the effects of the training package to target parents’ behaviors and psychological well-being. We included the following phases: baseline, educational component, culturally adapted ACTr, and follow up.

Procedures

We delivered a training where five participants attended a total of six, 45-60 min sessions. We delivered each training session in a 1:1 format with a trainer. All sessions were conducted via Telehealth. We audio recorded each session for treatment integrity purposes. Prior to meeting with participants, we first collected informed consent online via DocuSign. Upon completion of informed consent, we contacted parents (with their preference of contact) to begin the intervention. The agenda for the sessions can be found in Table 13. This includes the session number, session components, examples of the modified exercises/metaphors, and the Latinx cultural value that was included for each session. At the end of each session, the researcher provided each participant with a copy of the PowerPoint materials presented.

Sessions were scheduled on a weekly basis for each participant. There were no set days or times for when the sessions would take place for each participant. This was flexible in order to meet the needs of each family. During the training phase, the researcher emailed or texted (based on their preference) each participant the night before their scheduled session, detailing the time their next session was taking place and included the zoom meeting details. In addition, participants were sent a reminder an hour prior to starting sessions. Other general reminders included an email or text on a weekly basis to confirm participants were submitting their data.

Pre-assessment

We reviewed the purpose of the training, as well as what they could expect from the training. In addition, we set up and helped participants navigate and ensure they were able to connect properly with the Zoom platform. Specifically, we reviewed how to connect and find the Zoom link and how to navigate once inside the platform (e.g., using the mute setting). Next, we collected the self-report measures (AAQ-II, PSS, and FQOL) and the parent demographic questionnaire online through Qualtrics. During this session, we discussed and identified the specific target behaviors for the participants. The selected target behaviors were either not present in the participant’s repertoire (i.e., not occurring at all) or occurring at a low rate (i.e., less than once per month).

Next, we introduced participants to their data collection system. We trained participants how to track the frequency of their values-directed behaviors. The topography of each value-directed behavior varied due to participants having individualized values and goals. The researcher asked participants a series of different questions throughout the pre-assessment to help with the adaptations of the ACT exercises (see Appendix X). These questions were not used in an interview style, but rather were constructed into a rapport building conversation with each of the participants. The purpose of these questions was to gauge what certain values were present in their lives, and to assess their general life experiences that would aid in adaptations to the ACTr exercises. For example, we did not want to assume that all participants shared the value of *familismo* in the same way, or that all families participated in certain holidays such as Three Kings Day.

Baseline

We collected baseline data on the parent selected behaviors prior to starting training sessions for 3-8 weeks. At the end of each night, participants completed their own data and submitted it to the researcher.

Educational Component

Session 1: Information on ASD and ABA

We included a parent education component at the beginning of the training, and the information included for this session was largely guided from the results of the pilot study (i.e., many parents reported not knowing the purpose of starting ABA services). The educational component included general information about ASD and ABA services (see Appendix Y for the English version and Appendix Z for the Spanish version). For the information on ASD, we included general facts about ASD (e.g., treatment recommendations, prevalence) and recommendations from other families who have children with ASD. For the information on ABA services, we included components in the following areas: how is ABA effective, benefits of ABA, and ABA resources. In this session, the researchers aimed to get to know the participants on an individual level, in order to create a trusting relationship (i.e., establishing trust) moving forward for the remainder of the training sessions. While most of the content was only adapted by translating information for the sessions conducted, the session was guided by the cultural value of personalismo (creating interpersonal relationships).

Culturally Adapted ACT

After the educational component, we delivered the culturally adapted ACTr intervention. All sessions included an experiential and didactic component, followed by a discussion portion. At the end of each session, we provided homework activities that were related to the discussed session content. We did not conduct any check-ins or reminders for participants to complete their homework assignments. However, we did follow up and reviewed assignments at the start of the following session. This included any self-reflection, barriers to practicing a strategy, or follow up questions that may have come up. Table 13 outlines the session number, ACTr target skill, session components, examples of activities/exercises for participants, and the integrated Latinx cultural value. The portion under 'exercise examples' are metaphors and exercises that were modified and culturally adapted for each training session. The exercises that were used are common ACT metaphors and exercises that are used by practitioners (Harris, 2009; Polk et al., 2016; Stoddard & Afari, 2014). We culturally adapted exercises and activities to include Latinx cultural values that were identified from the pilot study results. The Latinx cultural values identified from the pilot included *familismo* (familism), *respeto* (respect), *personalismo* (sympathy, building interpersonal relationships) and *confianza* (trust). For each ACTr session, we discuss the title of the adapted exercise, how it was modified, and the purpose for the modification.

Session 2: Values Clarification

We focused on introducing the ACT approach with participants in the context of being a parent to a child with ASD. We began by discussing what values are in this context, and how actionable goals can be created. We used the exercise *Three Wishes*. The purpose of this experiential exercise was to increase parent motivation in order to engage in values-directed actions. In the exercise, parents were asked to imagine how this training can make an important difference to them and their families. In this context, we asked parents to think and write out on a piece of paper wishes in three areas: wishes for their family, wishes for their child's well-being, and wishes for themselves as parents. At the end of the exercise, parents were encouraged to share and discuss with the researcher.

For this exercise, we included both Latinx cultural traditions (including parts of their spirituality) and the cultural value of familismo (familism). We modified this exercise to "*Deseos de los Tres Reyes Magos"* (wishes from the Three Kings). Día de los Tres Reyes Magos (Three Kings Day) is a holiday tradition from Latin American culture. For the Latinx cultures who celebrate this tradition, each has adapted different ways to celebrate the holiday based on their customs and religion. With each variation, children often receive gifts from the Three Kings (similar to receiving gifts from Santa Claus during Christmas). Similarly, we put in context for participants that these three wishes would be granted from the Three Kings, as it can symbolize a childhood tradition.

When we delivered this exercise, all participants (n=5) were familiar with the Three Kings holiday. However, only four participants (i.e., Liliana, Sofia, Isabella, and Olivia) stated that they grew up celebrating the holiday and continue to celebrate it with their family. For one participant (i.e., Sabrina), the exercise was adapted to include a family member they looked up to to deliver these wishes instead of a wise king.

Session 3: Mindfulness

The first part of this session focused on getting parents in contact with what brought them to this training and to continue to discuss what they expect to get out of it. We created a space for parents to share thoughts from the previous session, listen to what challenges they were facing with their children, and themselves. The researcher was present and connected with the parents, while actively engaging in values of personalismo. Next, the researcher introduced present moment awareness with the exercise *Centering* (Harris, 2009). In addition, we included strategies focused on how parents can practice present moment awareness in their daily lives.

For the next exercise in this session, we modified the exercise *Music, mindfulness, and defusion* (Schwartz, 2013) by including a Christmas classic song titled “Feliz Navidad.” “Feliz Navidad” is a well-known song across the world and can demonstrate the impact of bilingualism in our country. In addition, it is a song that often brings joy and memories from the holiday seasons. We discussed how our inner experiences can take us away from contact with the present moment, followed by having parents share their experiences when listening to the selected music. For this exercise, we played the same version of “Feliz Navidad” by José Feliciano, to all participants. During the pre-assessment, all participants shared that they celebrated the Christmas holiday.

Session 4: Defusion

For the first part of the session, we listened to difficult thoughts and feelings families were experiencing during the week. This included both in the context of parenting and in other domains of their lives (i.e., health, marriage). We began the session by discussing what cognitive fusion was and difficult thoughts that surround our everyday lives. Participants were able to share their thoughts and the effects this has on their family. We followed up by discussing cognitive defusion and how to build skills around it. We modified and adapted the exercise *Thoughts as passengers* (Hayes et al., 2012) to *Pensamientos como invitados a la fiesta* (thoughts as party guests; see Appendix AA for the original exercise and Appendix AB for adapted exercise in English and Spanish). The purpose of this exercise was to deliteralize provocative psychological content through objectification. For example, in the exercise, the metaphor of the "passengers" on the bus are described as thoughts, feelings, bodily states, memories, and other aspects of experience. We modified the exercise to take place at the parent's home (in a gathering setting) and include important family members (e.g., mothers, grandmothers) and close friends as the party guests. We included the cultural value of familismo, in reference to demonstrate a lack of family support that some families can feel. This value was added to demonstrate that while the value of family may be important, several Latinx families can often experience a lack of support from family, as indicated from the results of the pilot study. In addition, we included statements aimed at the "role as a parent," as it was an important subcategory from the findings of the pilot study.

For this exercise, we adapted the exercise further for each participant to include important contextual information. For example, we made sure to include the names of friends or family members they had shared from previous sessions. Additionally, a portion of the adapted exercise included the participant to imagine preparing a dish of their choice (e.g., a specialty dish, food they enjoyed making for their family). For each participant we adapted the exercise to include the participant's meal choice to strengthen the metaphor. Some food choices included fish tacos, ceviche, and short ribs. We made a modification for a participant who had stated that she did not enjoy cooking. In this case, the exercise was modified to have the participant imagine bringing her favorite store bought items to share with family and friends.

Session 5: Acceptance and Self as Context

We discussed two ACT processes in this session: acceptance and self as context. First, we began by discussing what acceptance and willingness meant in the context of being a parent with a child with ASD. We used the exercise *Don't think about a puppy* (Afari, 2012) and modified the exercise to "*No pienses en pan dulce*" (don't think about sweet bread; see Appendix AC for the original and adapted exercise). Pan dulce (sweet bread) can encompass pastries, sweet bread, and even cookies from a bakery. Pan dulce is often shared with families and friends in the Latinx culture during religious holidays or even as a treat on any given day. We focused on the cultural value of familismo (familism) to represent a shared meal, past childhood memories, and often a tradition of recipes that has been shared across generations. The purpose of this exercise was to demonstrate the paradox of thought suppression (Stoddard & Afari, 2014). For this exercise, we did not modify it any further as all participants shared an experience with sweet bread.

In the next portion, we discussed the different areas that are related to the self (self as content). We adapted the exercise *Fusion with self-evaluations* (Luoma et al., 2007) to "*Fusión con nuestras evaluaciones.*" The purpose of this exercise was to show families how to notice evaluations, rather than holding them to be true, specifically when it comes to themselves. Similar to the information we collected in session 4 from the pre-assessment, we adapted the exercise for each participant to include a picture of food that was either a dish they enjoyed preparing for their family or generally eating. We further incorporated the cultural value of respeto (respect) in context of creating self-evaluations toward one self. We led participants through the exercise by making different evaluations and description statements toward their selected food item. We further demonstrated different strategies on how participants could incorporate respectful and thoughtful verbal behavior to their daily personal statements. In addition, we modified the metaphor *The prince and the beggar* (Scarlet, 2013) to "*El príncipe y el mendigo*." This metaphor demonstrated the continuity of an identified self, even when changing circumstances and internal experiences occur (Stoddard & Afari, 2014). For this exercise, we included the following modifications: language, concept, and metaphor. Going beyond only translation, similar to the exercise above, we included the cultural value of respeto (respect) and honesty to identify traits for the individuals in the metaphor. During the discussion, to help put the metaphor in context, we provided examples of Spanish dichos (sayings) that were related to maintaining one's true identity.

Session 6: Committed Actions

In the final session, we reviewed individualized values that were discussed from *Session 2.* We checked in to see if any values had shifted or if new values had come up from participating in this training. We translated the exercise *Goals, actions, and barriers* (Hayes et al., 2012) to *"Metas, acciones, y barreras"* to demonstrate and encourage families to practice using committed actions toward their values. We encouraged participants to select another domain (e.g., relationships, family, community) to actively work on their values. During the activity, participants were able to identify additional values, create measureable goals, and discuss barriers that would get in the way of living in line with those values. The researcher then guided participants through the *Bull's Eye Exercise* (Lundgren et al., 2012). This values clarification exercise evaluated participants' ongoing values and the newly identified values from this session. Participants were able to locate their values on the "bull's eye" and see how consistent they were living in life with their values.

In addition, we adapted the metaphor *Waiting for the wrong train* (Hart, 2006) to "*Esperando el tren equivocado.*" The purpose of this metaphor was to demonstrate and draw attention to the process of moving forward even when faced with difficult situations, instead of being stuck in relative comfort. At the start of the exercise, participants were instructed to imagine they were going on a journey to a special destination. We made unique adaptations for all participants to include a specific place that they had shared that they hoped to travel to. We further adapted this metaphor for all participants by including dichos (sayings) that may often be shared across family generations. For example, the dicho (saying), "*No hay mal que por bien no venga*," translates to there is no bad from which something good does not come. The context of this message was shared to illustrate how some moments can be difficult in life, however we can utilize tools to move forward each day.

Follow up

Data collection continued for two weeks after the last ACTr session. After the two-week period, we had parents complete the indirect measures, similar to the baseline phase, (AAQ-II, FQOL, PSS, & the parent knowledge test) and complete the parent social validity survey (see Appendix U for English version and Appendix V for the Spanish version). In addition, we set up an online meeting for participants to ask about any final questions regarding the study and share any feedback about the training.

Results

Frequency of Value-Directed Actions

The frequency of behaviors per week during baseline, training, and follow-up for Liliana and Sabrina are displayed in Figure 4. In general, their value-directed behaviors were low during baseline, with the exception of week 2 for Sabrina. When we implemented the training phase, we saw an initial slight increase in value-directed actions, followed by an increasing trend for both participants. These data suggest that the ACTr resulted in increases in value-directed behaviors for both Liliana and Sabrina. However, we observed mixed results for their follow-up data. While the follow-up data decreased from training levels, value-directed behaviors were still above baseline levels for both participants.

Liliana’s selected value to focus on during the study was personal growth. During the baseline phase, Liliana’s rate of responding was low and steady. She engaged in two instances of her selected value-directed behavior during week 1, and then did not engage in any behaviors during weeks 2 and 3. In the training phase, Liliana’s value-directed behavior increased to two instances, and then continued to increase up to nine instances during week 7. During the first week of follow-up, the total number of weekly value-directed behaviors decreased to two instances, but then increased during the final week to seven instances. Overall, the rate of responding increased from a mean of 0.7 during baseline to a mean of 6 instances of engagement of value directed behaviors during the training phase. However, maintenance of gains made during treatment are unclear in the follow-up phase.

Sabrina’s selected value to focus on during the study was self care. During the baseline phase, Sabrina’s rate of responding was low and steady with the exception of week 2. During the first week of baseline, Sabrina engaged in three value-directed behaviors, but then in week 2, Sabrina engaged in a total of 14 value-directed behaviors. By week 3, the rate of responding was four instances of engagement weekly and demonstrated a decrease in trend down to one instance in week 6. During the training phase, Sabrina demonstrated an increasing trend in responding, from three instances during week 7 to nine instances during week 10. In general, she engaged in an average weekly rate of 5.5 value-directed actions and a total of 22 valued based behaviors. For the follow up phase, the total number of weekly value-directed behaviors decreased from nine total instances in week 10 to five total instances in week 11. Sabrina's rate of responding continued on a decrease in trend the final week of follow up. Overall, the rate of responding increased from a mean of 4 during baseline to a mean of 5.5 instances of engagement of value-directed behaviors during the training phase. While her weekly engagement of value-directed behaviors did not maintain at the same levels as the end of treatment, they were still higher than during baseline.

The frequency of value-directed actions per week during baseline, training, and follow-up for Sophia, Isabella, and Olivia are displayed in Figure 5. In general, Sophia and Olivia's value-directed behaviors were low and steady during baseline. Isabella demonstrated an initial increase in value-directed behaviors during week 1 and week 2, but responding remained low and steady during the remainder of baseline. When we implemented the training phase, we saw an initial increase in value-directed actions for all participants, followed by an increasing trend for two participants (Isabella and Olivia). These data suggest that the ACTr resulted in increases in value-directed behaviors for all participants. In the follow-up, all participants maintained level of responding, similar to responding in the training phase.

Sofia's selected value to focus on during the study was her personal health. During the baseline phase, Sofia's rate of responding was low and steady. She consistently engaged in two instances of her selected value-directed behavior in weeks 1-3. In the training phase, Sofia's behavior increased slightly to four instances, but her behavior was variable during the training phase. She demonstrated an average weekly rate of 3.7 and a total of 11 value-based behaviors. For the follow up phase, Sofia's rate of responding remained stable, with a weekly average of five value-directed actions and 10 total instances of engagement. Overall, the rate of responding increased from a mean of 2 during baseline to a mean of 3.7 instances of engagement of value-directed behaviors during the training phase. Treatment gains were maintained during the follow up phase with an average of five instances of engagement of value-directed behaviors.

Isabella's selected value to focus on during the study was increasing her knowledge on ASD. During the baseline phase, Isabella demonstrated an initial variable level of responding in her values directed-actions. By week 3, rate of responding was about three instances of engagement weekly and demonstrated a decrease in trend down to one instance in week 6. During the training phase, Isabella demonstrated an increasing trend in responding, from one instance in week 6 to six instances during week 7. In general, she engaged in an average weekly rate of six value-directed actions and a total of 17 value-directed behaviors. For the follow up phase, Isabella's rate of responding maintained, with a weekly average of 5.5 value-directed actions and 11 total instances of engagement. Overall, the rate of responding increased from a mean of 3.3 during baseline to a mean of six instances of engagement of value-directed behaviors during the training phase. Isabella's engagement of value-directed behaviors maintained at similar levels at the end of treatment.

Olivia's selected value to focus on during the study was helping her child complete tasks independently and helping him build his self-esteem. During the baseline phase, Olivia's rate of responding was low and steady. Olivia engaged in two weekly value-directed actions in week 2 and week 3. By week 4, rate of responding was down to one instance of engagement weekly and demonstrated a decrease in trend down to zero level of engagement. During the training phase, Olivia demonstrated an increasing trend in responding, from zero instances during week 8 to nine instances in week 10. In general, she engaged in an average weekly rate of 7.3 value-directed actions and a total of 22 valued-based behaviors. For the follow-up phase, Olivia's rate of responding increased from the training phase, with a weekly average of eight value-directed actions and 16 total instances of engagement. Treatment gains were maintained during the follow up phase with an average of eight instances of engagement of value-directed behaviors. Overall, the rate of responding increased from a mean of 1 during baseline to a mean of 7.3 instances of engagement of value- directed behaviors during the training phase.

Indirect Measures

Acceptance and Action Questionnaire-II

The AAQ-II scores for pre-training and post-training for all participants are displayed in Figure 6. AAQ-II scores range from 7 to 49, with higher total scores indicating higher psychological inflexibility and lower scores indicated higher psychological flexibility. In general, AAQ-II scores during the pre-training assessment for all participants ranged from 12-20. According to Hayes (2019), cutoffs on measures of symptoms like depression or anxiety are around 24-28. The participants scores were not in these ranges, suggesting that they had some psychological flexibility during the pre-training assessment.

In the post-training assessment, AAQ-II scores for all participants ranged from 16-22. Four participants demonstrated increased AAQ-II scores at post-training. Liliana's score during her pre-training assessment was 13, and increased to 16 at the post-training assessment. Sofia's score during her pre-training assessment was 12, and increased to 18 at the post-training assessment. Isabella’s score during her pre-training assessment was 17, and increased to 21 at the post training assessment. Olivia’s score during her pre-training assessment was 17, and increased to 22 at the post training assessment. One participant demonstrated decreased AAQ-II scores at post-training. Sabrina’s score during her pre-training assessment was 20, and decreased to 17 at the post training assessment.

The Parental Stress Scale

The PSS scores for pre-training and post-training for all participants are displayed in Figure 7. PSS scores range from 18 to 90, with lower scores indicating lower levels of parental stress and higher scores indicating higher levels of stress. In general, PSS scores during the pre-training assessment for all participants ranged from 37 to 47.

In the post-training assessment, PSS scores for all participants ranged from 34-47. Three participants demonstrated decreased scores at post-training. Sabrina’s score during her pre-training assessment was 41, and decreased to 37 at the post training assessment. Sofia’s score during her pre-training assessment was 47, and decreased to 34 at the post-training assessment. Olivia’s score during her pre-training assessment was 37, and decreased to 32 at the post training assessment. However, two participants demonstrated increased scores at post-training. Liliana’s score during her pre-training assessment was 42, and increased to 47 at the post-training assessment. Isabella’s score during her pre-training assessment was 39, and increased to 47 at the post-training assessment.

Family Quality of Life Scale

The FQOL scores for pre-training and post-training for Liliana and Sabrina are displayed in Figure 8 the scores for pre-training and post-training for Sofia, Isabella, and Olivia are displayed in Figure 9. The scores for the FQOL were summed up in five domains: family interaction, parenting, emotional well-being, physical well-being, and disability related support. The FQOL used satisfaction as the primary response format, with higher scores indicating higher levels of satisfaction in each domain and lower scores indicating lower levels of satisfaction. To note, due to there being a different amount of questions in each domain, the total sum of each domain will vary. For instance, the max score for each domain are as follows: family interaction (30), parenting (30), emotional well-being (20), physical well-being (25), and disability related support (20).

In general, we observed an increase in scores across at least three domains for three participants: Liliana, Sabrina, and Sofia. However, for two participants, Isabella and Olivia, the scores in the majority of the domains either decreased or stayed the same. The FQOL responses for pre-training and post-training for Liliana are displayed in Figure 8. In the post-training, Liliana's scores on the FQOL increased across all domains. The most notable increases were in the emotional well-being, parenting, and family interaction domains where her score increased by 8 to 10. The FQOL responses for pre-training and post-training for Sabrina are displayed in the bottom panel of Figure 8. In the post-training, Sabrina's scores on the FQOL increased across three domains: family interaction, emotional well-being, and disability related support. However, Sabrina's scores decreased in the domains of parenting and physical well-being. The most notable increase was in the emotional well-being domain where her score increased by 5.

The FQOL responses for pre-training and post-training for Sofia are displayed in Figure 9 on the top panel. In the post-training, Sofia's scores on the FQOL increased across all domains and remained the same in the domain of disability support. The most notable increases were in the family interaction and emotional well-being domain where her score increased by 6 to 8. The FQOL responses for pre-training and post-training for Isabella are displayed in the middle panel of Figure 9. In the post-training, Isabella's scores on the FQOL decreased slightly across all domains by a score of 1 to 3 points. The FQOL responses for pre-training and post-training for Olivia are displayed at the bottom of Figure 9. In the post-training, Olivia's scores on the FQOL decreased slightly in the domains of family interaction, parenting, and disability related support. For the domains of emotional and physical well-being, Olivia's scores stayed the same. The most notable decrease was in the parenting domain where her score decreased by 5.

Parent Knowledge Test

For the Parent Knowledge Test, we separated the responses into two categories: participants' reported level of confidence for ASD and ABA (shown in Table 14), and correct responses to factual questions about ASD and ABA (shown in Figure 10). For the reporting in the level of confidence in ASD and ABA, participants were able to respond in a Likert-type scale from "not knowledgeable" to "extremely knowledgeable." Participant's confidence levels all varied for their confidence on their knowledge about ASD and ABA. Three participants demonstrated a slight increase in at least one area, one participant demonstrated a slight decrease in both areas from the pre to post training, and one participant demonstrated no change in both areas. The factual questions about ASD and ABA were presented in a true or false format. For this portion, the majority of participants (n=4) demonstrated an increase in scores, while one participant's remained stable.

Social Validity Survey

Evaluations for the social validity survey for all participants are displayed in Table 15. Participants were able to respond to statements in a Likert-type scale from "strongly agree" to "strongly disagree." Overall, all participants strongly agreed or agreed with the questions presented in the survey. At the end of the survey, participants were able to leave additional comments/feedback or the trainer. In this section, Sofia expressed, *"Muchas gracias por estar siempre pendiente de mi familia"* [Thank you very much for always looking out for me and my family]. Another participant, Sabrina, stated that she was "I am sad to end the study, but you [the researcher] have given me new tools, and reminded me of ones I have already learned." Finally, Olivia stated, *"Aprendí a tomar tiempo para meditar y reflexionar sobre el presente. También aprendí a no juzgarme a mí misma y hacer las cosas que quiero"* [I learned how to take time to meditate and reflect on the present. I also learned how to not judge myself and do the things I want to]. Overall, participants provided positive feedback regarding the training and application of ACT strategies outside of training sessions.

Reliability Measures

IOA of Parent Self-Report Measures

For Liliana, IOA was calculated for 50% of baseline occurrences, 32% of training occurrences, and 33% of follow-up occurrences. IOA was 100% for baseline, training, and follow-up occurrences. For Sabrina, IOA was calculated for 43% of baseline occurrences, 40% of training occurrences, and 37% of follow-up occurrences. IOA was 100% for baseline, training, and follow-up occurrences. For Sofia, IOA was calculated for 50% of baseline occurrences, 36% of training occurrences, and 33% of follow-up occurrences. IOA was 100% for baseline, training, and follow-up occurrences. For Isabella, IOA was calculated for 36% of baseline occurrences, 44% of training occurrences, and 50% of follow-up occurrences. IOA was 100% for baseline, training, and follow-up occurrences. For Olivia, IOA was calculated for 42% of baseline occurrences, 32% of training occurrences, and 44% of follow-up occurrences. IOA was 100% for baseline, training, and follow-up occurrences.

IOA of Treatment Integrity of Training

Treatment integrity was measured by the researcher implementing all the training components in each session. IOA was calculated for 30% of training sessions across all participants. The researcher's treatment integrity for the ACTr sessions were 100% across all participants.

Discussion

This study examined the effects of a culturally adapted ACTr to improve the psychological flexibility, quality of life and value-directed behaviors for Latinx parents of children with ASD. This study also sought to identify to what extent would this intervention increase parent knowledge of ASD and ABA. We first conducted a pilot study to learn more about cultural values held by Latinx families who had children with ASD, as well as to learn about barriers that families faced in receiving behavioral analytic treatment. We then used information from the pilot study to inform cultural adaptations to create an ACT intervention, which we delivered to families of children with ASD who were waiting to receive services.

All participants demonstrated an increased rate of value-directed behaviors from baseline to the training phase. Further, increases in value-directed behaviors were observed when the training phase was put in place, thus demonstrating that the culturally adapted ACTr resulted in increases in value-based behaviors for these participants. Three participants (Sofia, Isabella, and Olivia) maintained treatment gains similar from the training phase. While not at the same levels from the training phase, Liliana and Sabrina demonstrate some evidence for maintenance after the current study's 2-week follow-up. For instance, Liliana's responding in the final week (week 9) demonstrated an increase in trend.

In general, the data from the indirect measures (AAQ-II, PSS, and FQOL) provided mixed results. For the AAQ-II, only one participant demonstrated decreased AAQ-II scores at post-training, indicating higher psychological flexibility. While four participants demonstrated increased AAQ-II scores at post-training, indicated higher psychological inflexibility. In light of these results, further discussion is warranted on assessing participant's movement in psychological flexibility. From the current study, while it was not directly captured from the

AAQ-II measure, we saw anecdotal evidence of improvement in the participants' psychological well-being and functioning. For example, Liliana shared that throughout the course of the study she was working extra hours at work and was being tasked with new duties. While this was causing additional stress, it was still feeling manageable with her other responsibilities. Liliana stated that she looked forward to her sessions, as she was always learning something new to apply to her life. Liliana reported, during the last session, that she had earned a job promotion and was excited for the new opportunities. The outcome of getting a job promotion aligned with Liliana's value to increase personal growth. While information as such was not captured in the AAQ-II scores, participants demonstrated different approaches to adapt and be flexible in different areas of their lives. The AAQ-II serves as only one way to measure changes in psychological flexibility. Future research may continue to examine movement in psychological flexibility in observable and measurable participant behavior.

For the PSS, three participants demonstrated decreased scores at post-training indicating lower levels of parental stress, while two participants demonstrated increased scores at post-training. The data from the FQOL provided important areas to highlight. Overall, three participants reported an increase in scores across the majority of domains. For example, Liliana, Sabrina, and Sofia all made notable increases in the areas of family interaction, parenting, and emotional well-being. An aspect worth noting is the relation of these domains to the values each participant was working on during the study. For instance, Sofia was working on her value of personal health and demonstrated an increase in scores in the domain of physical well-being. Additionally, Sabrina made most notable increases in the domain of emotional well-being. Sabrina was focused on her value of self-care, which aligned with domain of emotional well-being to support the parent's personal interest. For two participants (Isabella and Olivia), we observed a slight decrease in satisfaction scores across at least three domains. Olivia demonstrated a notable decrease level of satisfaction in the domain of parenting. To note, several of the questions presented in the FQOL survey focus on the family system as a whole. For example, two of the questions presented in the parenting domain included the following: "my family members help the children learn to be independent" and "my family members help the children with school work and activities." While Olivia focused on her value of helping her child increase independent skills, these questions also focused on the whole family system supporting the child.

The current study further evaluated to what extent this intervention would increase parental knowledge of ASD and ABA. All participants demonstrated an increase during the pre to post-training on the factual information presented. The educational component of the study was presented in Session 1 of the current study. There was no follow up or review of the material toward the end of the study. While the researcher shared the content as a resource to participants, additional procedures for knowledge checks throughout the study may have demonstrated a significant change in scores. Similarly, across all participants, there was little to no movement on the self-report confidence levels about ASD and ABA. An area to discuss were the post training scores for Isabella. Isabella reported a decrease in confidence on knowledge about ASD (moderately knowledgeable to slightly knowledgeable) and a decrease in confidence on knowledge about ABA (slightly knowledgeable to not knowledgeable). From anecdotal information conducted after follow up, Isabella reported feeling more lost towards ABA in the sense of next steps to take in order to attain services for her child. Isabella had already been on a waitlist for over 1.5 years and continued to be on a waitlist at the end of the study. In addition, she continued to face a language barrier, which made it difficult to follow up on the status of waitlist and clarity of her child's evaluation appointments.

The results of this study pertained to understanding and implementing adapted cultural and language interventions in behavior analytic practices. Our findings extend previous research (Baires, 2020) by offering additional ways that an intervention can be culturally adapted. Our research methods utilized both surface level (e.g., translations) and more in-depth adaptations (e.g., including cultural practices) to deliver a culturally responsive intervention. More specifically, we culturally adapted our intervention in relation to the framework proposed by Bernal et al. (1995). Some important areas of adaptation included metaphors, context, concepts, and methods. When delivering individualized sessions across participants, we incorporated findings from the pilot study by applying cultural values, but in a manner that was relevant to each participant.

Additionally, an on-going practice that was implemented across all sessions was the value of *personalismo* (interpersonal relationship). The researcher integrated this value by ensuring that at the start of every session, a personal check-in was completed. As the sessions progressed, the researcher was able to connect on a more personal level with each participant by engaging in these behaviors, instead of jumping directly into the training content. We found this to be a vital component to the training sessions in order to have continuous engagement and maintain active participation throughout the study. Upon beginning the study, we were clear to inform families that participation in the study was not directly tied to receiving ABA services for their child, as reaching out to families that were on a waitlist was a primary form of recruitment purposes. We wanted to make sure that families were clear on the purposes of the current study and that these sessions would directly affect their own behaviors. An additional value that was embedded across sessions was *confianza* (trust) and *respeto* (respect). Building trust with families allowed for a deeper conversation and families to share barriers that were relevant for the purposes of the study context and for the researcher to be aware of personal barriers to engaging in values outside of session. For example, Sofia shared that she was in the process of working to get her immigration papers during the course of the study. This was causing overall stress in her life and working on these related tasks, such as following up with paperwork, was taking priority over engaging in her selected values. Another participant, Olivia, also had significant positive personal life changes occurring coinciding while the study was taking place. She shared that her older son got married and she also became a grandmother. As these were important life events, her values in a different domain had shifted.

This study further highlighted some of the systemic barriers, barriers identified from the pilot (e.g., extended waitlist), and the daily personal challenges faced by the participants in order to engage in their selected values. Asking the participants share their personal challenges provided further guidance in the process of including this context for the exercises. This contributes to the process and promotion of increasing cultural humility practices and developing awareness for practitioners and researchers. That is, information about contextual variables that are important to, and reported by, the participants can then be incorporated into the intervention and therapeutic relationship. While this study was aimed at working with Latinx parents of children with ASD, a similar process can be taken when working with any population to individualize supports offered to families. Similar to the recommendations provided by Miller et al. (2019), acknowledging participant experiences allowed our research practices to evolve and create an effective and meaningful intervention for each participant.

Another important contribution from the results of these data is adding to the growing literature base on using ACTr with families of children with ASD. In general, this study contributes in utilizing ACT across a diverse population. More specifically, this research includes both in-depth and surface level adaptations of ACTr, specifically within metaphors, for the Latinx population. To our knowledge, there have only been two studies targeting cultural adaptation of ACTr with Latinx parents with ASD (Baires, 2020; Cañon Garzón, 2012). The findings from the current study contribute to the relevance and acceptability of ACT with Latinx parents. Additionally, this study adds to the literature base by including direct behavioral measures when using an ACTr intervention, instead of only reporting behavioral changes using standardized self-report measures. A final important contribution in the domain of ACT, was demonstrating a process to conducting an ACT based functional analyses (see Hayes & Toarmino, 1995). Understanding the evolution of certain behavioral functions (e.g., how does a person come to think) for each individual can have an impact for successful outcomes (Hayes & Toarmino, 1995). This study demonstrated the importance of first establishing cultural knowledge for a particular group, followed by adapting practices to understand the behavioral function for individuals' behaviors. For this study in particular, verbal behavior played a significant role not only to understand families' perspectives, but to also teach new strategies to engage in different patterns of behaviors.

Similar to the cultural humility practices described earlier, flexible approaches to delivering this ACTr content to families was also needed. For instance, ACT itself was an approach that was completely new to families, including the majority of the ACT processes. Discussing the goals and putting them into real life context had to be approached in a sensitive and relatable manner. As the researcher, providing personal examples was helpful for participants to relate and understand the scope of each session. For example, hearing terminology such as ‘mindfulness’ or practicing present moment awareness left some confusion with some of the participants from the current study. The researcher observed this lack of understanding by participant’s lack of engagement and similar behaviors during a portion of the session. However, hearing how the researcher would practice these skills (e.g., sipping a cup of coffee first thing in the morning and not having a phone present for 5 min) and sharing personal experiences helped both to increase participant understanding and clarity to effectively deliver the content for the researcher. The same process can be applied when working across other families, not just limited to Latinx populations. Overall the implications from this study may have broader implications and applicability in creating and delivering an ACTr in a flexible manner.

An additional extension in this study was the educational component prior to the ACTr intervention. The purpose of adding an educational component centered on ASD and ABA was due to the findings from the pilot study. The findings from the pilot study indicated that parents wanted more information and resources to learn about ASD and ABA. Similarly aligning with that information, the results of the parent knowledge test in the current study demonstrated that the majority of parents (n=4) responded below 80% to factual questions about ASD and ABA. The educational component information was relevant to include in the current study due to the inclusion criteria that specifically targeted families that were on a waitlist for behavior analytic services and may not have had much exposure to information on ASD and/or ABA. We delivered the educational component in a flexible way, while maintaining the core components across participants (i.e., discussion of ASD prevalence, myths, and symptoms). The type of information presented to each participant also required an additional contextual adaptation. While all of the participants were on a waitlist of services for at least 6 months to 1.5 years, they all had a spectrum of different aged children (i.e., 3-16 years-old). For this purpose, we also integrated components that participants would find relevant for their child. For instance, Sabrina had a 16-year-old boy, thus we included a portion on symptoms specifically aimed toward teens.

This study presented limitations that are important to note. The first limitation of the study were the data collection procedures. Similar to a limitation presented in Gould et al. (2018), data were not collected from an independent observer and data had the potential to be under reported or over reported by each participant. Similarly, not all participants submitted data on a consistent basis, either on occurrences or non-occurrences. Both of these factors lend this to cause an internal threat to the study. Self-monitoring methods were selected due to the nature of an independent observer being unable to directly observe each participant in their natural environment. The current study placed additional parameters to limit the limitations that may be brought from this. First, during the pre-assessment, parents tested out the forms to ensure they were able to properly submit them. Parents were encouraged to set reminders and keep a journal for additional notes that could be helpful. Future research may examine additional strategies to promote accurate self-report data (e.g., St. Peter et al., 2012). For example, providing participants with additional feedback during the training phase on their self-reported data may result in improved accuracy.

A second limitation of the study were the varied daily opportunities participants had to engage in value-directed behaviors. For example, Sophia would only engage in up to one value-directed behavior per day (exercising at least 20 min in a day), while Olivia may have had several opportunities daily to engage in her selected value-directed behaviors (allowing child to be independent). Furthermore, this was supported by the data in which Lilliana, Sabrina, and Olivia would occasionally submit more than one entry per day of their value-directed actions. By visual inspection of the data, it may appear that some participants did not make significant gains as quickly as others. Although the behaviors are free operant, there is likely going to be a ceiling effect, and the ceiling will necessarily vary across participants and behaviors. Future research may evaluate two to three on-going values for participants across their different life domains (e.g., parenting, work, friendships).

A third limitation of the study were differences across participants in duration for the training phase. We had planned to conduct two training sessions per week, for a total of 3 weeks. However, due to personal circumstances (e.g., illness), two participants had 2 weeks with one session, and then 2 weeks with two sessions, thus extending their time in training to 4 weeks. Liliana attended one training session during week 4 and week 5 and attended two training sessions in week 6 and week 7. Sabrina attended two training sessions during week 7 and week 8 and attended one training sessions in week 9 and week 10. While the additional week of having face to face contact with the trainer may have further increased the participant's engagement with value-directed actions, it presents as a limitation because it resulted in the training being different than the other three participants.

An additional limitation of the study was the generalizability of the findings, causing an external threat to the study. The socio demographics were very similar across all participants. For instance, all participants were female, identified as Mexican (n=4), were stay at home parents (n=3), and were raised in Mexico (n=4). From the feedback and anecdotal information, participants were able to relate to the cultural values and adaptions presented in the exercise. For example, during the exercise *Music, mindfulness, and defusion* (Schwartz, 2013), participants listened to a Christmas classic song, "Feliz Navidad." A similarity that several participants discussed were the memories they had from their childhood growing up in a different country (i.e., Cuba or Mexico). Furthermore, after hearing the song, they reported a desire to be able to celebrate with their own parents and share some of those memories from the past. A possibility that may explain why these adaptations worked well with these participants may be due to their similarities. It is recommended for researchers to continue an on-going evaluation for what adaptions will be needed across different participants. Future research should replicate the adaptations that were utilized in this study to include families from other Latinx backgrounds. For example, recruiting additional Latinx families that were born and raised in the US may demonstrate if some cultural values are passed across generations.

A further limitation was the duration of follow up measures that were collected. Due to time limitations, follow up data was only collected for two weeks after the last training session, and no further contact was made with participants. This short duration in the follow up phase may have resulted in a lack of maintaining treatment gains across participants. That is, a longer follow-up phase may have resulted in different patterns of responding across time for the participants. Future research may examine extending the follow up phase to a month or extending follow up further than six months (similar to Gould et al., 2018). In previous research studies, it has been noted that the benefits of ACT may take time before changes in behavior can occur (Biglan et al., 2013).

Finally, a final limitation worth noting was that we did not conduct a comparison of a non-culturally adapted ACTr group to the our culturally adapted ACTr group. From our findings, we can draw conclusions of improvement on value-directed actions across participants based on the cultural adaptations that were included in this intervention. However, due to not conducting a comparison group, the exact role that cultural adaptations played in the changes can not be determined. Future research may explore running both culturally adapted and non-culturally adapted ACTr with families of children with ASD.

A further consideration of the current study was to examine the effects of providing compensation for participation. Families were eligible to be compensated with two gift cards (totaling $50 combined) for their time and efforts for participation. Participants were eligible to receive the first gift card, valued at $20, after the collection of baseline measures. Next, participants were eligible to earn the second gift card, valued at $30.00, after the completion of follow up paper work (i.e., completion of indirect measures) as a bonus. The amount of the gift card may have had a different monetary value across each participant. The majority of families (60%) reported earning less than $30,000 as their annual household income, followed by 20% earning $30,000-$50,000, and 20% earning $75,001-$100,000. During the pre-assessment and outlined procedures, the researcher explained that receiving the gift cards was not contingent for their overall progress of engaging and/or reporting on their value-directed behaviors. However, we cannot determine the relationship between the participants' overall motivation to participate in the current study the value of the gift cards.

Future research may explore the feasibility of conducting this intervention in-person. Due to taking safety precautions from COVID-19 and extending participation to the entire state, families only had the option to participate online. Delivering the training in person may increase the strength of some of the values such as *confianza* (trust) and *personalismo* (friendliness) that this study embedded. For instance, having in person face time may build trust with the researcher at the onset of the relationship. Furthermore, some parents may feel more comfortable sharing difficult experiences being in the same room with the researcher. Thus, this may increase engagement in value directed behaviors and applicability of ACT strategies outside of training sessions. A further consideration on extending this research to take place in-person is to build further support within parents in the community. From the pilot study, parents reported having a lack of support from not only their own family members, but the community at large. For example, one parent stated, “I wish I had known of like a support group or like in the therapy places, if they had like a mom or meet up place. It was so hard in the beginning because you feel so hopeless.” While the purpose of the current study was not directly aimed to function as a support group for families, some similar benefits may have resulted from this. For example, shared parent experiences, transfer of knowledge, and the utilization of other services in the community for their children. In particular, from the similarities in participants from the current study, discussing past experiences may have been a commonality to be shared with other parents to relate to their own current behavior patterns. Ultimately, sharing these experiences may strengthen engagement in value-directed behaviors and increase participant psychological flexibility, and future research should investigate the potential utility of adding community building to individualized ACTr interventions.

Conclusion

The findings of this study evaluated the effects of a cultural adapted ACTr for Latinx parents of children with ASD. This study contributes to the growing literature by demonstrating the need of culturally adapting treatment through its demonstrated efficacy. Research is still limited regarding information on what constitutes an appropriate and effective cultural adaptation for the Latinx population (Benuto et al., 2020), specifically in the field of behavior analysis. At the current state, behavior analytic adaptations are surface level and focus primarily on language. While this is a start, it is not sufficient and more work is needed to create in-depth adaptation for treatments to be culturally responsive and meet families where they are. This study adapted ACT exercises and investigated the applicability of an ACTr with a diverse and marginalized group. In particular, we modified ACT exercises with Latinx cultural values and created further adaption to fit each family's context. In summary, these findings contribute to the domain of cultural and language adaptions by demonstrating an additional adaptation of ACTr with Latinx parents of children with ASD.

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Tables

Table 1

Sociodemographic Characteristics of Online Survey Participants

Characteristic	N	%	Characteristic	N	%
Gender			Hispanic/Latino origin		
Female	16	89	Mexican	16	89
Male	2	11	Central American	1	5.5
Age			Puerto Rican	1	5.5
25-34	3	17	Education level		
35-44	15	83	Did not graduate	1	5.5
County of NV residence			High school diploma/GED	7	39
Clark	5	28	Some college/associate	5	28
Washoe	13	72	Technical degree	1	5.5
Ethnicity			Bachelor's degree	1	5.5
Hispanic/Latino	18	100	Graduate/professional degree	2	11
Language spoken in the home					
English	5	28	Other	1	5.5
Spanish	6	33			
Both equally	7	39			

Note. N= 18. Participants were on average 36.4-years-old.

Table 2

Open-Ended Parent Responses from Online Survey

	N	%		N	%
Length of ABA services			Parent values around services		
Less than 6 months	1	6	Treatment planning	6	33
6 months - 1 year	4	23	Individualized planning	3	17
1 year – 3 years	6	33	Data progress	3	17
More than 3 years	7	36	Involvement	5	28
Major initial barriers			Other	1	5
Waitlist	5	28	Learning about ABA services		
Insurance/funding	3	17	Internet search	2	12
COVID-19 pandemic	2	10	Resources	6	34
None	3	17	Family/friends	3	18
Other	5	28	Service provider	2	12
			Referral	3	18
			Walk-In	1	6

Note. N=18. 'Other' major initial barriers identified were the lack of providers in the area (including providers that would accept child's age because they were older than 10) and lack of flexibility with the child's school schedule and doing ABA at the same time.

Table 3

Parent Experiences Around ABA Services

Question	Always N (%)	Often N	%	Sometimes N	%	Rarely N	%	Never N
Do you feel included around treatment planning for your child?	14 (82)	2	12	1	6	0	0	0
Do you feel that ABA agencies took cultural considerations in treatment planning for your family?	9 (53)	4	24	3	19	1	6	0
Does your service provider speak Spanish or was there someone you could communicate your needs to?	9 (53)	4	24	2	11	1	6	1

Note. N=17.

Table 4

Sociodemographic Characteristics of Structured Interviews and Focus Group Participants

Characteristic	N	%	Characteristic	N	%
Gender			Hispanic/Latino Origin		
Female	8	89	Mexican	8	100
Male	1	11	Education Level		
Age			Did not graduate	1	12.5
25-34	2	22	High school diploma/GED	4	50
35-44	7	78	Some college/Associate	2	24
County of NV Residence			Technical degree	1	12.5
Clark	2	22			
Washoe	7	78			
Ethnicity					
Hispanic/Latino	9	100			
Language spoken in the home					
English	2	25			
Spanish	1	13			
Both equally	5	62			

Note. N= 9. Only some demographic information was collected from the male parent (participant from the married couple) from the English-speaking group due to only the other parent completing the participation forms.

Table 5

Definition of Key Terms

Term	Definition
Categories	During the analysis process, codes are grouped into clusters around similar ideas or concepts
Code	Trust and friendliness in therapeutic relationships
Coding	During the analysis process, codes are grouped into clusters around similar ideas or concepts
Themes	Interpretive concepts or proportions that explain aspects of the data, which are the final output of the analysis.

Table 6

Theme and Subcategories for all Focus Groups and Structured Interviews

Theme	Subcategories
Family and cultural values	Family
	Trust and friendliness in therapeutic relationships
	Role as a parent
Reaction to receiving a diagnosis	Perspectives/knowledge of receiving a diagnosis
	Lack of support
Impact of ABA services	
	Positive outcomes
	Barriers
	Language barrier
The future of ABA and recommendations	Need for resources and further education
	Transitional services (aging out)

Table 7

Family and Cultural Values

Categories	Illustrative quote
Family	"*La integridad y la confianza son importantes para mi, especialmente con diferentes personas que entran y salen de mi casa. Creo que estos valores van en ambos sentidos, tanto en la forma en que yo trataba a los profesionales y como en la forma en que me trataban a mí."* [Integrity and trust are important for me, especially with different people coming in and out of my home, I think these values go both ways with both how I was treating the professionals and how they were treating me].[2] "*Yo quería que estuviera con la familia y que siempre me lo respetaran [hijo]."* [I wanted him to be with the family and to always respect him [son]. [3] "*Deseaba que mi proveedor de servicios y yo hubiéramos tenido una amistad más valiosa entre nosotros*." [I wish my service provider and I would have had a more valued friendship]. [2]
Trust and friendliness in therapeutic relationships	"I feel like we all speak the same language [when we communicate], and that's the biggest thing too. Or they see our kids or the therapist does X amount of time; they have to know your kids so well. You know them the best, but this person is also spending so much time with your child." [2]
Role as a parent	"That thought is always there [being a 'good enough parent.'] You think you are doing your best, but the thought is always there that I'm not doing a good job. Why are my kids behaving like this?"[1] "I think when we question if we are good parents, that is a sign of good parenting. I think if we weren't questioning, we wouldn't have the best efforts at heart."[1]

Note. [1] = English-speaking focus group, [2] = Individual interviews, [3] = Spanish-speaking focus group *(text has been translated*)

Table 8

Reaction to Receiving a Diagnosis

Categories	Illustrative Quote
Perspectives/knowledge of receiving a diagnosis	*“Yo odiaba ABA, yo lo odié al principio porque yo no estaba preparada para recibir ese tipo de servicios.”* [I hated ABA, I hated it at first because I was not prepared to receive those kinds of services].[3]
Lack of support	“*Necesitamos más comunicación entre las familias, familias con niños con autismo, porque es muy raro encontrar un grupo de mamás que en realidad estén interesadas porque hay mucha negación [en aceptar el diagnostico.]*” [We need more communication between families, families with children with autism. Because it is very rare to find a group of mothers who are interested because there is much denial [in accepting the diagnosis]. [3]
	“*Durante COVID, mis servicios terminaron repentinamente. Nunca recibí una razón por la cual este fue el caso, y no recibí apoyo sobre qué hacer después [de la terminación de servicios]. Seguí llamando, pero nunca pasó nada.”* [During COVID, my services were suddenly terminated. I never received a reason why this was the case and I did not get support on what to do next. I continued to call, but nothing ever happened].[2]
	“I wish I had known of like a support group or like in the therapy places if they had like a mom or meet up place. It was so hard in the beginning because you feel so hopeless.”[2]

Note. [1] = English-speaking focus group, [2] = Individual interviews, [3] = Spanish-speaking focus group *(text has been translated*)

Table 9

Impact of ABA

Categories	Illustrative Quote
Positive outcomes	“Before ABA service there were things that we could not do. I could not go to a restaurant because my son will scream when a stranger comes to him.”[1]
	“He would get his own tomatoes and do his own grocery shopping and go to the grocery store. The idea was the technician will go with us and we would use a list and he would pay for his own groceries. She would give the money for him to pay and tell him ‘here you pay on your own”[1]
	“The ABA places actually give you so much hope my son is potty trained like I didn't think that whatever happened like, I mean, the more that he's there like he's learning to talk more trying communicate more of his needs.”[2]
	“The owner of this ABA-the doctor came to meet with me and I feel like he sat down and spent the most time with me he was asking the most questions he was asking me what I think that we should work on more and the other people they didn't ask.”[1]
Barriers	“When my boy turned 10 the providers that we were with stopped services at a certain age. Then we were on another waitlist for almost a year.”[1]
	"*No fue fácil, estuvimos en una lista de espera aproximadamente 1.5 años y tuvimos varias entrevistas con diferentes agencias. Cuando nos aprobaron para los servicios, lloré de felicidad.”* [It was not easy, we were on a waitlist for about 1.5 years and had several interviews with different agencies. When we were approved for services I was crying with happiness].[3]
Language barriers	*“Si alguna vez tenía una queja o no me gustaba cómo iba algo, no sabía con quién podía quejarme sin perder la ayuda para mi hijo, tenía miedo*.” [If I ever had a complaint or didn't like how something was going I didn't know who I could complain to without losing help for my child, I was scared].[2]
	“*Hubo varios problemas de comunicación, nunca supe de mis derechos. Realmente nunca tuve una comprensión clara de cuál era la información correcta, sentí que solo entendía un lado de las cosas y era difícil para mí hacer preguntas.”* [There were several communication issues. I never knew about my rights. I never really had a clear understanding of what the right information was; I felt that I was only getting one side of things and it was hard for me to ask questions].[2]

Note. [1] = English-speaking focus group, [2] = Individual interviews,
[3] = Spanish-speaking focus group *(text has been translated*)

Table 10

The Future of ABA and Recommendations

Categories	Illustrative Quote
Need for resources	“*Más personas que nos ayuden a identificar y educarnos como papás sobre lo que es el autismo. ¿Nos dicen que tu niño tiene autismo y ya ¿verdad? Y eso debería de ser un poquito más gentil*.” [More people to help us identify and educate ourselves as parents on wha autism is. They tell us that your child has autism and that’s it right And that should be a little more gently said].[3]
	“An introduction of ABA should be a little bit more helpful for the parent so they don't feel like I don't know how to say it like they’r treating your son like not human being.”[1]
	“There’s a little bit of support from the community especially for like new parents whose kids are getting newly diagnosed right now, an I know the numbers are going up [of children being diagnosed].”[1]
	“*Pero para los papás que están iniciando en el camino de autismo [e necesario] un mejore entendimiento de ABA, yo creo que les ayudaría, sería muy beneficiario para ellos*.” [But for parents who are starting on the autism path a better understanding of ABA [is necessary], I think it would help them, it would be very beneficial for them].[3]
	“I had to watch without understanding, so that can definitely be changed with more understanding and education”[1]
Transitional services (aging out)	“Detuvieron los servicios porque el proveedor que tenía llegaba a un límite de sus servicios de la edad de mi hijo y tomo un año y medi para encontrar un nuevo proveedor.” [They stopped services because the provider I had reached a limit on their services for my son's age and it took a year and a half to find a new provider.][3]

Note. [1] = English-speaking focus group, [2] = Individual interviews, [3] = Spanish-speaking focus group *(text has been translated*)

Table 11

Sociodemographic Characteristics of ACTr Participants

Characteristic	N	%	Characteristic	N	%
Gender			Hispanic/Latino origin		
Female	5	100	Mexican	4	80
Male	-	-	Cuban	1	20
Age			Education level		
25-34	1	20	High school diploma/GED	1	20
35-44	3	60	Some college/Associate	2	40
45-54	1	20	Technical degree	1	20
County of NV residence			Graduate degree	1	20
Clark	4	80	Annual household income		
Washoe	1	20	Less than $30,000	3	60
Ethnicity			$30,000-$50,000	1	20
Hispanic/Latino	5	100	$75,001-$100,000	1	20
Language spoken in the home			Occupation		
English	1	20	Housekeeper	1	20
Spanish	4	80	Educational specialist	1	20
			Stay at home parent	3	60

Note. N= 5. Participants were on average 42-years-old.

Table 12

Summary of Value-Directed Actions

Participant	Value	Value-directed behavior	Examples
Liliana	Personal growth	Any instance of engaging in self-improvement skills and increasing knowledge of understanding/speaking English	Engaging in exercise (e.g., doing Zumba, walking, running) for at least 20 min Taking time to learn more English
Sabrina	Making time for myself	Any instance of engaging in a leisure, social (with friends), or self-care activity without the kids	Taking time to read Going shopping (including window shopping) Spending time and/or chatting with friends
Sofia	Personal health	Any instance of engaging in physical well-being (e.g. exercise)	Going to the gym for at least 20 min Doing an at home workout for at least 20 min
Isabella	Increasing knowledge on ASD	Any instance of engaging in a learning opportunity focused on increasing knowledge on ASD	Attending an informational workshop focused on information toward ASD Reading/watching a YouTube video learning about ASD
Olivia	Helping child being independent and self-esteem	Any instance of youngest child engaging in an activity independently in the home and mom follows through with expectations	Completing household tasks/activities of daily living Learning to do a new task independently Following through with expectations

Table 13

Overview of Intervention

Session	ACT Target Skill	Session Component	Adapted Exercise Example	Latinx Cultural Value
1	N/A	Introduction Information about ASD & ABA Services	N/A	Confianza (trust)
2	Values Clarification	Introduction to ACT What are values?	The three wishes	Cultural traditions, familismo (familism)
3	Mindfulness	Engage in brief mindfulness strategy Understanding what current stressors families are facing Introduction to present moment awareness	Centering (Harris, 2009) Music mindfulness & defusion (Schwartz, 2013)	Personalismo (personal relationships), cultural traditions, and familismo (familism)
4	Defusion	What is cognitive defusion and fusion	Thoughts as passengers (Hayes et al., 2012)	Familismo (familism) and role as a parent
5	Acceptance & Self as context	Introduction to acceptance Define differences between self as content, self as context, and self as process	Fusion with self-evaluations (Luoma et al., 2007) The prince and the beggar Don't think about a puppy (Afari, 2012)	Cultural traditions, respeto (respect), and familismo (familism)
6	Committed Actions	Review values clarification Introduction to committed actions	Goals, actions, and barriers form (Hayes et al., 2012) The Bull's Eye (Lundgren et al., 2007) Waiting for the wrong train (Hart, 2006)	Cultural traditions

Table 14

Confidence Levels About ASD and ABA

Participant	Liliana		Sabrina	
	Pre	Post	Pre	Post
Confidence on knowledge about ASD	Moderately knowledgeable	Moderately knowledgeable	Slightly knowledgeable	Slightly knowledgeable
Confidence on knowledge about ABA	Slightly knowledgeable	Moderately knowledgeable	Slightly knowledgeable	Slightly knowledgeable

Participant	Sofia		Isabella		Olivia	
	Pre	Post	Pre	Post	Pre	Post
Confidence on knowledge about ASD	Slightly knowledgeable	Moderately knowledgeable	Moderately knowledgeable	Slightly knowledgeable	Moderately knowledgeable	Moderately knowledgeable
Confidence on knowledge about ABA	Slightly knowledgeable	Very knowledgeable	Slightly knowledgeable	Not knowledgeable	Slightly knowledgeable	Slightly knowledgeable

Table 15

Social Validity Survey Responses

Participant	Liliana	Sabrina	Sofia	Isabella	Olivia
I was able to access the sessions easily (e.g., connect to zoom)	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Agree
This training respected my cultural background and values	Strongly agree	Strongly agree	Agree	Agree	Strongly agree
I found this training to be culturally sensitive	Strongly agree	Strongly agree	Strongly agree	Agree	Agree
My knowledge increased in the area of ASD	Strongly agree	Agree	Strongly agree	Neutral	Agree
My knowledge increased in the area of ABA	Strongly agree	Agree	Strongly agree	Agree	Agree
I was able to apply the ACTr strategies	Strongly agree	Strongly agree	Agree	Agree	Agree
I feel confident in applying the ACT strategies in the future	Strongly agree	Agree	Strongly agree	Neutral	Agree
The ACT strategies were effective in reducing my psychological distress as a parent of a child with ASD	Strongly agree	Strongly agree	Agree	Agree	Strongly agree
I was satisfied with the information presented in this training	Strongly agree	Strongly agree	Strongly agree	Agree	Agree
I was satisfied with the trainer	Strongly agree	Strongly agree	Strongly agree	Agree	Strongly agree
All of my questions and concerns were answered throughout this training	Strongly agree	Strongly agree	Strongly agree	Agree	Agree
I would recommend this training to other parents of children with ASD	Strongly agree	Strongly agree	Agree	Agree	Agree

Figures

Figure 1

The ACT Matrix

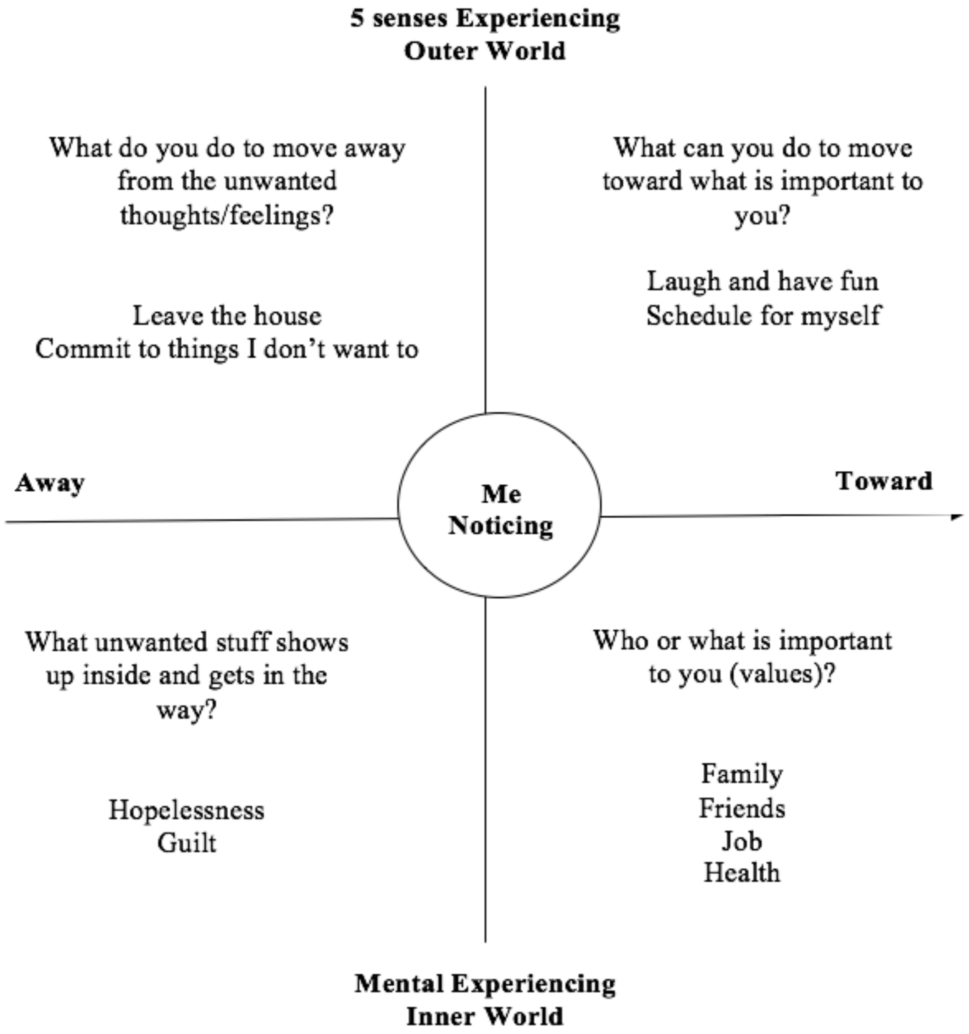


Figure 2

Focus Group Coding Process

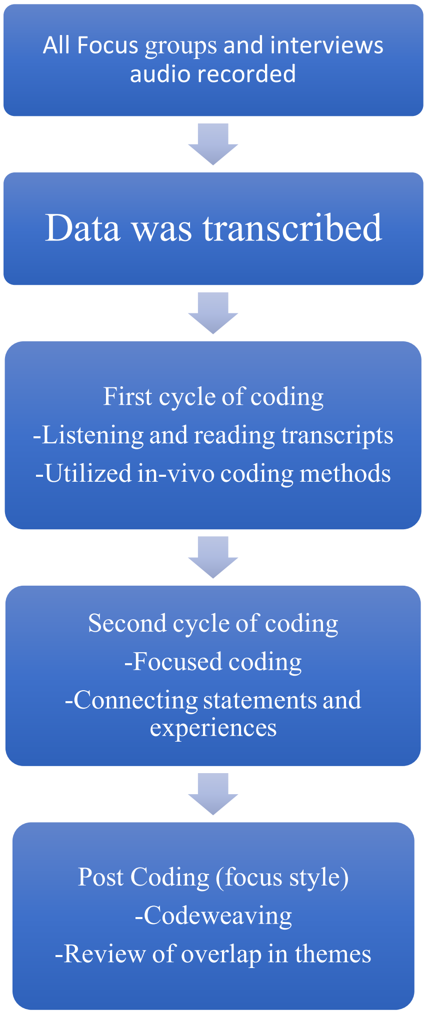


Figure 3

Example of Defining and Understanding Themes

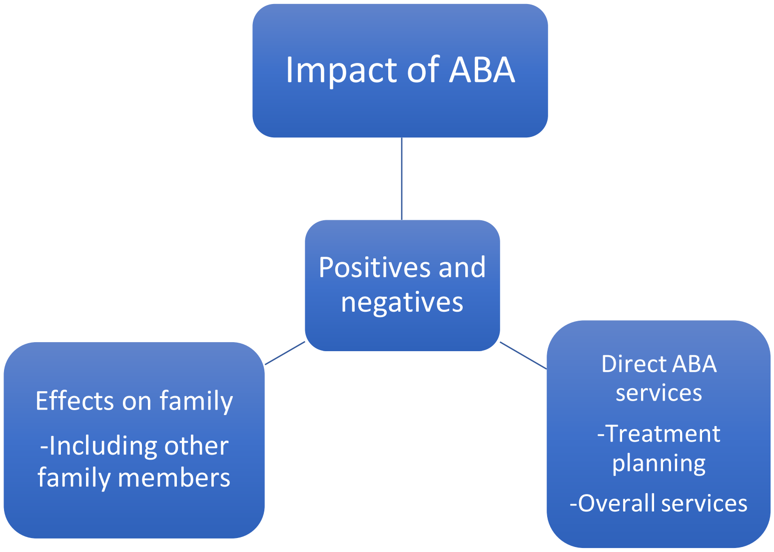


Figure 4

Frequency of Value-Directed Actions (Liliana and Sabrina)

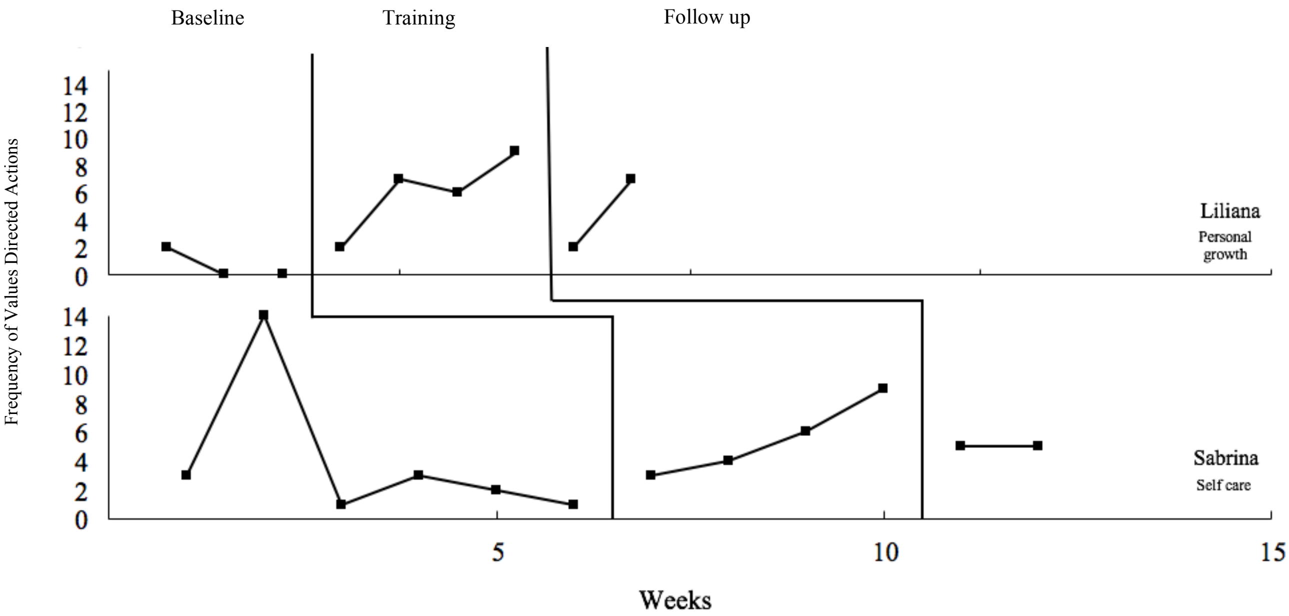


Figure 5

Frequency of Value-Directed Actions (Sofia, Isabella, Olivia)

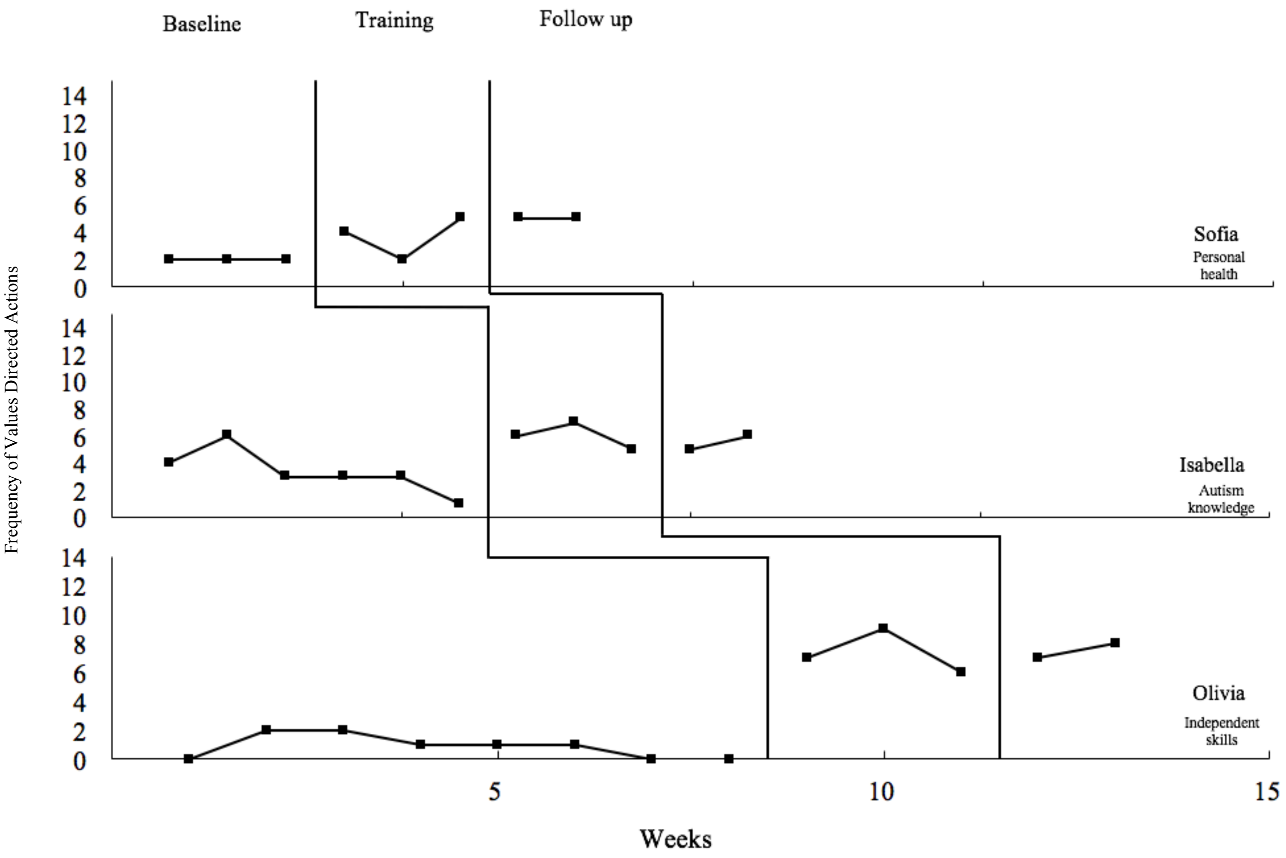


Figure 6

Scores on the Acceptance and Action Questionnaire-II

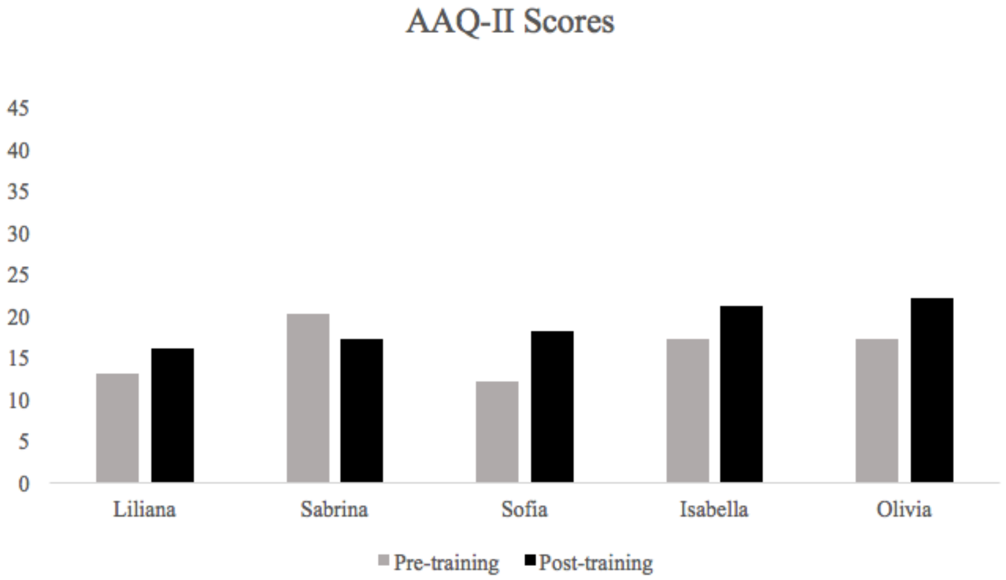


Figure 7

Scores on the Parental Stress Scale

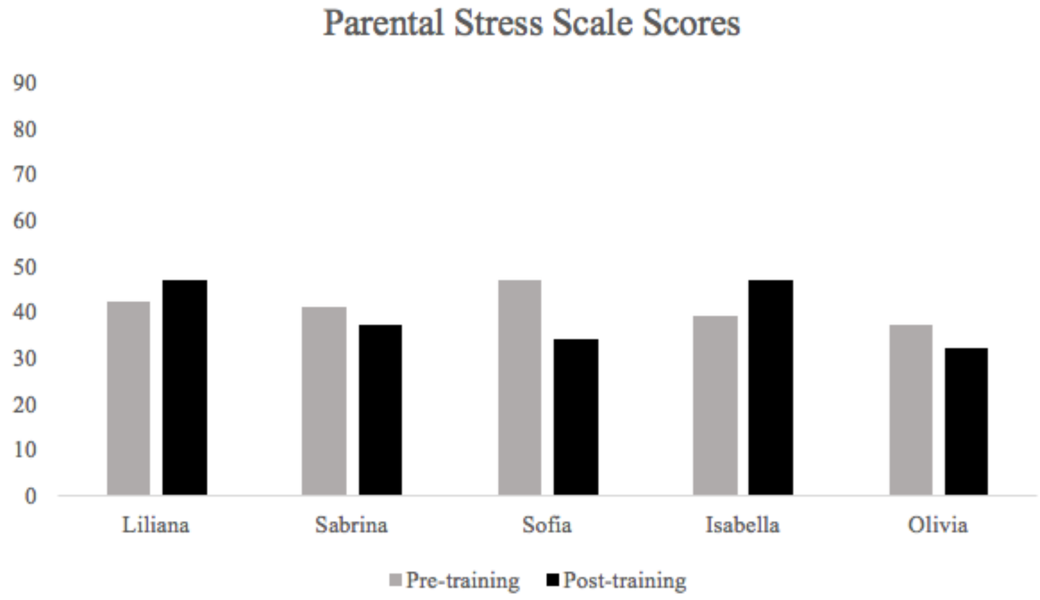
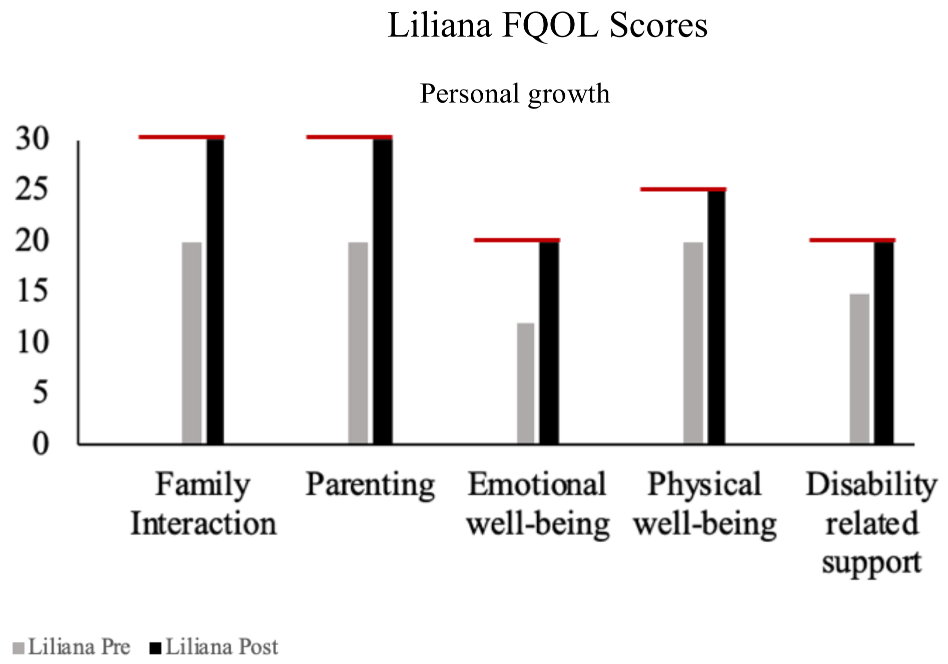
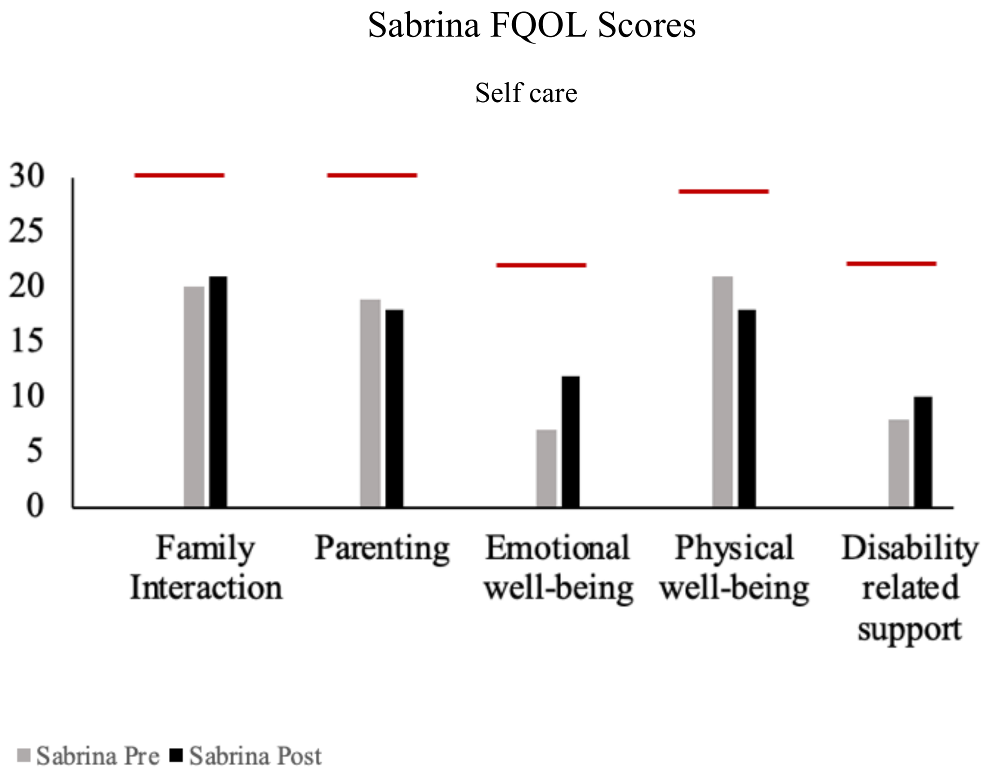


Figure 8

Scores on the Family Quality of Life Scale (Liliana and Sabrina)

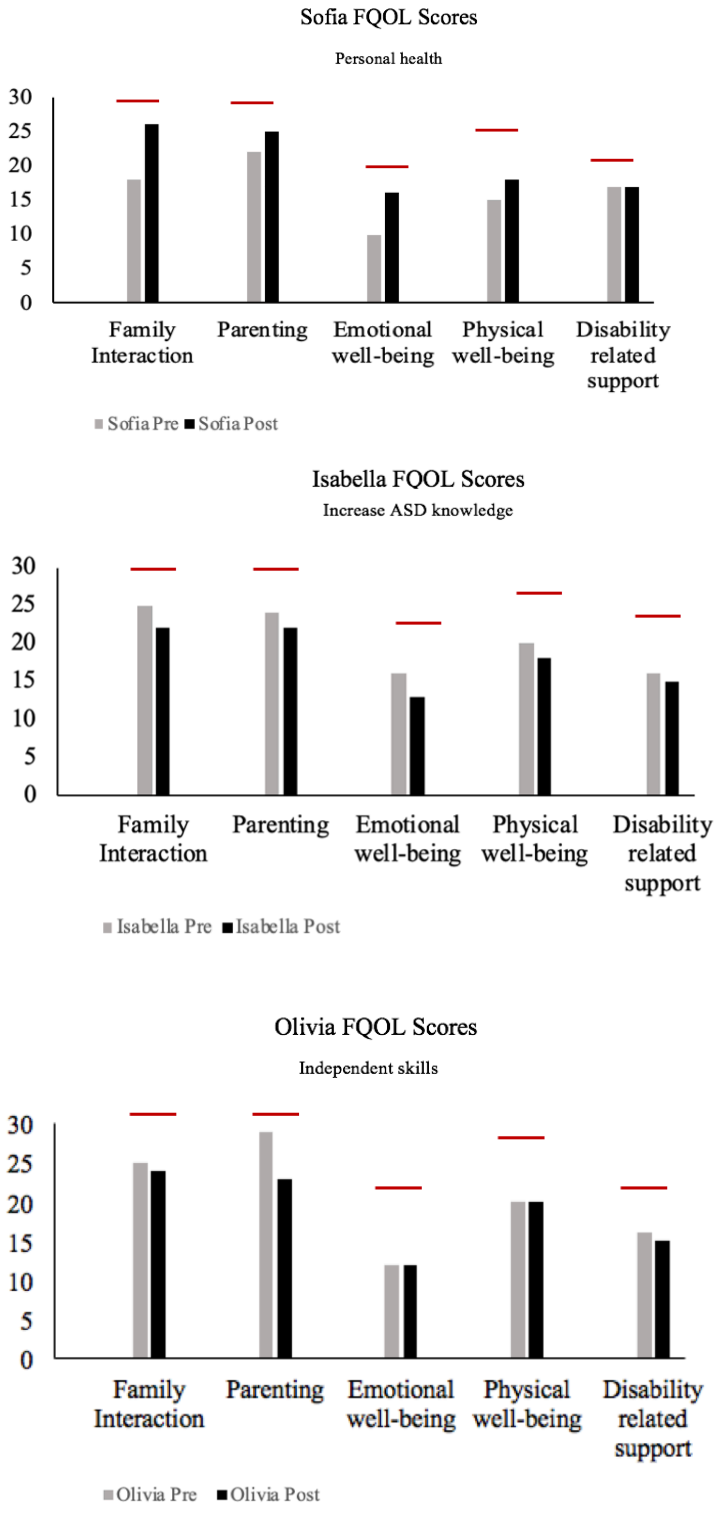




Note. The red line represents the max score for each domain.

Figure 9

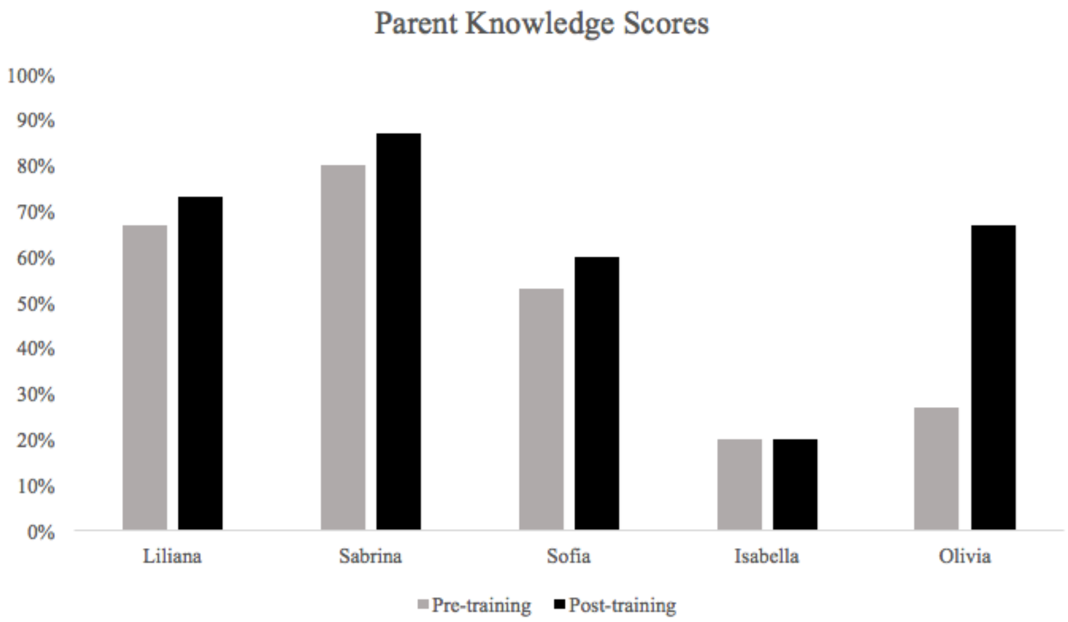
Scores on the Family Quality of Life Scale (Sofia, Isabella, and Olivia)



Note. The red line represents the max score for each domain.

Figure 10

Scores on the Parent Knowledge Test



Appendices

Appendix A: Participant Demographic and Experience Survey (English version)

Are you of Hispanic or Latino origin of descent?

- Yes
- No

Please specify Hispanic or Latino origin

- Mexican
- Central American
- South American
- Puerto Rican
- Other → (fill in)

Are you a parent or caregiver of a child with a disability or other special needs?

- Yes
- No

Are you currently receiving or have you ever received ABA services for your child?

- Yes
- No

How long have you had or did you have ABA services?

- Less than 6 months
- 6 months-1 year
- 1 year-3 years
- More than 3 years

What primary language do you speak at home?

- Spanish
- English
- English and Spanish
- Other

What county in Nevada do you reside in?
(Fill in)

What is your gender identity?

- Male
- Female
- Transgender male
- Transgender female
- Other (fill in)
- Do not want to answer

What is your age?
(Fill in)

What is your highest level of education?

- Did not graduate high school
- High School diploma or GED
- Some college or Associates degree
- Technical degree/certificate
- Bachelor's degree
- Graduate or Professional degree
- Other (specify)

Questions regarding ABA services

How did you find out about services? (e.g. referral, resources).
(Fill in)

When you started ABA services, how much did you know about ABA or about your child's diagnosis?
(fill in)

What do you value around services?
(Fill in)

Do you/did you feel included around treatment planning of your child?

- Always
- Often
- Sometimes
- Rarely
- Never

Is there anything about your cultural background/values that you hold that are important for your child's provider to know?
(fill in)

Did you feel that the ABA services took cultural considerations for treatment planning for your family?

- Always
- Often
- Sometimes
- Rarely
- Never

What did you find to be the most helpful/effective in receiving ABA services?
(Fill in)

Were there any barriers/difficulties in receiving ABA services?
(Fill in)

We would like to hear and learn more from your experiences! Can we contact you further to ask any additional questions? We will also give families the option to be part of a focus group. The focus group will be held with your preference of either online or in person (in either Spanish or English). The focus group will be a good opportunity to meet and share experiences with other Latino families!
(select all that apply)

- ○ Yes! I would be okay to be contacted further for additional questions
  → Please provide the best method of contact (provide phone and/or email)
- ○ Yes! I would like to participate in a focus group
  → Please provide the best method of contact (provide phone and/or email)
- ○ No, I do not want to be contacted further

Appendix B: Participant Demographic and Experience Survey (Spanish version)

¿Eres de origen o descendencia Hispano/a o Latino/a?
- Si
- No

Por favor especifique origen Hispano
- Mexicano/a
- Centroamericano/a
- Suramericano/a
- Puertorriqueño/a
- Otro → (llenar)

¿Es usted padre o cuidador de un niño con una discapacidad o otras necesidades especiales?
- Si
- No

¿Recibe o ha recibido servicios de ABA para su hijo/a?
- Si
- No
-

¿Cuánto tiempo ha tenido o tuvo servicios de ABA?
- Menos de 6 meses
- 6 meses - 1 año
- 1 año - 3 años
- Más de 3 años

¿Qué idioma habla generalmente en casa?
- Español
- Inglés
- Inglés y español
- Otro

¿En qué condado de Nevada reside?
(llenar)

¿Cuál es su identidad de género?
- Hombre
- Mujer
- Mujer Transgénero
- Hombre Transgénero
- Eligio no responder
- Otro

¿Cuál es su edad?
(llenar)

¿Cual es su nivel más alto de educación?

- ○ No me gradué de la secundaria
- ○ Diploma de secundaria o GED
- ○ Algo de colegio o título de asociados
- ○ Título/certificado técnico
- ○ Licenciatura
- ○ Graduado o grado profesional
- ○ Otro (Especifique)

Preguntas sobre los servicios de ABA

¿Cómo se enteró de los servicios? (por ejemplo, referencia, recursos, amigos)
(llenar)

Cuando comenzó los servicios de ABA, ¿cuánto sabía sobre ABA o el diagnóstico de autismo?
(llenar)

¿Qué valora usted de los servicios? (tratamiento, planificación, participación)
(llenar)

¿Se sintió/se siente incluido en la planificación del tratamiento de su hijo/a?

- ○ Siempre
- ○ A menudo
- ○ Algunas veces
- ○ Raramente
- ○ Nunca

¿Hay algo sobre sus valores culturales que tenga que ser importante que el proveedor de su hijo sepa?
(llenar)

¿Sintió que los servicios de ABA tomaron consideraciones culturales para la planificación del tratamiento de su familia?

- ○ Siempre
- ○ A menudo
- ○ Algunas veces
- ○ Raramente
- ○ Nunca

¿Qué le pareció más útil/efectivo en recibir servicios de ABA?
(llenar)

¿Hubo barreras/dificultades cuando recibió los servicios de ABA?

(llenar)

¡Nos gustaría escuchar y aprender más de sus experiencias! ¿Nos podemos poner en contacto con usted para hacerle preguntas adicionales? También les daremos a las familias la opción de ser parte de un grupo focal. El grupo de enfoque se llevará a cabo con su preferencia en línea o en persona (en español o inglés). ¡El grupo de enfoque será una buena oportunidad para conocer y compartir experiencias con otras familias latinas!
(seleccione todas las que correspondan)

- ○ Sí, me gustaría que me contactaran más
  → ¿Qué es el mejor método de contacto (teléfono y / o correo electrónico)
- ○ Si, me gustaría participar en el grupo focal
  →¿Qué es el mejor método de contacto (teléfono y / o correo electrónico)
- ○ No, no quiero participar

Appendix C: Structured Interview Purpose and General Overview (English version)

We thank you for your participation in our structured interview. I'm Mariela Hostetler and I am the student researcher for this project. We hope to record this interview so that we capture more accurate data, will that be okay? And very important—your participation today is strictly voluntary; you may withdraw at any time, for any reason. In addition, you don't have to share any information that you don't want to share. Your opinions are extremely important to us. We want you to feel free to tell us exactly what you think.

The purpose of the focus group is to get your thoughts and experiences about your current ABA services or ABA services that you have received in the past. Specifically, we want to understand what barriers Latinos encounter when receiving services, how service providers can provide more valuable services for you and your family, and things that have helped during treatment/that have not been as effective.

Your responses will be confidential and will not be linked with identifying information. Your responses will not affect current behavioral services that you are receiving or future services that you are seeking. Keep in mind, I will ask that you not share where you are receiving services or your primary services provider. What you can share is general examples such as "the behavior analyst did X" or the "rbt did this really great thing that I liked."

Before we start, do you have any questions?

Questions:

1. What was the process like to begin services as a Latinx?
    a. This can be discussed as the length of time to get services, who recommended services, initial impressions of ABA, family adjustments, onboarding process. This can serve as a good opportunity for families to discuss ease or difficulties of how those relationships started. For example, were forms available in English and Spanish, was a bilingual speaker available, etc.
2. How included did you feel regarding treatment planning?
    a. This can include preferences for programming, this can include things that were important for you as a family (family dinners), etc.
3. Are there any family values/cultural values that your providers have included in services or ones that you wish had been included?
    a. What type of impact did this have?
4. What are some barriers that you have encountered with services?
    a. Either with the service providers or the nature of services in general? How was this handled?
5. Can you make one or two recommendations for service providers to make the transition to receiving ABA services smoother/ something that fits into their life?
    a. This discussion can also serve with increased retention rates in services as well as implementing plans with fidelity in the home.

Appendix D: Structured Interview Purpose and General Overview (Spanish version)

Le agradecemos su participación entrevista estructurada. Soy Mariela Hostetler y soy la investigadora estudiante. Nos gustaría grabar esta sesión con audio para capturar datos precisos. ¿Esta de acuerdo con esto? Y muy importante, su participación hoy es estrictamente voluntaria; puede retirarse en cualquier momento, por cualquier motivo. Además, no tienen que compartir ninguna información que no quiera. Sus opiniones son muy importantes para nosotros. Queremos que se sienta libre de decirnos exactamente lo que piensa.

El propósito del grupo de enfoque es conocer sus pensamientos y experiencias sobre sus servicios de ABA que está recibiendo o los servicios de ABA que ha recibido en el pasado. Específicamente, queremos entender qué barreras encuentran los latinos al recibir servicios, cómo los proveedores de servicios pueden dar servicios más valiosos para usted y su familia, y cosas que han ayudado durante el tratamiento / que no han sido tan efectivas.

Sus respuestas serán confidénciale y no se vinculará con información de identificación. Sus respuestas no afectarán los servicios actuales que están recibiendo o los servicios futuros que están buscando. Tengan en cuenta que le pedimos que no compartan dónde está recibiendo los servicios o su proveedor de servicios principal. Lo que puede compartir son ejemplos generales como "el analista de comportamiento hizo X" o el "rbt hizo esto realmente genial que me gustó.”

Antes de empezar, ¿tienen algunas preguntas?

Preguntas:

1. ¿Cómo fue el proceso para comenzar los servicios como latina/o?
    a. Esto se puede discutir como la cantidad de tiempo para obtener los servicios, quién los recomendó, las impresiones iniciales de ABA, los ajustes familiares, el proceso de empezar servicios. Esto puede servir como una buena oportunidad para que las familias hablen sobre la facilidad o las dificultades de cómo comenzaron esas relaciones. Por ejemplo, hubo formularios disponibles en inglés y español, hubo una persona bilingüe disponible, etc.
2. ¿Qué tan incluido se sintió con respecto a la planificación del tratamiento?
    a. Esto puede incluir preferencias de programación, esto también puede incluir cosas que son importantes para usted como familia (cenas familiares), etc.
3. ¿Hay valores familiares / culturales que sus proveedores de ABA hayan incluido en los servicios o que usted desearía que se hubieran incluido? ¿Qué tipo de impacto tuvo esto?
4. ¿Cuáles son algunas de las barreras que ha encontrado con los servicios?
    a. Sea con los proveedores de servicios o con la naturaleza de los servicios en general. ¿Cómo se manejó esto?
5. ¿Puede hacer una o dos recomendaciones para que los proveedores de servicios hagan la transición hacia la recepción de los servicios de ABA más sencillos o algo que se adapte a sus vidas?
    a. Esta discusión también puede servir para incrementar las tasas de retención en los servicios, así como para implementar planes con fidelidad en el hogar.

Appendix E: Focus Group Purpose and General Overview (English version)

We thank you for your participation in our focus group. I'm Mariela Hostetler and I will be moderating this focus group. This session will be recorded so that we capture more accurate data, so please speak one at a time. Is everyone okay with that?

And very important—your participation today is strictly voluntary; you may withdraw at any time, for any reason. In addition, you don't have to share any information that you don't want to share in front of other people. If there are things that come up that you would like to share or think may be beneficial but do not want to share in front of the group-please feel free to contact me and we can set up a time to talk one on one.

Your opinions are extremely important to us. We want you to feel free to tell us exactly what you think, and we hope that your ideas will create discussion among all of us.

The purpose of the focus group is to get your thoughts and experiences about your current ABA services or ABA services that you have received in the past. Specifically, we want to understand what barriers Latinos encounter when receiving services, how service providers can provide more valuable services for you and your family, and things that have helped during treatment/that have not been as effective.

Your responses will be completely confidential, however keep in mind that we are in a group setting so you will be sharing with others around you today. We are asking that you agree to protect the confidentiality of everyone in this group and that you agree to not discuss any specific details that you hear today. For example, things that can be shared about the focus group with non-participants can be the general goals and nature of the group. But things that should remain confidential is the content of our conversations, participants names, etc. Your responses will not affect current behavioral services that you are receiving or future services that you are seeking. Keep in mind, I will ask that you not share where you are receiving services or your primary services provider. What you can share is general examples such as "the behavior analyst did X" or the "rbt did this really great thing that I liked." If participants start to share information that the moderator deems to be confidential, the moderator will jump in and remind participants to not share the given information.

Before we start, do you have any questions?

Questions:

1. What was the process like to begin services as a Latinx? This can be discussed as the length of time to get services, who recommended services, initial impressions of ABA, family adjustments, onboarding process.
    a. This can serve as a good opportunity for families to discuss ease or difficulties of how those relationships started. For example, were forms available in English and Spanish, was a bilingual speaker available, etc.
2. How included did you feel regarding treatment planning?
    a. This can include preferences for programming, this can include things that were important for you as a family (family dinners), etc.

3. Are there any family values/cultural values that your providers have included in services or ones that you wish had been included? What type of impact did this have?
4. What are some barriers that you have encountered with services?
    a. Either with the service providers or the nature of services in general? How was this handled?
5. Can you make one or two recommendations for service providers to make the transition to receiving ABA services smoother/ something that fits into their life?
    a. This discussion can also serve with increased retention rates in services as well as implementing plans with fidelity in the home.

Appendix F: Focus Group Purpose and General Overview (Spanish version)

Le agradecemos su participación en nuestro grupo focal. Soy Mariela Hostetler y voy a ser la moderadora para este grupo focal. Esta sesión se grabará para que capturemos datos precisos, así que por favor hable uno por uno. ¿Están todos de acuerdo con eso?

Y muy importante, su participación hoy es estrictamente voluntaria; puede retirarse en cualquier momento, por cualquier motivo. Además, no tienen que compartir ninguna información que no quieras compartir frente a otras personas. Si surgen cosas que le gustaría compartir o piensen que pueden ser beneficiosas, pero no quieren compartirlas frente al grupo, no duden en contactarme y podemos hacer una cita entre nosotros.

Sus opiniones son muy importantes para nosotros. Queremos que se sienta libre de decirnos exactamente lo que piensa, y esperamos que sus ideas generen discusión entre todos nosotros.

El propósito del grupo de enfoque es conocer sus pensamientos y experiencias sobre sus servicios de ABA que está recibiendo o los servicios de ABA que ha recibido en el pasado. Específicamente, queremos entender qué barreras encuentran los latinos al recibir servicios, cómo los proveedores de servicios pueden dar servicios más valiosos para usted y su familia, y cosas que han ayudado durante el tratamiento / que no han sido tan efectivas.

Sus respuestas serán completamente confidenciales, sin embargo, tengan en cuenta que estamos en un grupo, por lo que compartan con otros a tu alrededor hoy. Por ejemplo, las cosas que se pueden compartir sobre el grupo de enfoque con los que no son participantes pueden ser los objetivos generales y la naturaleza del grupo. Pero lo que debe permanecer confidencial es el contenido de nuestras conversaciones, los nombres de los participantes, etc. Sus respuestas no afectarán los servicios actuales que están recibiendo o los servicios futuros que están buscando. Tengan en cuenta que le pedimos que no compartan dónde está recibiendo los servicios o su proveedor de servicios principal. Lo que puede compartir son ejemplos generales como "el analista de comportamiento hizo X" o el "rbt hizo esto realmente genial que me gustó.” Si los participantes comienzan a compartir información que la moderadora considera confidencial, la moderadora intervendrá y les recordará a los participantes que no compartan tal información.

Antes de empezar, ¿tienen algunas preguntas?

Preguntas:

1. ¿Cómo fue el proceso para comenzar los servicios como latina/o?
    a. Esto se puede discutir como la cantidad de tiempo para obtener los servicios, quién los recomendó, las impresiones iniciales de ABA, los ajustes familiares, el proceso de empezar servicios. Esto puede servir como una buena oportunidad para que las familias hablen sobre la facilidad o las dificultades de cómo comenzaron esas relaciones. Por ejemplo, hubo formularios disponibles en inglés y español, hubo una persona bilingüe disponible, etc.
2. ¿Qué tan incluido se sintió con respecto a la planificación del tratamiento?
    a. Esto puede incluir preferencias de programación, esto también puede incluir cosas que son importantes para usted como familia (cenas familiares), etc.

3. ¿Hay valores familiares / culturales que sus proveedores de ABA hayan incluido en los servicios o que usted desearía que se hubieran incluido? ¿Qué tipo de impacto tuvo esto?
4. ¿Cuáles son algunas de las barreras que ha encontrado con los servicios?
    a. Sea con los proveedores de servicios o con la naturaleza de los servicios en general. ¿Cómo se manejó esto?
5. ¿Puede hacer una o dos recomendaciones para que los proveedores de servicios hagan la transición hacia la recepción de los servicios de ABA más sencillos o algo que se adapte a sus vidas
    a. Esta discusión también puede servir para incrementar las tasas de retención en los servicios, así como para implementar planes con fidelidad en el hogar

Appendix G: Agenda for Focus Group (English version)

1. Review purpose and general overview
2. Request permission from participants to audio record session
3. Introduction of the group activity: The ACT Matrix
    a. Participants share personal values
    b. Provide participants with a copy of a blank ACT Matrix for personal usage
4. Begin prepared discussion questions
5. Provide participants with additional resources (e.g., support groups, parent trainings)

Appendix H: Agenda for Focus Group (Spanish version)

1. Revisar el propósito y la descripción general
2. Solicite permiso a los participantes para grabar la sesión con audio
3. Introducción de la actividad grupal: El Matriz de ACT
    a. Los participantes comparten valores personales
    b. Dar a los participantes una copia del Matriz de ACT en blanco para uso personal
4. Comience las preguntas de discusión preparadas
5. Dar a los participantes recursos adicionales (por ejemplo, grupos de apoyo, entrenamientos para padres)

Appendix I: Treatment Fidelity Checklist for Focus Group (English version)

Procedure	Yes	No
The moderator tells participants that participation is strictly voluntary and can withdraw at any time		
The moderator asks permission from participants to be audio recorded		
The moderator states the purpose of the focus group		
The moderator presents the ACTr Matrix activity		
The moderator allows time for questions during the session		
The moderator provides any resources (as needed)		

Appendix J: Treatment Fidelity Checklist for Focus Group (Spanish version)

Procedimiento	Si	No
La moderadora les dice a los participantes que la participación es estrictamente voluntaria y puede retirarse en cualquier momento		
La moderadora pide permiso a los participantes para que grabe el audio.		
La moderadora declara el propósito del grupo focal.		
La moderadora presenta la actividad del ACTr Matriz		
La moderadora da tiempo para preguntas durante la sesión.		
La moderadora proporciona los recursos (según sea necesario)		

Appendix K: Participant Demographic Questionnaire (English version)

Are you of Hispanic or Latino origin of descent?
- Yes
- No

Please specify Hispanic or Latino origin
- Mexican
- Central American
- South American
- Puerto Rican
- Other → (fill in)

Are you a parent or caregiver of a child with a disability or other special needs?
- Yes
- No

Are you currently receiving or have you ever received ABA services for your child?
- Yes
- No

How long have you been on a waitlist to receive ABA services?
- Less than 6 months
- 6 months-1 year
- 1 year-3 years
- More than 3 years

What primary language do you speak at home?
- Spanish
- English
- English and Spanish
- Other

What county in Nevada do you reside in?
(Fill in)

How many years have you lived in the US?
(Fill in)

What is your gender identity?
- Male
- Female
- Transgender male

- Transgender female
- Other (fill in)
- Do not want to answer

What is your age?
(Fill in)

What is your highest level of education?

- Did not graduate high school
- High School diploma or GED
- Some college or Associates degree
- Technical degree/certificate
- Bachelor’s degree
- Graduate or Professional degree
- Other (specify)

Appendix L: Participant Demographic Questionnaire (Spanish version)

¿Eres de origen o descendencia Hispano/a o Latino/a?
- Si
- No

Por favor especifique origen Hispano
- Mexicano/a
- Centroamericano/a
- Suramericano/a
- Puertorriqueño/a
- Otro → (llenar)

¿Es usted padre o cuidador de un niño con una discapacidad o otras necesidades especiales?
- Si
- No

¿Recibe o ha recibido servicios de ABA para su hijo/a?
- Si
- No

¿Cuánto tiempo ha estado en una lista de espera para recibir servicios de ABA?
- Menos de 6 meses
- 6 meses - 1 año
- 1 año - 3 años
- Más de 3 años

¿Qué idioma habla generalmente en casa?
- Español
- Inglés
- Inglés y español
- Otro

¿En qué condado de Nevada reside?
(llenar)

¿Cuantos años a vivido en los EU?
(llenar)

¿Cuál es su identidad de género?
- Hombre
- Mujer
- Mujer Transgénero

- ○ Hombre Transgénero
- ○ Eligio no responder
- ○ Otro

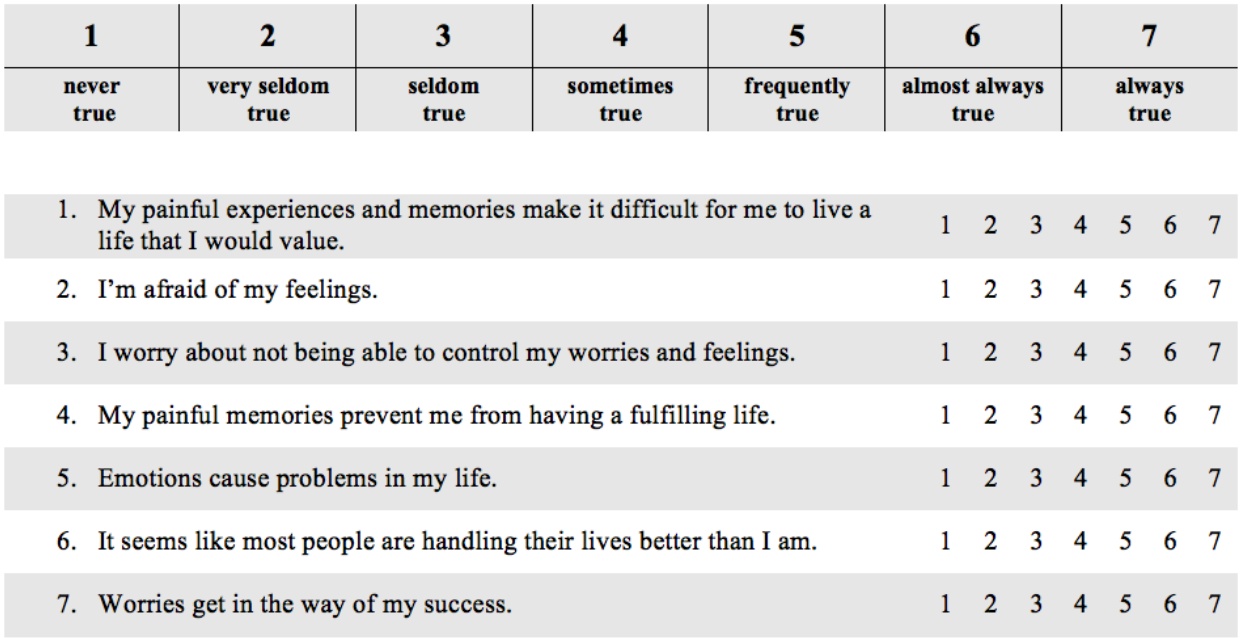
¿Cuál es su edad?
(llenar)

¿Cual es su nivel más alto de educación?

- ○ No me gradué de la secundaria
- ○ Diploma de secundaria o GED
- ○ Algo de colegio o título de asociados
- ○ Título/certificado técnico
- ○ Licenciatura
- ○ Graduado o grado profesional
- ○ Otro (Especifique)

Appendix M: Acceptance and Action Questionnaire-II (AAQ-II; English version)

Below you will find a list of statements. Please rate how true each statement is for you by circling a number next to it. Use the scale below to make your choice.



1	2	3	4	5	6	7
never true	very seldom true	seldom true	sometimes true	frequently true	almost always true	always true

1. My painful experiences and memories make it difficult for me to live a life that I would value.	1	2	3	4	5	6	7
2. I'm afraid of my feelings.	1	2	3	4	5	6	7
3. I worry about not being able to control my worries and feelings.	1	2	3	4	5	6	7
4. My painful memories prevent me from having a fulfilling life.	1	2	3	4	5	6	7
5. Emotions cause problems in my life.	1	2	3	4	5	6	7
6. It seems like most people are handling their lives better than I am.	1	2	3	4	5	6	7
7. Worries get in the way of my success.	1	2	3	4	5	6	7

Appendix N: Acceptance and Action Questionnaire-II (AAQ-II; Spanish version)

Debajo encontrará una lista de afirmaciones. Por favor, puntúe qué tan cierta es cada afirmación para usted encerrando en un círculo un número al lado. Utilice la escala de abajo para hacer su elección.

1	**2**	**3**	**4**	**5**	**6**	**7**
Nunca es verdad	**Muy raramente es verdad**	**Raramente es verdad**	**A veces es verdad**	**Frecuentemente es verdad**	**Casi siempre es verdad**	**Siempre es verdad**

1. Mis experiencias y recuerdos dolorosos hacen que me sea difícil vivir la vida que querría	1	2	3	4	5	6	7
2. Tengo miedo de mis sentimientos	1	2	3	4	5	6	7
3. Me preocupa no ser capaz de controlar mis preocupaciones y sentimientos	1	2	3	4	5	6	7
4. Mis recuerdos dolorosos me impiden llevar una vida plena	1	2	3	4	5	6	7
5. Mis emociones interfieren en como me gustaría que fuera mi vida	1	2	3	4	5	6	7
6. Parece que la mayoría de la gente lleva su vida mejor que yo	1	2	3	4	5	6	7
7. Mis preocupaciones interfieren en el camino de lo que quiero conseguir	1	2	3	4	5	6	7

Appendix O: Parental Stress Scale (PSS; English version)

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 = Strongly disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly agree

1	I am happy in my role as a parent	
2	There is little or nothing I wouldn't do for my child(ren) if it was necessary.	
3	Caring for my child(ren) sometimes takes more time and energy than I have to give.	
4	I sometimes worry whether I am doing enough for my child(ren).	
5	I feel close to my child(ren).	
6	I enjoy spending time with my child(ren).	
7	My child(ren) is an important source of affection for me.	
8	Having child(ren) gives me a more certain and optimistic view for the future.	
9	The major source of stress in my life is my child(ren).	
10	Having child(ren) leaves little time and flexibility in my life.	
11	Having child(ren) has been a financial burden.	
12	It is difficult to balance different responsibilities because of my child(ren).	
13	The behavior of my child(ren) is often embarrassing or stressful to me.	
14	If I had it to do over again, I might decide not to have child(ren).	
15	I feel overwhelmed by the responsibility of being a parent.	
16	Having child(ren) has meant having too few choices and too little control over my life.	
17	I am satisfied as a parent	
18	I find my child(ren) enjoyable	

Appendix P: Parental Stress Scale (PSS; Spanish version)

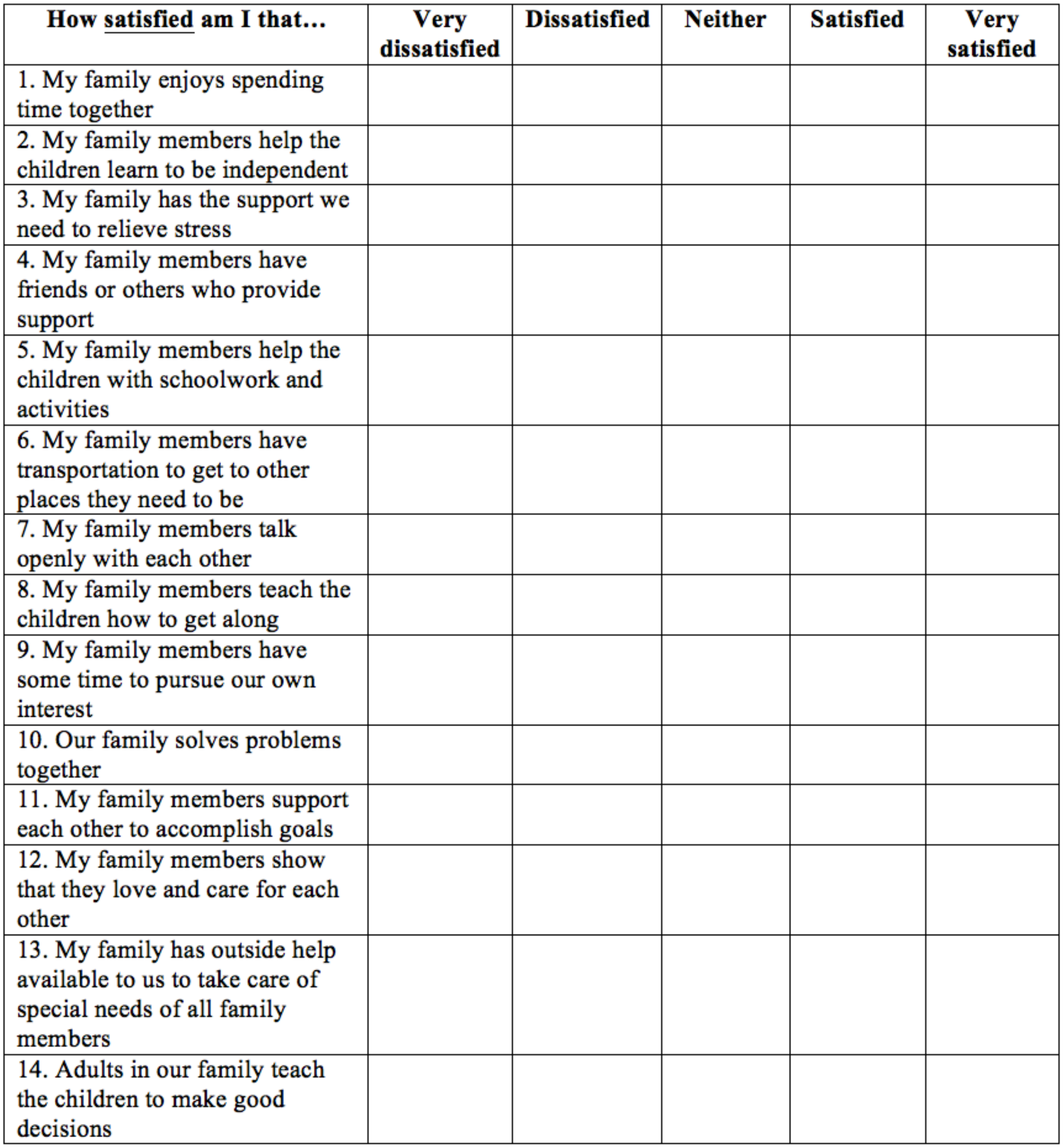
Las siguientes declaraciones describen sentimientos y percepciones sobre la experiencia de ser padre. Piense en cada uno de los elementos en términos de cómo es típicamente su relación con su hijo o hijos. Indique en la escala en que está de acuerdo o en desacuerdo con los siguientes puntos colocando el número correspondiente en el espacio provisto.

1 = Totalmente en desacuerdo 2 = En desacuerdo 3 = Indeciso 4 = De acuerdo 5 = Totalmente de acuerdo

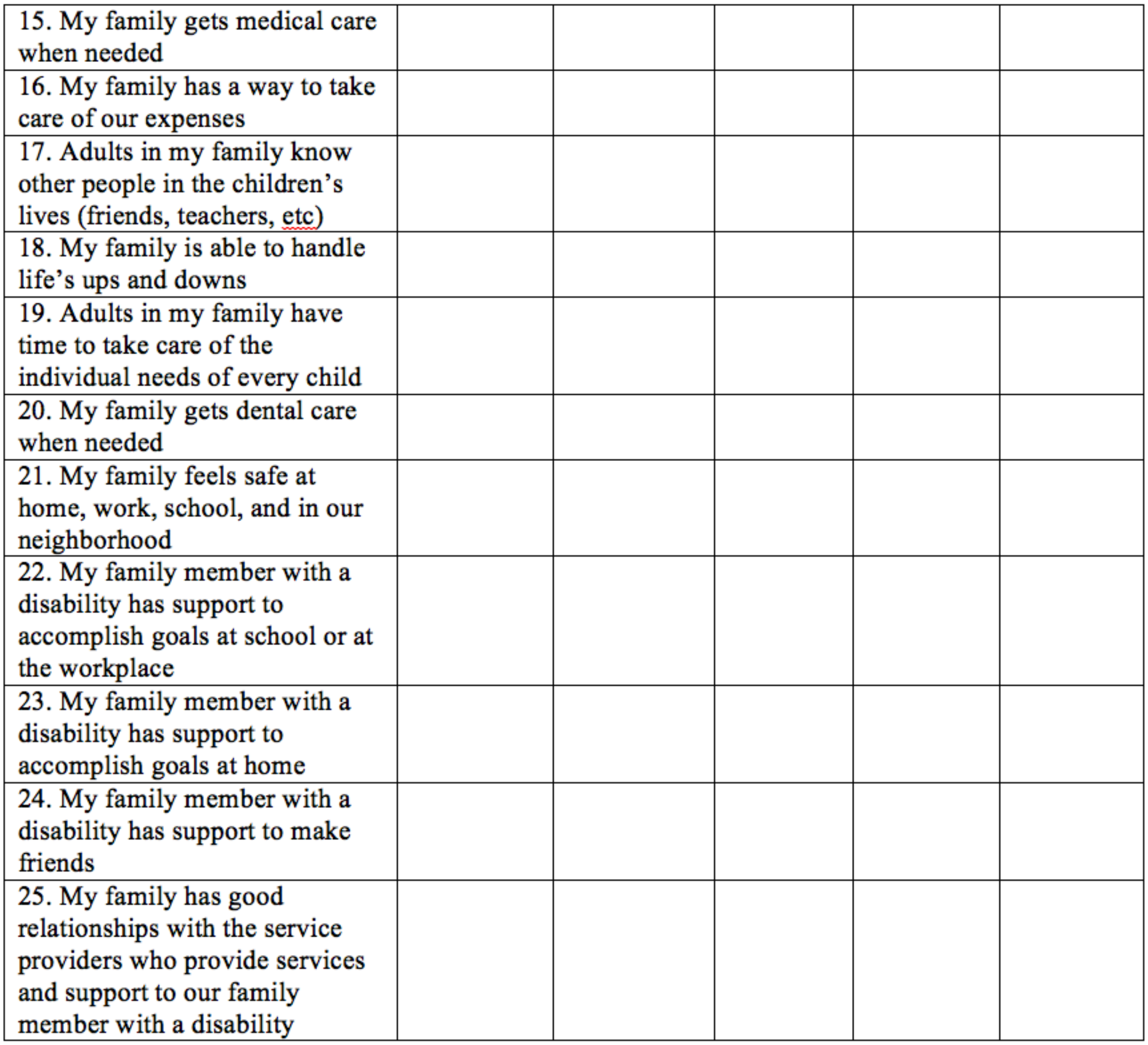
1	Soy feliz en mi papel de padre.	
2	Hay poco o nada que no haría por mi (s) hijo (s) si fuera necesario.	
3	El cuidado de mis hijos a veces requiere más tiempo y energía del que tengo para dar	
4	A veces me preocupa si estoy haciendo lo suficiente por mis hijos.	
5	Me siento cerca a mi hijo (s).	
6	Disfruto pasar tiempo con mis hijos.	
7	Mi (s) hijo (s) son una fuente importante de afecto para mí.	
8	Tener hijos me da una visión más segura y optimista del futuro.	
9	La mayoría de estrés en mi vida viene de mis hijos.	
10	Tener hijos deja poco tiempo y flexibilidad en mi vida.	
11	Tener hijos ha sido una carga económica.	
12	Es difícil balancear las diferentes responsabilidades debido a mis hijos.	
13	El comportamiento de mi (s) hijo (s) a menudo me resulta embarazoso o estresante.	
14	Si tuviera que hacerlo de nuevo, podría decidir no tener hijos.	
15	Me siento abrumado por la responsabilidad de ser padre.	
16	Tener hijos ha significado tener muy pocas opciones y muy poco control sobre mi vida.	
17	Estoy satisfecha como madre o padre	
18	Encuentro a mis hijos agradables	

Appendix Q: Family Quality of Life Scale (FQOL; English version)

This survey is about how you feel about your life together as a family. Your family may include many people (mother, father, children, aunts, grandparents). For this survey, please consider your family as those people



How satisfied am I that…	Very dissatisfied	Dissatisfied	Neither	Satisfied	Very satisfied
1. My family enjoys spending time together					
2. My family members help the children learn to be independent					
3. My family has the support we need to relieve stress					
4. My family members have friends or others who provide support					
5. My family members help the children with schoolwork and activities					
6. My family members have transportation to get to other places they need to be					
7. My family members talk openly with each other					
8. My family members teach the children how to get along					
9. My family members have some time to pursue our own interest					
10. Our family solves problems together					
11. My family members support each other to accomplish goals					
12. My family members show that they love and care for each other					
13. My family has outside help available to us to take care of special needs of all family members					
14. Adults in our family teach the children to make good decisions					



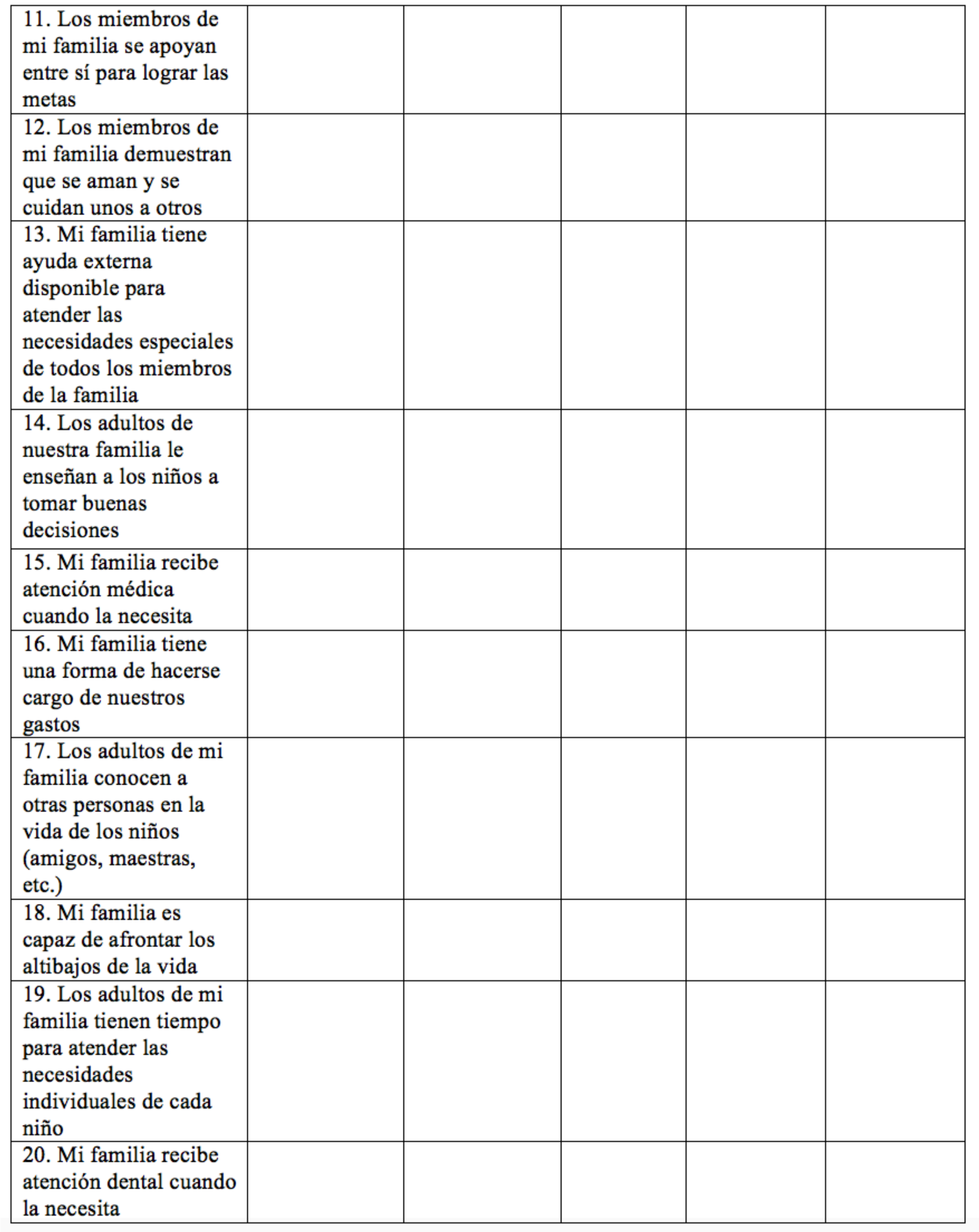
15. My family gets medical care when needed					
16. My family has a way to take care of our expenses					
17. Adults in my family know other people in the children's lives (friends, teachers, etc)					
18. My family is able to handle life's ups and downs					
19. Adults in my family have time to take care of the individual needs of every child					
20. My family gets dental care when needed					
21. My family feels safe at home, work, school, and in our neighborhood					
22. My family member with a disability has support to accomplish goals at school or at the workplace					
23. My family member with a disability has support to accomplish goals at home					
24. My family member with a disability has support to make friends					
25. My family has good relationships with the service providers who provide services and support to our family member with a disability					

Hoffman, L., Marquis, J., Poston, D., Summers, J. A., & Turnbull, A. (2006). Assessing family outcomes: Psychometric evaluation of the beach center family quality of life scale. *Journal of Marriage and Family*, *68*(4), 1069–1083. https://doi.org/10.1111/j.1741-3737.2006.00314.x

Appendix R: Family Quality of Life Scale (FQOL; Spanish version)

Esta encuesta trata sobre cómo se sienten acerca de su vida juntos como familia.

Que satisfecha/o estoy que…	**Muy insatisfecha/o**	**Insatisfecha/o**	**Ninguna/o**	**Satisfecha/o**	**Muy Satisfecha/o**
1. A mi familia le gusta pasar tiempo juntos					
2. Los miembros de mi familia ayudan a los niños a aprender a ser independientes					
3. Mi familia tiene el apoyo que necesitamos para aliviar el estrés					
4. Los miembros de mi familia tienen amigos u otras personas que brindan apoyo					
5. Los miembros de mi familia ayudan a los niños con las tareas y actividades escolares					
6. Los miembros de mi familia tienen transporte para llegar a otros lugares donde necesitan estar					
7. Los miembros de mi familia hablan abiertamente entre ellos					
8. Los miembros de mi familia les enseñan a los niños cómo llevarse bien					
9. Los miembros de mi familia tienen un poco de tiempo para perseguir nuestro propio interés					



11. Los miembros de mi familia se apoyan entre sí para lograr las metas					
12. Los miembros de mi familia demuestran que se aman y se cuidan unos a otros					
13. Mi familia tiene ayuda externa disponible para atender las necesidades especiales de todos los miembros de la familia					
14. Los adultos de nuestra familia le enseñan a los niños a tomar buenas decisiones					
15. Mi familia recibe atención médica cuando la necesita					
16. Mi familia tiene una forma de hacerse cargo de nuestros gastos					
17. Los adultos de mi familia conocen a otras personas en la vida de los niños (amigos, maestras, etc.)					
18. Mi familia es capaz de afrontar los altibajos de la vida					
19. Los adultos de mi familia tienen tiempo para atender las necesidades individuales de cada niño					
20. Mi familia recibe atención dental cuando la necesita					

21. Mi familia se siente segura en casa, en el trabajo, en la escuela y en nuestro vecindario.					
22. El miembro de mi familia con discapacidad tiene apoyo para lograr metas en la escuela o en el lugar de trabajo					
23. El miembro de mi familia con discapacidad tiene apoyo para lograr metas en casa					
24. El miembro de mi familia con discapacidad tiene apoyo para hacer amigos					
25. Mi familia tiene buenas relaciones con los proveedores de servicios que brindan servicios y apoyo a nuestro familiar con discapacidad.					

Appendix S: Parent Knowledge Test (English version)

Part 1:

1. How knowledgeable about autism spectrum disorder (ASD) do you feel?
   - ○ Extremely knowledgeable
   - ○ Very knowledgeable
   - ○ Moderately knowledgeable
   - ○ Slightly knowledgeable
   - ○ Not knowledgeable

2. How knowledgeable about ABA do you feel?
   - ○ Extremely knowledgeable
   - ○ Very knowledgeable
   - ○ Moderately knowledgeable
   - ○ Slightly knowledgeable
   - ○ Not knowledgeable

Part 2:

	True	**False**	**Unsure**
1. Boys are four times as likely than girls to have ASD			
2. All individuals that have an ASD diagnosis share the same symptoms			
3. Vaccines can cause ASD			
4. ASD is caused by a lack of parenting skills			
5. There are beneficial treatments available for individuals with ASD			
6. 'ABA' therapy stands for applied behavior analysis			
7. ABA is considered an evidence based best practice			
8. A certified board behavior analyst provides ABA services			
9. ASD can be cured with ABA			
10. It is recommended that all children with ASD receive 40 hours per week of therapy			
11. Data collection is an important component of an ABA program			
12. Parents are involved in their child's planning and consent for behavior change programs			
13. A provider is able to terminate services without an appropriate transition plan			
14. In the event that ABA services are disrupted by a provider, it is the parent's responsibility to find a new service provider			
15. As a parent, I can report a violation or complaint to the Behavior Analyst Certification Board			

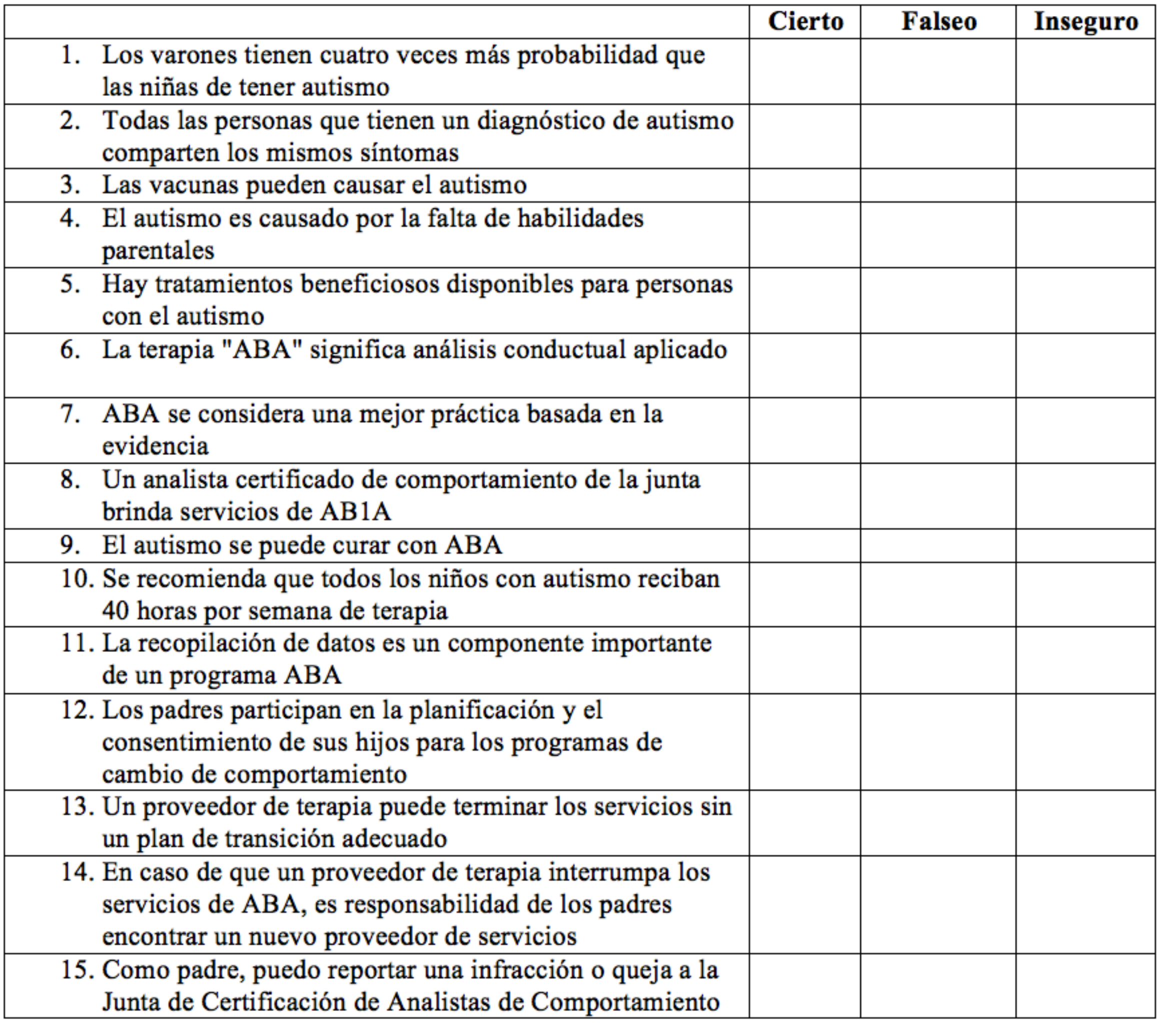
Appendix T: Parent Knowledge Test (Spanish version)

Parte 1:

1. ¿Qué nivel de conocimiento tiene sobre el trastorno del espectro autista (TEA)?
   - Extremadamente informada/o
   - Muy bien informada/o
   - Moderadamente informada/o
   - Ligeramente informada/o
   - No informada/o

2. ¿Qué tan bien informada acerca de ABA se siente?
   - Extremadamente informada/o
   - Muy bien informada/o
   - Moderadamente informada/o
   - Ligeramente informada/o
   - No informada/o

Parte 2:



	Cierto	**Falseo**	**Inseguro**
1. Los varones tienen cuatro veces más probabilidad que las niñas de tener autismo			
2. Todas las personas que tienen un diagnóstico de autismo comparten los mismos síntomas			
3. Las vacunas pueden causar el autismo			
4. El autismo es causado por la falta de habilidades parentales			
5. Hay tratamientos beneficiosos disponibles para personas con el autismo			
6. La terapia "ABA" significa análisis conductual aplicado			
7. ABA se considera una mejor práctica basada en la evidencia			
8. Un analista certificado de comportamiento de la junta brinda servicios de AB1A			
9. El autismo se puede curar con ABA			
10. Se recomienda que todos los niños con autismo reciban 40 horas por semana de terapia			
11. La recopilación de datos es un componente importante de un programa ABA			
12. Los padres participan en la planificación y el consentimiento de sus hijos para los programas de cambio de comportamiento			
13. Un proveedor de terapia puede terminar los servicios sin un plan de transición adecuado			
14. En caso de que un proveedor de terapia interrumpa los servicios de ABA, es responsabilidad de los padres encontrar un nuevo proveedor de servicios			
15. Como padre, puedo reportar una infracción o queja a la Junta de Certificación de Analistas de Comportamiento			

Appendix U: Parent Social Validity Survey (English version)

Please read each statement carefully and rate how much you agree or disagree with each statement.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. I was able to access the sessions easily (e.g., connect to zoom)					
2. This training respected my cultural background and values					
3. I found this training to be culturally sensitive					
4. My knowledge increased in the area of ASD					
5. My knowledge increased in the area of ABA					
6. I was able to apply the ACTr strategies					
7. I feel confident in applying the ACTr strategies in the future					
8. The ACT strategies were effective in reducing my psychological distress as a parent of a child with ASD					
9. I was satisfied with the information presented in this training					
10. I was satisfied with the trainer					
11. All of my questions and concerns were answered throughout this training					
12. I would recommend this training to other parents of children with ASD					

Were there any additional comments/feedback that you would like to share?

Appendix V: Parent Social Validity Survey (Spanish version)

Lea atentamente cada declaración y califique en qué medida está de acuerdo o en desacuerdo con cada declaración.

	Totalmente de acuerdo	De acuerdo	Neutral	Desacuerdo	Muy en desacuerdo
1. Pude acceder a las sesiones fácilmente (conectar para zoom)					
2. Este entrenamiento respetó mis valores y antecedentes culturales					
3. Encontré esta capacitación culturalmente sensible					
4. Mi conocimiento aumentó en el área de autismo					
5. Mi conocimiento aumentó en el área de ABA					
6. Pude aplicar las estrategias ACTr					
7. Me siento segura/o de poder aplicar las estrategias ACTr en el futuro					
8. Las estrategias de ACT fueron efectivas para reducir mi angustia psicológica como padre de un niño con autismo					
9. Quedé satisfecha/o con la información presentada en este entrenamiento					
10. Estaba satisfecha con la entrenadora					
11. Todas mis preguntas e inquietudes fueron respondidas a lo largo de entrenamiento					
12. Recomendaría este entrenamiento a otros padres de niños con autismo					

Appendix W: Researcher Treatment Integrity

Please rate to which the session goals were completed by
0: The researcher did not cover the outlined materials
1: The researcher covered SOME of the outlined materials
2: The researcher covered all of the outlined materials

Participant:
Scoring sessions

Item	Score
1. Introduction to the training -Provides information on ASD & ABA -Provides resources in preferred language	
2. Introduction to what ACT is -Introduction to values clarification -Three wishes -Check in if additional resources were needed	
3. Introduction to mindfulness -Allow time for participants to share strengths/challenges -Centering -Music, mindfulness, and defusion	
4. Introduction to defusion -Trainer listens to parent's difficult thoughts -Thoughts as passengers	
5. Introduction to acceptance and self as context -Don't think about a puppy -Fusion with self-evaluations -The prince and the beggar	
6. Introduction to committed action -Review values clarification -Goals, actions, and barriers -Waiting for the wrong train	

Appendix X: Considerations for Adapting Exercises

Pre-assessment:

1. Is there anything about your cultural background/values that you hold that are important to you that the experimenter should know?
2. Do you have any religious affiliations that are either important to you or that you would like to share with the experimenter? (This will not impact your participation in the study)
3. What are some common holidays you and your family celebrate?
4. What is your relationship with extended family members?

Session 1: Information on ASD and ABA

There will be age-appropriate modifications to the educational content

Session 2: Values Clarification

1. Did you and your family celebrate Three Kings Day?
    a. If not, who are some important family/friends that you look up to? These families can be either present or from the past.

Session 3: Mindfulness

1. Do you listen to Christmas music in your home around the holidays? (Gaining a sense of holiday time and listening to music)
    a. If not, when you were growing what were some classic songs that you remember playing/playing for your kids?

Session 4: Defusion

1. Who were some family members/close friends that you have recently hosted/are important to you?
2. Do you enjoy cooking? What is a meal that you enjoy sharing with the ones you love?

Session 5: Acceptance and Self as Context

1. What are some traditional foods that are made in your home? How are these foods different than what your friends are used to?

Session 6: Committed Actions

1. Where is a place you wish to travel to, why?
2. When you were growing up, what are some saying that your parents would say to you?
    a. Are any of these that you tell your own kids?
    b. Examples:
        i. **“El que madruga, dios le ayuda**
            1. *Meaning / English equivalent*: Early bird gets the worm. Stresses the importance with being responsible with our work tasks (early risers are more productive).
        ii. **No hay mal que por bien no venga**
            1. *Translation*: There's no bad from which something good doesn't come
                a. *Meaning / English equivalent*: Every cloud has a silver lining.

Appendix Y: Outline of Educational Component (English version)

Part 1: Introduction to autism

1. Section 1: What is autism
    a. Includes definitions, prevalence, causes
2. Section 2: Signs and symptoms of autism
    a. Milestones and discussion of behaviors
3. Section 3: How is autism treated?
    a. Treatment options
    b. Resources
    c. Family recommendations

Part 2: Introduction to applied behavior analysis (ABA)

1. Section 1: Why ABA?
    a. Components of ABA
    b. Discuss expectations and what ABA can include
2. Section 2: Parental rights
    a. How to get started with services & understanding my child's rights
    b. What to expect when services begin
3. Section 3: Resources in my community

Appendix Z: Outline of Educational Component (Spanish version)

Parte 1: Introducción al autismo

1. Sección 1: ¿Qué es el autismo?
    a. Incluye definiciones, prevalencia, causas
2. Sección 2: Signos y síntomas del autismo
    a. Hitos y discusión de comportamientos
3. Sección 3: ¿Cómo se trata el autismo?
    a. Opciones para tratamiento
    b. Recursos
    c. Recomendaciones de otras familias

Parte 2: Introducción al análisis conductual aplicado (ABA)

1. Sección 1: ¿Por qué ABA?
    a. Componentes de ABA
    b. Discutir las expectativas de la terapia y lo que puede incluir ABA
2. Sección 2: Derechos de los padres
    a. Como comenzar con los servicios y comprender los derechos de mi hijo
    b. Qué esperar cuando comiencen los servicios
3. Sección 3: Recursos en mi comunidad

Appendix AA: Thoughts as Passengers (original version, Hayes et al. 2012)

“It's as if there is a bus and you're the driver. On this bus we've got a bunch of passengers. The passengers are thoughts, feelings, and bodily states, memories, and other aspects of experience. Some of them are scary, and are dressed up in black leather jackets and they've got switchblade knives. What happens is, you're driving along and the passengers start threatening you, telling you what you have to do, where you have to go. ‘You’ve got to turn left’ You’ve got to go right’ etc. The threat that they have over you is that, if you don’t do what they say, they’re going to come up from the back of the bus.

“It’s as if you’ve made deals with these passengers, and the deal is, “You sit in the back of the bus and scrunch down so that I can't see you very often, and I'll do what you say pretty much.” Now what if one day you get tired of that and say, ‘I don't like this! I'm going to throw those people off the bus!’ You stop the bus, and you go back to deal with the mean looking passengers. Notice that the very first thing you had to do was stop. Notice now you're not driving anymore, you're just dealing with these passengers. Plus, they are really strong. They don't intend to leave, and you wrestle with them, but it just doesn't turn out very successfully.”

Eventually you go back to placating the passengers, to try and get them to sit way in the back again where you can’t see them. The problem with that deal is you have to do what they ask. Pretty soon, they don't even have to tell you to ‘turn left.’ You know as soon as you get near a left turn that certain passengers are going to crawl all over you. Eventually you may get good enough that you can almost pretend that they're not on the bus at all. You just tell yourself that left is the only direction in which you want to turn! However, when they eventually do show up, it's with the added power of the deals that you've made with them in the past.

"Now the trick about the whole thing is the following. The power that the passengers have over you is 100% based on this: "If you don't do what we say, we're coming up and we're making you look at us.' That's it! It's true that when they come up they look like they could do a whole lot more. They got knives, chains, etc. it looks like you could be destroyed. The deal you make is to do what they say so they won't come up and stand next to you and make you look at them. The driver (you) has control of the bus, but you trade away the control in these secret deals with the passengers. In other words, by trying to get control, you've actually given up control! Now notice that, even though your passengers claim they can destroy you if you don't turn left, it has never actually occurred. These passengers can't make you do something against your will."

Appendix AB: Thoughts as Party Guests (adapted exercise)

Thoughts as Party Guests (English version)

"It's as if there is a weekly party and you're the host. At this party you've invited your mom, your grandpa, Cecy (your close mom friend), your aunt Blanca, your cousin Alejandro, and other family and friends. Your guests are thoughts, feelings, and bodily states, memories, and other aspects of experience. Some of them are scary. You have planned to make one of your specialty dishes, pozole. But it requires your focus, attention, and of course your secret ingredient. What happens is, your party guests start arriving early. While you tell them to relax outside at the patio and make themselves at home, they heavily insist on what to add to your pozole and how much spices you should be adding. 'You should definitely put a lot of radishes' yells your aunt Blanca from the living room. 'No, No No' yells your cousin Alejandro- definitely no cilantro, you'll ruin it!" These threats that they have over you is that, if you don't do what they say, they're going to come into your kitchen and start to take over."

"It's as if you've made deals with these guests, and the deal is 'You come to my home and around my patio so that I can't see you very often, and I'll do what you say pretty much." Now what if one day you get tired of that and say, 'I don't like this! I'm going to throw all these people out of my home!" You stop the music that is playing in the background, stop cooking and you go out to the patio to deal with your opinionated guests. Notice that the very first thing you had to do was stop. Notice now you're not cooking anymore, you're just dealing with these guests. They look upset and they don't intend to leave. You start to ask nicely but it just doesn't turn out very successfully."

Eventually you go back to calming down your guests, to try and get them to sit back outside in the patio again where you can't see them. The problem with that deal is you have to do what they ask. Pretty soon, they don't even have to tell you to 'add more spice to your dish'. You know as soon as you get near your spice cabin that certain guests are going to crawl all over you. Eventually you may get good enough that you can almost pretend that they're not in your home at all. You just tell yourself that you definitely don't want to add cilantro, like your cousin had said. However, when they eventually do come back inside the kitchen, it's with the added power of the deals that you've made with them in the past.

"Now the trick about the whole thing is the following. The power that the party guests have over you is 100% based on this: "If you don't do what we say, we're leaving the patio and we're making you look at us.' That's it! It's true that when they come inside they look like they could do a whole lot more. The deal you make is to do what they say so they won't come and hover in the kitchen and make you look at them. The host (you) has control of your home, but you trade away the control in these secret deals with the party guests. In other words, by trying to get control, you've actually given up control!

Now notice that, even though your guests claim they can destroy you if you don't add enough radishes to your dish, it has never actually occurred. These guests can't make you do something against your will."

Thoughts as party guests (Spanish version)

"Es como si hubiera una fiesta y tú fueras la anfitriona. En esta fiesta invitaste a tu mamá, tu abuelo, Cecy (tu amiga que es mamá cercana), tu tía Blanca, tu primo Alejandro y otros familiares y amigos. Tus invitados son pensamientos, sentimientos y estados corporales, recuerdos y otros aspectos de la experiencia. Algunos de ellos dan miedo. Tienes planeado hacer uno de tus platillos especiales, el pozole. Pero requiere su enfoque, atención y, por supuesto, tu ingrediente secreto. Lo que sucede es que los invitados a la fiesta comienzan a llegar temprano. Mientras les dices que se relajen afuera en el patio y se sientan como en casa, ellos insisten mucho en qué deberías agregar a tu pozole y cuántas especias debes agregar. 'Definitivamente deberías poner muchos rábanos', grita tu tía Blanca desde la sala. "No, no, no, grita tu primo Alejandro, definitivamente no le pongas cilantro, ¡lo vas a arruinar!" Estas amenazas que tienen sobre ti es que, si no haces lo que te dicen, van a entrar a tu cocina y empezar a tomar el control.

"Es como si hubieras hecho tratos con estos invitados, y el trato es 'Ven a mi casa y que se mantengan alrededor de mi patio para que no los pueda ver mucho, y haré lo que me digas". Ahora, ¿qué pasa si un día te cansas de eso y dices: '¡No me gusta esto! ¡Voy a echar a todas estas personas de mi casa! " Apagas la música que suena de fondo, dejas de cocinar y sales al patio a tratar con tus invitados. Observe que lo primero que tenías que hacer era detenerte. Fíjate que ahora ya no estás cocinando, solo estás delirando con estos invitados. Parecen molestos y no tienen la intención de irse. Empiezas a preguntar amablemente, pero no resulta muy satisfactorio."

Con el tiempo, vuelve a calmar a tus invitados, para intentar que se sienten nuevamente afuera en el patio, donde no los puedes ver. El problema con ese trato es que tienes que hacer lo que te piden. Muy pronto, ni siquiera tienen que decirte que "agregue más chiles a su plato". Tan pronto como te acerques a tu gabinete de especias, sabrás que ciertos invitados se van a saltar sobre ti. Con el tiempo, puede volverse lo suficientemente bueno como para casi fingir que no están en su casa. Simplemente te dices a ti mismo que definitivamente no quieres agregar cilantro, como había dicho tu primo. Sin embargo, cuando finalmente regresan a la cocina, es con el poder adicional de los acuerdos que ha hecho con ellos en el pasado.

“Ahora el truco de todo el asunto es lo siguiente. El poder que los invitados a la fiesta tienen sobre ti se basa en un 100% en esto: "Si no haces lo que te decimos, saldremos del patio y te vamos hacer que nos mires". ¡Eso es todo! Es cierto que cuando entras parece que pueden hacer mucho más. El trato que haces es hacer lo que dicen para que no se acerquen a la cocina y te hagan mirarlos. El anfitrión (tu) tiene el control de tu hogar, pero tú cambias el control en estos acuerdos secretos con los invitados a la fiesta. En otras palabras, al tratar de tomar el control, ¡en realidad lo has perdido!

Ahora observe que, aunque tus invitados afirman que pueden destruir tu plato si no agrega suficientes rábano, en realidad nunca ha ocurrido. Estos invitados no pueden obligar a hacer algo en contra de tu voluntad.”

Appendix AC: Don’t think about a puppy (original version; Afari, 2012)

If you’re willing, I’d like you to do a short exercise with me. For the next few seconds, I’d like you to not think about a puppy. You can think about anything else other than a puppy. If thoughts of a cute little puppy that wags his tail and jumps on you to lick your face come up, go ahead and push thoughts away and don't think about them. You can think about anything else, but whatever you do, don’t think about a puppy.

Don't think about sweet bread (adapted exercise)

If you’re willing, I’d like you to do a short exercise with me. For the next few seconds, I’d like you to not think about sweet bread. You can think about anything else other than sweet bread. If thoughts of the delicious sweet smell of cinnamon or the flaky taste after the first bite come up, go ahead and push thoughts away and don’t think about them. I don’t want you to think about dipping it in hot chocolate or having it in the afternoon with a cup of coffee. You can think about anything else, but whatever you do, don’t think about sweet bread.

Don't think about sweet bread (adapted exercise, Spanish version)

Si está dispuesto, me gustaría que hiciera un breve ejercicio conmigo. Durante los próximos segundos, me gustaría que no pensara en pan dulce. Puede pensar en cualquier otra cosa que no sea pan dulce. Si surgen pensamientos sobre el delicioso olor dulce de canela o el sabor escamoso después del primer bocado, adelante, aleja esos pensamientos y no piense en ellos. No quiero que piense en mojarlo en un chocolate caliente o tomarlo por la tarde con una taza de cafecito. Puede pensar en cualquier otra cosa, pero hagas lo que hagas, no piense en un pan dulce.