Examining the Feasibility, Acceptability and Cultural Relevance of the Family Check-Up Online with Latine Parents

by

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DISSERTATION ABSTRACT

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Doctor of Philosophy in Counseling Psychology

Title: Examining the Feasibility, Acceptability and Cultural Relevance of the Family Check-up Online with Latine Parents

This study examined the feasibility, acceptability, and cultural relevance of the Family Check-up Online in Spanish (FCU-OS), while evaluating its effectiveness in promoting positive parenting and parenting self-efficacy among Spanish-speaking Latine participants. The FCU-OS is a web-based app paired with telehealth coaching support developed to improve parenting strategies that support children's growth and well-being. Structural equation modeling (SEM) was utilized to examine the effects of the FCU-OS on parenting self-efficacy and positive parenting as well as to explore direct and indirect effects of the FCU-OS on parental stress and depression. Forty-nine Spanish-speaking participants who used the Spanish version of the app were drawn from two randomized controlled trials. Additionally, participants from this larger sample were invited to participate in two focus groups (N=9) to share their experience utilizing the application. Qualitative and engagement data revealed high acceptability of the FCU-OS but indicated the need for improvements in feasibility and better integration of cultural fit. SEM analysis found that engagement with the FCU-OS resulted in an increase in both parenting self-efficacy and positive parenting in comparison to the control group, however FCU-OS showed no direct or indirect impact on parental mental health. Collectively, these findings suggest the FCU-OS is relevant, usable and effective for Latine parents but would benefit from cultural adaptations to better address unique experiences and increase positive outcomes from engagement.

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DEDICATION

This dissertation is dedicated to my family. I would not be here without their incredible sacrifices, which have given me the privilege to pursue the dreams they could not. The values they instilled of perseverance, humility, and community have not only carried me this far but continue to shape my path forward and inspire me to help my community heal by listening to their voices and honoring their stories.

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CHAPTER 1

INTRODUCTION

Latine in the United States

In 2021, the Latine population in the United States was 62.5 million, with 42% of the population consisting of individuals under the age of 18 (Moslimani & Noe-Bustamante, 2023). While the Latine population continues to grow, the programs and services required to meet the basic needs of this community have not, resulting in a range of health disparities (Calzada et al., 2020; Baquero & Parra-Medina, 2020). In comparison to non-Latine families, Latine families tend to experience higher rates of discrimination, economic and occupational challenges, language barriers, limited access to healthcare, and cultural shifts, all of which result in high levels of stress and fewer opportunities to engage in effective, positive parenting practices (Cervantes et al., 2016; Lee, 2017).

Bronfenbrenner's ecological model (1979) emphasizes that child behavioral problems are a product of complex interactions between the child and multiple risk and protective factors across their ecological system. In this context, the everyday stressors experienced by Latine families contribute not only to parenting but also to the broader developmental risks faced by their children. Latine youth in the U.S. are disproportionately affected by internalizing and externalizing problems (Gomez & Gudiño, 2022), and they face higher rates of juvenile arrests, substance use, school dropout, and teen pregnancy (Gonzales et al., 2012). Although more serious behavioral problems occur during adolescence and early adulthood, internalizing and externalizing behavioral problems such as substance use, delinquency, and suicidal ideations stem from childhood difficulties (Arslan et al., 2020). Given this, parenting interventions have been identified as an effective approach to preventing problem behaviors in youth by addressing

the systems around them. Ample research has shown that enhancing parenting skills and parenting self-efficacy can have a positive impact on parental well-being as well as child behavior problems (Cost et al., 2023; Hamovitch, Acri & Bornheimer, 2020).

Parent Mental Health and Parenting

The Family Stress Model highlights the theoretical process by which economic hardships and other stressors in parents can decrease child and adolescent mental health and wellbeing (Masarik & Conger, 2017). Specifically, the model suggests that stressors such as challenges related to parenting, limited resources, or daily demands can lead to increased psychological distress in parents. Psychological distress in parents includes symptoms of depression and anxiety that can result in disrupted parenting, ultimately affecting youth mental health and wellbeing (Masarik & Conger, 2017). For instance, parenting stress has been associated with negative parenting, such as punitive and overcontrolling behaviors and lack of warmth, which have been found to increase internalizing and externalizing behaviors in youth (de Maat et al., 2021; Jones et al., 2021). Psychological distress in parents can also lead to unsupportive parenting, ruptured parent-child relations, and heightened risk for abuse and neglect in the home (Newland et al., 2013; Russel et al., 2020; Van der Put et al., 2017). White and colleagues (2015) found that economic stress experienced by Latine mothers was associated with increased adolescent externalizing behaviors through harsh parenting, while Latine fathers' economic pressures and neighborhood safety concerns led to decreased paternal warmth, leading to greater adolescent internalizing symptoms. Similarly, Mendoza et al. (2017) found that higher parental stress increased internalizing and externalizing behaviors in youth. Parental depression can also impact youth's wellbeing. For example, a study with Mexican-origin mothers found that depression increased the likelihood of authoritarian parenting, which was linked to higher

internalizing problems in youth (Calzada et al., 2019). In addition to parental stress and depression causing the use of less effective parenting strategies, it can also decrease a parent's trust in their parenting skills (Boruszak-Kiziukiewicz & Kmita, 2020).

Parenting Self-efficacy

Albert Bandura (1982) proposed the construct of self-efficacy which refers to an individual's beliefs in their ability (i.e., motivation, cognitive resources, and behaviors) to successfully perform a certain way or fulfill a role. According to Coleman and Karraker (1998), for parents to feel their parenting is effective they must have the knowledge to respond appropriately to challenges that arise, confidence to complete necessary tasks, and believe it will result in cooperation from their children. Parenting self-efficacy is a crucial factor in shaping positive development and adjustment in youth (Tazouti & Jarlégan, 2019). In a study of 89 Mexican American families, increased parental self-efficacy had a direct association with a decrease in adolescent conduct problems (Dumka et al., 2010). Similarly, Izzo and colleagues (2014) found higher parental self-efficacy increased parental warmth and in turn resulted in greater socioemotional adjustment in children of Latine families. In addition to promoting parenting self-efficacy and youth adjustment, research suggests that parents who feel more confident in their parenting abilities are less likely to experience symptoms of stress and depression (Fang, et al., 2021). Increasing parenting self-efficacy can lead to improvements in parental mental health. Parenting programs that focus on strengthening the parenting skills can help increase parents' confidence in their ability to manage and support their children effectively (Mouton et al., 2018).

Parenting Interventions

Social Learning Theory (SLT) posited by Albert Bandura (1971), states that children learn how to behave and emotionally respond to stimuli through observation and imitation. Parents are seen as the most salient models of behavior and emotion and therefore many existing interventions focus on reducing negative parenting practices and increasing positive parenting practices (Shelleby & Shaw, 2014). Patterson's (1982) coercion theory built on this work and focused on the impact of negative parenting practices on children, which reinforce problem behavior and lead to adolescent conduct problems. Specifically, the theory suggests that negative parenting practices teach children a pattern of resistance and persuasion as a way of relating to others (Granic & Patterson, 2006). Parenting interventions have historically focused on parenting behaviors (e.g., nurture, discipline, and monitoring), parent adjustment (e.g., parental self-regulation), and parent-child relationships (e.g., communication) (Sanders & Mazzucchelli, 2022). Research suggests that these components, specifically positive reinforcement and discipline techniques are key to reducing problematic child behavior (Leijten et al., 2019). The effectiveness of parenting interventions on child behaviors has been a topic of interest and various studies have found that parenting interventions can decrease behavioral and emotional challenges (Barlow & Coren 2017). Mingebach and colleagues (2018) conducted a meta-analysis that supported the effectiveness of parent-based interventions in reducing externalizing symptoms associated with disruptive behavior, conduct problems, and ADHD. More recently, a different systemic review found that parent training interventions targeting behavioral challenges were also effective in reducing internalizing symptoms in children and adolescents (Zarakoviti et al., 2021). In addition to these skill-building components and their positive effect on child outcomes, SLT- based interventions have also focused on enhancing parenting self-efficacy. For

example, The Incredible Years Parenting Program (Webster- Stratton, 2005) uses a collaborative model that helps parents identify existing skills and discover effective strategies to make the changes they desire that align with their family system and values (Gardner & Leijten, 2017). Similarly, one of the main goals of the Triple P intervention is to increase parent's confidence by providing them with the knowledge and skills to address everyday parenting challenges (Sanders, 2008). Consequently, research has found that parenting interventions also increase parenting self-efficacy (Resnik et al., 2023; Wittkowski et al., 2016).

Online Parenting Interventions

Both Incredible Years and Triple P- Positive Parenting Program, have been adapted to be delivered online (Day & Sanders 2018; Taylor et al., 2008). Providing parenting programs online increases accessibility to mental health services and has been shown to have higher rates of attendance and participation when compared to traditional parenting interventions (Flujas-Contreras, Garcias-Palacios & Gomez, 2019). Moreover, online parenting interventions have been found to be just as effective as traditional interventions in reducing both emotional and behavioral challenges in children and mental health challenges in parents (Florean et al., 2020). Research on online parenting interventions has also focused on additional supports that may facilitate parental engagement in online programs including support from a provider for ongoing consultation (Florean et al.,2020). Day and colleagues (2018) found that the inclusion of practitioner support for the Triple P online resulted in a decrease in negative parenting and challenging child behaviors as well as an increase in module completion and program satisfaction when compared to the self-directed program where participants receive no support from a provider.

Family Check-Up (FCU)

The FCU is an assessment-driven, evidence-based intervention for children between the ages of 2-17 (Dishion & Stormshak, 2007). The FCU uses a tailored approach based on unique family strengths and was originally developed as an in-person treatment program that engaged parents to address contextual stressors and parenting approaches that prevent problem behavior in children (Dishion & Stormshak, 2007). The FCU has been shown to decrease externalizing and internalizing problems and improve self-regulation in children and adolescents (Wang et al.2019; Connell et al., 2021; Fosco et al., 2013). Moreover, the FCU has also yielded positive results regarding parents' mental health and behavior. Research has found that engagement with the FCU has resulted in increased positive parengting, parenting self-efficacy and decreased parental depression (Resnik et al., 2023; Stormshak et al., 2019; Connell & Stormshak, 2023). Like other parenting programs, the FCU has also been adapted to be delivered through a web-based application called the FCU-Online (FCU-O). Online delivery was created with the goal to increase accessibility to resources and address barriers to receiving parenting and mental health support in person. Much of the existing research on parenting interventions has primarily involved White, middle-class families, resulting in limited attention to the needs of diverse families navigating unique cultural contexts (Martinez et al., 2021).

Cultural Adaptations

The cultural misalignment of interventions may inadvertently lead to assumptions about the relationship between various forms of parenting skills and negative outcomes for children that might not be true or relevant to all cultures (Maciel et al., 2023). For example, while harsh parenting has been linked to poor outcomes, Carlo et al. (2018) found that in the context of U.S Mexican families, where there is high involvement and warmth, moderately harsh parenting did

not result in negative youth outcomes. More research is needed to examine the cultural incongruency and relevancy of parenting interventions to specific communities of color to explore whether these associations hold true across cultural backgrounds (Stormshak et al., 2017).

The necessity of culturally adapting evidence-based interventions has been the subject of ongoing debate. On the one hand, most evidence-based parenting interventions are not culturally adapted and yet appear to be effective with families of diverse backgrounds (Baumann et al., 2015; Leijten et al., 2016; Smith et al., 2014). On the other hand, research suggests that culturally adapted intervention programs increase the likelihood of participation and completion of programs and improve outcomes for those who participate (Mejia et al., 2017). The latest meta-analysis suggests that parenting interventions potentially maintain their effectiveness despite cultural differences, implying that cultural adaptations may not always be necessary (Maciel et al., 2023). However, the study also emphasizes that cultural adaptations can enhance the effectiveness of evidence-based interventions when applied to families from diverse cultural backgrounds (Maciel et al., 2023). In other words, while not required, adaptations can lead to better outcomes. This has been true in studies focused on the Latine population, for example, Parra-Cardona and colleagues (2017) compared the impact of two culturally adapted Generation PMTO interventions, one where language and methods were adapted and cultural values were included as part of the larger framework (Criando con Amor: Promoviendo Armonía y Superación; CAPAS) and another that included specific topics relevant to the Latine population including immigration related stress and managing discrimination and biculturalism (CAPAS-Enhanced). Results suggested that families who received the CAPAS-Enhanced had greater improvements in child behavior, further supporting the idea that, while not required, cultural

adaptations can result in significant differences in overall efficacy of parenting training programs (Parra-Cardona et al., 2017).

Since these studies, other research has provided additional evidence on the efficacy of culturally adapted interventions. Parra-Cardona and colleagues (2021) assessed the efficacy of CAPAS-Youth, a modified version of CAPAS-Enhanced for adolescents ages 12-14. Results indicated similar outcomes, suggesting that compared to a waitlist group, families engaged in CAPAS-Youth demonstrated a decrease in youth internalizing and externalizing behavior, improvement in parenting skills such as warmth, problem solving and monitoring as well as a decrease in maternal stress due to the inclusion of immigration and biculturalism topics (Parra-Cardona et al., 2021). Another study looked at the feasibility and efficacy of Nuestras Familias: Andando Entre Culturas, a culturally adapted Parent Management Training (PMT) intervention (Martinez et al., 2021). Like CAPAS-Youth, this cultural adaptation also added components to address the immigration context while also including core components of PMT. The study found that the Nuestras Familias intervention resulted in better parenting practices and a decrease in youth problematic behavior including risk for substance use when compared to the waitlist group (Martinez et al., 2021). Collectively, these studies highlight the importance of not only culturally adapting interventions but also incorporating unique cultural experiences and also provide valuable insight and guidance on the adaptation processes.

The Ecological Validity Model (EVM) (Bernal et al., 1995) is one of the most widely cited cultural adaptation models, proposing eight dimensions to consider when adapting interventions: language, persons, metaphors, content, concepts, goals, methods, and context. The EVM, however, does not provide guidance on how or who to involve when considering cultural modifications which is why other models have been created to build upon the (EVM), addressing

some of its limitations. The Cultural Adaptation Process (CAP; Domenech-Rodriguez & Wieling, 2005) offers a systematic framework grounded in community-based participatory research, focused on engaging the community throughout the adaptation process. While this study does not align exactly with the process outlined by Domenech-Rodriguez & Wielding (2005), CAP principles inspired our approach by emphasizing the importance of integrating qualitative data that centers around the voices of Latine caregivers to help guide the interpretation of quantitative findings and inform future adaptations of the FCU-OS.

Current Study

There are many components of the FCU that are geared towards cultural responsiveness including the ecological, collaborative, individually tailored approach and the emphasis on culturally sensitive delivery by mental health professionals (Dishion & Stormshak, 2007). Most research on the FCU has not found any evidence that results differ by race or ethnicity suggesting its efficacy for racial diverse populations (Smith et al., 2014). However, Smith et al., (2014) found differences between Hispanic, African American, and European American families that warrant further examination. While aspects of the FCU allow for culture to be addressed, it has never gone through a true cultural adaptation for Latine families. Hence, I hope this study will help shed light on the effectiveness and cultural relevance of the FCU-O and guide future cultural adaptations to this evidence-based intervention.

This study aims to examine the feasibility, acceptability and cultural relevance of the Family Check-up Online when delivered in Spanish (FCU-OS) to Latine parents. The goal is to provide a better understanding of adaptions that may be required to meet the needs of Latine parents. More specifically this study will (a) explore the feasibility and acceptability of the FCU-OS and better understand missing cultural components of the online intervention; (b) investigate

the effects of the FCU-OS on the use of positive parenting skills and parenting self-efficacy (c) examine effects of the FCU-OS on parental stress, and depression; and (d) determine if parenting self-efficacy and parenting skills can predict mental health improvements in parents.

Research Hypothesis

The first aim is to explore the feasibility, acceptability, and cultural relevance of FCU-OS. I hypothesize that parents will find the FCU-OS feasible given it is user-friendly. I anticipate that participants will generally find the app acceptable, but they may experience some difficulty implementing certain skills. Additionally, I expect they may perceive the app as lacking cultural relevance, given that it has not yet been tailored to their specific cultural context. Qualitative analysis from focus groups will be used to assess feasibility and accessibility. Usage data (such as engagement with the program,) will provide additional information on the acceptability of the FCU-OS. Feedback from focus groups will also be incorporated in future intervention adaptations.

The second aim will analyze the effectiveness of the FCU-OS on increasing positive parenting skills and parenting self-efficacy. A goal of the FCU is to increase parenting self-efficacy and positive parenting skills, and prior research has found improvements in both after engagement with the FCU intervention (Resnik et al., 2023; Stormshak et al., 2019) Therefore, I hypothesize that there will be an increase in positive parenting skills and parenting self-efficacy for the intervention group when compared to the control group between baseline (T1) and the second follow-up (T3) which depending on the study was either at the 4 month or 6 month mark.

The third aim is to examine the impact of the FCU-OS on parental stress and depression. Previous studies on FCU-Online found the intervention to be associated with a decrease in parental stress and depression (Connell & Stormshak, 2023). Therefore, I hypothesize that there

will be a decrease in parental depression and parental stress at T3, because of engagement with the FCU-OS.

The fourth aim is to determine if the development of parenting skills and increased self-efficacy predicts improvement in parent mental health. Previous research has found that improvements in parental mental health are associated with engagement in the FCU, therefore I hypothesize that positive parenting skills and parenting self-efficacy will predict parental stress and depression.

CHAPTER II

METHODS

Sample

The sample for the current study, of 49 participants was drawn from two randomized controlled trials, the Middle School Success over Stress (MSSOS; NIMH-3R01MH122213-01S1) and the Parenting Young Children Study (PYC; NIDA- DA048756), both of which were provided an intervention to support positive parenting skills, parenting self-efficacy and parental mental health. Spanish-speaking participants who used the Spanish version in both studies were included in the current study. For the MSSOS study, participants had to be the primary caregiver and live at least 50% of the time with a child between the ages of 10 and 15. For the PYC study, participants had to be the primary caretaker of a child between the ages of 18 months and 5 years. See Table 1 for demographics of Spanish-speaking participants from each study.

Table 1

Sample demographics

Sample Characteristics	**MSSOS**				**PYC**			
	n	%	M	SD	n	%	M	SD
Gender								
Male	1	6			1	3		
Female	15	94			32	97		
Parent Age (years)			41.4	6.5			35.2	6.3
Child Age (years)			12.6	1.2			3.5	1.4

Multiple children	14	87.5	23	69.6
Partnered & Cohabiting	13	81.2	22	66.6

Note: N= 49

Participants in both studies went through a screening process and to be eligible they had to endorse heightened depressive symptoms on the Patient Health Questionaire-2 (PHQ-2; Kroenke & Spitzer., 2001), elevated symptoms of stress on the Perceived Stress Scale (PSS; Cohen et al., 1994) or a history of substance misuse. Additionally, all participants had to have access to e-mail and a smartphone. Participants in the intervention groups across both studies received a version of the FCU-OS, access to a bilingual coach, and were required to complete the same measures about parenting skills, parenting self-efficacy, paternal depression, and stress across 4-time points (MSSOS- baseline, 2-, 4-, 6-months; PYC- baseline, 3-,6-,12 months). Participants received $75 for each completed survey.

Procedures

Recruitment for MSSOS was done in collaboration with school districts across the Pacific Northwest. Parents received flyers about the study that provided brief information on the study and a link to a website where they could learn more. For PYC, recruitment occurred in collaboration with various community organizations serving families of young children in the Pacific Northwest including Healthy Start of Douglas and Josephine County, Early Childhood CARES, and HeadStart centers around the state of Oregon. Additionally, study team members attended community events where they would hand out flyers and provide information to participants. For both studies, if parents were interested, they were asked to call or email the study team. The study team would then conduct the screening process and if eligible review the

informed consent over the phone which would later be sent electronically for a signature. Participants would then complete the baseline survey and be randomly assigned to either the intervention or waitlist condition.

Table 2

Group Assignments per Study

	MSSOS	PYC	Current Sample
Intervention	5	17	22
Waitlist-Control	11	16	27

FCU-OS Study Protocol

Intervention Group

Once families were assigned to the intervention condition, they were granted access to the FCU-OS and a bilingual coach. The FCU-OS has 5 modules all of which include didactic content followed by supplemental videos and interactive activities derived from the *Everyday Parenting Curriculum* (Dishion et al., 2012). The middle school version of the FCU-OS included the following modules: 1) Healthy Behaviors for Stressful Times; 2) Positive Parenting; 3) Rules and Consequences; 4) Support School Success; and 5) Communication. The young children's version of the FCU-OS had modules on 1) Wellness; 2) Parenting and Substance use; 3) Positive Parenting; 4) Proactive Parenting; and 5) Rules and Consequences. Although the names of modules varied, broadly speaking the web-based app addressed topics of mental health, positive parenting, proactive parenting, and limit setting. For a detailed description of each module see Appendix A.

The bilingual coach's role was to support parents' application of parenting skills through telephone calls after each module's completion. Bilingual coaches were master- and doctoral-level clinicians who were trained to use motivational interviewing to facilitate goal setting and skill development. Coaches were trained to deliver the FCU model with fidelity using the COACH system to ensure consistent implementation and maintain intervention quality (Smith et al., 2013). Like the original Family Check-Up, the purpose of the coaches was to provide tailored skills to a family's specific needs. Furthermore, previous studies have shown that interventions paired with coaching result in higher engagement and positive outcomes (Stormshak et al., 2019).

Waitlist control condition

After the baseline survey, waitlist condition families completed scheduled assessments at the 3 remaining time points. The waitlist condition received access to the FCU-OS after the timepoint 3 (i.e., 4- or 6-month) follow-up survey was completed. Participants were enrolled in the application through a phone call with a study team member who would explain technical aspects of the app and answer any questions. Unlike the intervention group, these families did not have active consultations with bilingual coaches.

Measures

The Parenting Young Children Scale (PARYC)

To assess parenting behaviors, participants completed the PARYC, a 21-item measure created to assess positive parenting behavior, limit setting, and proactive parenting, all of which have been proven to increase positive outcomes for children and adolescents (McEachern et al., 2011). Responses for this measure were from 0 (never) to 4 (very often). Although the PARYC

has not yet been formally assessed for validity with Latine populations, the current study reports an internal consistency (α = .90) for this sample.

Parenting Task List

To measure parenting self-efficacy, items were adapted from the Parenting Task Checklist. (Sanders & Wooley, 2005) The measure consists of 9 items that assess a parent's confidence in using certain parenting skills. Items are rated using a Likert scale ranging from 1 (not confident at all) to 5 (very confident). While the validity of the parenting self-efficacy measure has not been established for use with Latine populations, the current study reports an internal consistency coefficient of (α=.91).

Perceived Stress Scale (PSS)

To assess parental stress, participants completed the Perceived Stress Scale (PSS; Cohen et al., 1994), a 14-item measure that examines the effect of various situations on perceived experiences of stress. Items are rated on a scale of "0" or "never" to "4" or "very often". Higher scores on the PSS suggest a higher level of stress in the past month. Validity studies on the PSS-14 with the Latine population has demonstrated adequate internal consistency (Ramirez & Hernandez, 2007), which can also be said about the current study (α =.70).

Patient Health Questionnare-9 (PHQ-9)

To measure parental depression, caregivers completed the PHQ-9 (Kroenke et al., 2001), a 9-item measure based on the DSM-IV criteria for the diagnosis of depression. Participants were asked to rate each item using a scale of 0 (not at all) to 3 (every day). Errazuriz et al. (2022) found that the PHQ-9 is a valid and reliable measure to assess depression among Latine identifying individuals. In the current study, baseline alpha for this study was (α =.91).

Engagement Data

Participant usage of the FCU-OS was automatically recorded by the web-based application and included information on the number of visits and time spent on the FCU-OS.

Focus Groups:

Sample:

Participants from both studies were assigned to the intervention group and those who had completed at least 3 of the 5 modules were invited to take part in the focus groups. There were two groups, one for each study, with a total sample size of n=9. The MSSOS group had 5 participants, and the PYC group had 4.

Procedures:

Participants were contacted over email and phone. Once they expressed interest, they participated in a phone call where additional information about the focus groups was provided, including the topic, duration, and modality. During this call, participants also completed consent forms and were informed that they would receive a $20 gift card for their participation. The focus groups were 90 minutes over zoom where participants were asked a total of 6 questions (see Appendix B).

Analytic Plan

The goal of the proposed study is to examine the feasibility, acceptability, and cultural relevance of an online intervention in Spanish and its effectiveness in improving parenting behaviors and mental health in Latine parents. The study will use a mixed-methods approach

including thematic content analysis, descriptives and structural equation path modeling (SEM) of the quantitative data.

Qualitative Analysis

Focus group recordings were manually transcribed by three Spanish-speaking individuals including two of the focus group co-facilitators and lead researcher. Transcripts were then reviewed by the lead investigator for accuracy. As recommended by recent research for best practices to obtain Intercoder reliability (ICR), there were two independent coders, with the second coder not participating in the creation of the coding frame (i.e., codebook) (O'Connor & Joffe, 2020). The lead investigator began by analyzing one transcript and creating a codebook that combined both deductive and inductive coding approaches. Specifically, the investigator used predefined codes related to acceptability, feasibility, and cultural relevance, while also identifying additional codes that emerged naturally from the data (Macqueen et al., 2009). The codebook was then provided to a second coder, who used the given codes to code the transcript. There were no predefined "units" or "segments," allowing the coders to select their own. Codes will be compared for agreement within a five-line radius, prioritizing consistent coding of similar segments regardless of where a quote begins or ends (O'Connor & Joffe, 2020; Campbell et al., 2013; Kurasaki, 2000). To determine intercoder reliability (ICR), using 25% of the data, agreement percentage (i.e., number of agreements divided by total codes utilized in shared segments) was calculated as well as Cohen's Kappa to address agreement that may occur by chance (O'Connor & Joffe, 2020; Miles& Huberman,1994). Both coders did not proceed to coding the remaining data until ICR was substantial (i.e., percentage >75% or κ>.61; Koch, 1977). ICR for 25% of the data was 76% agreement and (κ=0.71). Although ICR was met, both coders met to discuss discrepancies to decide whether any codes needed to be added or if current

code definitions needed change (Campbell, 2013). Ultimately, no changes were made and since ICR was substantial, coders proceeded to independently code the remaining data. ICR was calculated again using all data, resulting in 83% agreement and (κ=.82).

Quantitative Analysis

Using the laavan package in R, SEM models were specified as pre-post models using baseline T1 data and post-intervention T3 (Gana & Broc, 2019). For Aim 2, to determine if the FCU-OS increased the use of positive parenting skills and parenting self-efficacy, two separate pre-post autoregressive path models accounting for covariates including group (i.e., Intervention vs. Waitlist) and child and parent age were used. To address Aim 3, which included the direct effects of the FCU-OS on parental depression and stress, two pre-post autoregressive path models were specified. In each model, stress and depression at both timepoints were included as predictors, with each variable predicting the other over time given the comorbidity of stress and depression (LeMoult, 2020). Lastly, in Aim 4, I examined whether parenting skills and parenting self-efficacy predict improvements in parental mental health, and a mediation analysis was created with a focus on indirect effects (Hayes &Rockwood, 2017). Prior to these analyses, violations of assumption for normality were assessed. SEM Model fit was evaluated using the following criteria: a chi-square test with a *p* value greater that .05; a Comparative Fit Index (CFI) greater that .95; and a Root Mean Square Error Approximation (RMSEA) less than .08 (McDonald & Ho, 2002). Additionally, screening showed data meets the assumptions of multivariate normality.

CHAPTER III

RESULTS

Missing Data Analysis

Given the small sample size and longitudinal nature of this data set, missing data was expected. Little's MCAR was used to assess for missingness and was not significant indicating that for all variables data was missing completely at random, $\chi^2[133] = 122.58$, $p = .73$. Since the data met Little's MCAR assumptions, Full Information Maximum Likelihood (FIML) was estimated. FIML is used to accommodate for missingness by summing all data to estimate model parameters (Enders, 2001). Although the use of FIML with small samples has been questioned in the past, McNeish (2017), found that with samples of N>31, FIML showed no meaningful bias, and the direct likelihood was not flawed.

Hypothesis Testing

Aim 1: Assessing Feasibility, Acceptability and Cultural Relevance through Focus Groups

The first aim was to explore the feasibility, acceptability, and cultural relevance of the FCU-OS, it was hypothesized that participants would find the FCU-OS feasible to use but that there may be some concerns with acceptability and cultural relevance given the app had only undergone direct translation and content had not been modified. Coders identified five major themes across the two focus groups: acceptability, feasibility, cultural relevance, missing content and coaching all of which were divided into sub-themes (see Table 2; for definitions refer to Appendix C).

Table 3

Themes and subthemes from participants' focus group responses.

Major Themes	Subthemes
Acceptability	Relevance Motivating Normalizing Lack of Acceptability
Feasibility	Language Usability Lack of Usability
Cultural Relevance	Cultural Misalignment
Missing Content/Resources	Experiences Additional resources
Coaching	Content Support Interpersonal Support

Acceptability. Participants highlighted 5 factors in relation to the FCU-OS app's overall acceptability, particularly emphasizing how content relevance and language shaped their experience, with content being normalizing and motivating or lacking relevance.

Relevance. When reflecting on the relevance of the FCU-OS content, participants reported the information presented was relevant and applicable to their experiences of parenting:

> *[Los módulos] fueron muy útiles, fueron cortos, el contenido muy bueno y de una manera muy simple para nosotros poder aplicarlo.* ([The modules] were very useful, they were short, the content was very good, and they were very simple for us to apply.)

There was a commonly shared appreciation for the bear videos included in the app, where parenting scenarios aligned with their experiences but also helped them understand what changes they might need to make:

> *Era bueno porque de repente yo hacia las cosas como los ositos, que yo me enojaba en el momento entonces cuando ya empecé a ver los videos ya veía que teníamos que hablar tranquilos que teníamos que este guardar la calma entonces eso ayudo mucho.* (It was good because suddenly I would do things like the little bears, I would get angry

at the moment, so when I started watching the videos I saw that we had to talk calmly, that we had to stay calm, so that helped a lot.)

Additionally, participants in the MSSOS focus group also shared the helpfulness of the interactive activities which served to review and apply content learned in each module:

> *Entonces me gustaron las actividades también en que tenían ahí porque eran como un repaso también me gustaba precisamente porque eran cortas y muchas veces las repetí, una, dos hasta tres veces.* (So, I liked the activities they had there too because they were like a review. I also liked them precisely because they were short and I often repeated them, once, twice, even three times.)

In addition to participants' reports of the app's relevance and acceptability, they also described continuing to practice the skills they learned, finding new ways to apply them in different situations (e.g., using coping skills to support their child during tantrums rather than solely to regulate their own emotions).

Motivation. In describing their experience with the FCU-OS content, participants described the FCU-OS content as motivating and inspiring, contributing to their satisfaction and continued engagement. For example, one participant explained:

> *Pero gracias a eso yo reconozco que, si me ayudo a como que a echarme así un viaje hacia adentro y parar, reflexionar y aplicar.* (But thanks to that, I recognize that it did help me take a sort of inward journey and stop, reflect, and apply.)

Similarly, another participant shared:

> *¡Cuando [la aplicación] me dice que hice un buen trabajo, eso me reconfortaba diciendo "oh hice un buen trabajo!" me hacía sentir bien.* (When [the app] tells me I did a good job, it comforted me, like "oh I did a good job!" it made me feel good.)

In some cases, the app motivated participants to self-reflect on their parenting, while in others, the small reinforcements provided after completing an activity or module fostered a sense of accomplishment.

Normalizing. Another factor enhancing the content's acceptability was the ability to normalize parenting experiences that some participants had previously perceived as unique to their families. Reflecting on a video, one participant shared:

> *Se me hizo muy real este la actitud en que reaccionan los hijos adolescentes entonces eso me hizo como que "oh okay entonces no es la mía la única este está dentro de lo esté pues no normal, pero es parte de la edad." (*It was very realistic to me to see how the adolescents responded and so it made me think "oh okay it's not just my daughter it is normal for her age.")

Along the same lines another shared her insight:

> *Piensas como solo a uno le pasan estas cosas con los hijos y no ósea todo mundo batallamos con lo mismo.* (You think this only happens to me with my children but no everyone struggles with the same thing.)

Overall, it seemed that having their experiences normalized helped increase acceptance of the skills being presented to address these very common parenting challenges.

Lack of Acceptability. While acceptability was present, there were certain aspects of the app that participants found unrealistic, unrelatable, or difficult to apply. This participant specifically alluded to the lack of acknowledgment regarding the unrealistic nature of the responses in the video, as reflected in this quote:

> *Los jóvenes a esa edad a veces no quieran escuchar es muy bonito los episodios, pero cuando ves a la realidad, no te van a escuchar tan rápido.* (Young people at that age sometimes don't want to listen. The episodes are very nice, but when you see reality, they won't listen to you so quickly.)

Another participant shared the difficulty of behavior change that usually results in parents just giving in:

> *Tenemos que seguir constante, diario, si vimos que lo dejo ok volverle a recordar volverle a recordar. Pero a veces nosotros como padres preferimos lavar el plato. Que me cuesta lavar lo, lo acomodo y me evito ir a decirle entonces.* (We have to keep at it, every day, if we saw that he left it, okay, remind him again, remind him again. But sometimes we as parents prefer to wash the dish, put it away and avoid going to tell him then.)

The participant and others who agreed go on to discuss that maybe providing skills for parents on how to fight that urge to give in or how to troubleshoot when as parents they are applying the skill, but it simply does not work.

Feasibility. When looking at the feasibility of the app, the goal was to understand how easy and efficient it is for participants to interact with the app including the app's design and

whether it was practical for users to engage with and complete modules without confusion or frustration. Language was also a factor in the app's overall usability.

Language. Language plays a key role in usability, as it contributes to content being clear and easy to understand. Most participants had comments on the clarity of the language and ease to understand (e.g., "In regard to language, it was all very clear"). One participant shared this sentiment and explained what helped when language was not as clear:

> *En mi experiencia con la aplicación de respecto al lenguaje, fue entendible, no tuve como problema de alguna palabra. Si me confundía o si no entendía bien, me regresaba y volvía a leer. Porque ahí también nos daban como un poquito de explicación de lo que era cada uno de los subtemas.* (In my experience with the language, it was understandable; I didn't have any problems with any words. If I got confused or didn't understand well, I would go back and reread. Because they also gave us a little explanation of what each of the subtopics was.)

Participants in both groups highlighted their appreciation for the definitions and introductory sections at the start of each module, noting that these elements enhanced the app's usability by providing the necessary information to understand the rest of the module. There were also other features that participants shared to help them navigate the app with ease.

Usability. Participants in the MSSOS group found that the organization of the content and features was helpful in engaging and completing the modules. One participant shared how the apps design and structure (i.e., having videos first) enhanced engagement in activities:

> *Para mí fue muy, muy fácil usar la aplicación porque pues no más veías el video y a la hora de contestar en las preguntas pues ya tu ibas eligiendo.* (For me it was very, very

easy to use the application because you just watched the video and when it came to answering the questions, you just chose based on that.)

Another talked about the ease of keeping track of her progress:

> *Me gustaba mucho porque te iba mostrando conforme ibas avanzando y pues si lo dejabas a medias y de ahí volvías a regresar ya sabias adonde te habías quedado o incluso podías volver a regresar para volver a verlo*.(I really liked it because it showed you as you progressed, and if you left it halfway and came back from there, you knew where you had left off or you could even go back to see it again.)

Lack of Usability. On the other hand, there were features of the app that made it difficult for participants to engage including the length and design of activities and modules:

> *Pero creo que si a ver quién sabe si lo hicieran un poquito más cortos los episodios(modules), o las pruebas que daban al final... híjole eran demasiado como cuando va a acabar.* (But yeah, who knows if you made the modules a bit shorter or the tests at the end...Because wow it was a lot, like when does it end.)

Others shared the difficulty of using the app on their phones, for example this participant described seeing the amount of content on one page was overwhelming and would lead her to not engage:

> *Yo veía eso sentía como que era demasiado en una sola [pantalla], bueno porque lo hacia siempre en el teléfono también no utilice la computadora entonces se me hacía como demasiado y al momento que lo veía decía yo ay mejor al rato.* (I saw that, and I felt like it was too much on one [screen], well because I always did it on my phone and

I didn't use the computer, so it seemed like too much to me and the moment I saw it I said, "Oh, maybe later".)

While the MSSOS group voiced appreciation for the interactive activities. All the participants in the PYC focus group shared features of the app that did not allow them to continue with a module, impacting engagement. Some participants referred to the assessments at the start of the module (e.g., "I did not know what to answer because none applied and I couldn't move on until I did) while others discussed the interactive activities as a barrier (e.g., "There were too many options to choose from or I did not know what was being asked, it made me confused")

Cultural Relevance. Another goal of the focus groups was to assess whether the content aligned with participants' cultural values or if any culturally relevant aspects were missing. It is important to note that participants were not asked directly about culture but instead were asked the following two questions to avoid fishing: Was the content presented something you could see yourself applying to your parenting why or why not? Are there everyday parenting challenges you face that were not addressed in the modules? If so, what are they?

Cultural Misalignment. Most participants shared there was a sense of cultural misalignment between what the app suggested and what they believed or had been taught. One participant said:

Para ser honesto, al principio se me hizo un poquito, así como que ay esto no, un poco bobo, como que no va conmigo, como que yo era un poquito más así rígida más estricta en mi forma de ser madre y tiene que ver mucho con la cultura como uno fue criado también desde pequeño y muchas de las veces pues traemos eso verdad a nuestra propia vida ya como padres. (To be honest, at first it felt a little like, oh no, a

little silly, like it wasn't my thing, like I was a little more rigid, stricter in my way of being a mother and it has a lot to do with the culture in which one was raised from a young age and many times we bring that into our own lives as parents.)

Another participant shared a similar sentiment in feeling like the content was representative of a culture that was not hers:

> *No, esto es como lo haría un gringo. Decía yo. Así lo haría un gringo. Entonces dije no. Esa no soy yo.* (No, this is how a gringo (i.e., a white person) would do it. I said. This is how a gringo would do it. So, I said no. That's not me.)

Missing Content/Resources. In addition to feeling a some cultural disconnect, participants noted missing elements that could have made the app better and increased overall acceptability.

Experiences. When discussing the app, participants across both groups described lived experiences that were not addressed and important to their everyday parenting. The PYC group shared their experiences as first-time moms:

> *Eso también es muy difícil para nosotras y más como primerizas. De realmente tomar ese rol de decir, soy mamá, pero ¿qué estoy haciendo bien o qué estoy haciendo mal? ¿Qué me falta?* (That's also very difficult for us, especially as first-time moms. To really take on that role and say, " I am a mom, but what am I doing right or wrong?" What am I missing?)

Other topics that emerged included being single parents or parenting without family support. While participants noted a lack of content on these topics, they shared that having a coach helped

mitigate this gap. Through coaching, they were able to share their unique experiences and receive tailored guidance.

Additional Resources. As a response to the missing experiences, participants shared input on what they would find helpful. On the topics mentioned previously but also in general. For example, one said "*Es como quizás incluir a las cosas que nos pasan a las mujeres cuando damos a luz."* (Like maybe include the things that happen to us as women when we give birth.)

Another participant expanded on this and described:

> *Un módulo de la etapa inicial o de embarazo antes de la crianza en donde hubiera un acompañamiento con las madres... que te ayuden a manejar ciertas emociones que se pueden dar como alertas en el post parto para no tener una depresión post parta.* (A module for the initial stage or pregnancy before parenting, where there is support for mothers... to help you manage certain emotions that can arise as warning signs in the postpartum period, so you don't suffer from postpartum depression).

Both groups expressed a desire for more information on children's developmental stages, including typical behaviors at each age. Two participants sought this information elsewhere (i.e., online), highlighting a gap in the app's content. They emphasized that having this information within the app would help normalize their experiences and reduce feelings of isolation, as well as better equip them to address their concerns.

Coaching. As mentioned earlier, coaching is a significant part of the FCU-OS, making it important to understand participants' experiences and perceptions of its effectiveness. When reflecting on their experiences with coaching, participants highlighted its usefulness in better understanding the content and in providing a sense of support.

Content Support. In describing their experiences with coaching participants reported that having a coach helped them better understand, tailor and apply the content to fit the needs of the family:

> *Sí fue de mucha ayuda este para explicarnos algo que no entendíamos del módulo, yo traía una idea en mi cabeza y no sabía cómo decirla y ella nos ayudaba con otras palabras, a saber, expresarnos. (*Yes, she was very helpful in explaining something we didn't understand about the module. I had an idea in my head and didn't know how to express it, and she helped us express ourselves with other words.)

Another shared how having coaching sessions helped with accountability and increased app engagement:

> *Fue muy útil y aparte era como un compromiso que te hacías que decías "este es un compromiso y la próxima vez que nos veamos tienes que..." y lo hacía pues porque ya tenía que platicarle el resultado de lo que había hecho.* (It was very helpful and aside from that it was a commitment that you made, and you'd say, "This is a commitment and the next time we see each other I have to..." and I would do it because I had to talk about the results of what I had done.)

Interpersonal Support. In addition to receiving content support during the coaching sessions and participants also got interpersonal support, with coaches offering emotional encouragement and fostering a sense of connection. Here are some of the ways the participants described their experiences with their coaches:

> *Entonces para mi [Consultante] fue como... fue mi terapista, fue mi coach, fue mi amiga, fue como mi hermana, así sentí esa colaboración con ella.* (So, for me

[Consultant] was like, like my therapist, my coach, my friend and like my sister, that's how I felt the collaboration with her.)

Another said:

Me hacía sentir, que mi trabajo era muy bueno como mama. Lo que hacía me lome felicitaba. Y me lo aplaudía... Y eso como mama pues se lo agradezco porque no hay nadie que me diga "estas haciéndolo bien" ... que ella me lo digiera, ya pues, tranquilizaba mi alma, mi corazón, mi mente.(She made me feel like I was doing a good job as a mom. She celebrated what I did, she applauded it... and as a mom I appreciate because there isn't anyone who tells me "You are doing good" ... so for her to say that well it calmed my soul, my heart and my mind.)

In a similar vein, another participant described it as such:

Pudimos platicar también un poquito de nuestra vida, de nuestras frustraciones que traemos y que no podemos sacar con cualquier persona. Ella nos dio esa confianza de aunque no la conocíamos tanto… lloramos, reímos, aprendimos. (We also got to talk a bit about our lives, about our frustrations that we can't just tell anyone. Even though we did not know her well she gave us confidence... we cried, laughed and learned.

While participants identified areas for improvement and moments of disconnect, all expressed appreciation for the app and the coaching they received. They shared examples of how the app provided valuable skills and prompted reflection on their parenting approaches and goals moving forward. These sentiments align with the app's engagement data.

Engagement Data:

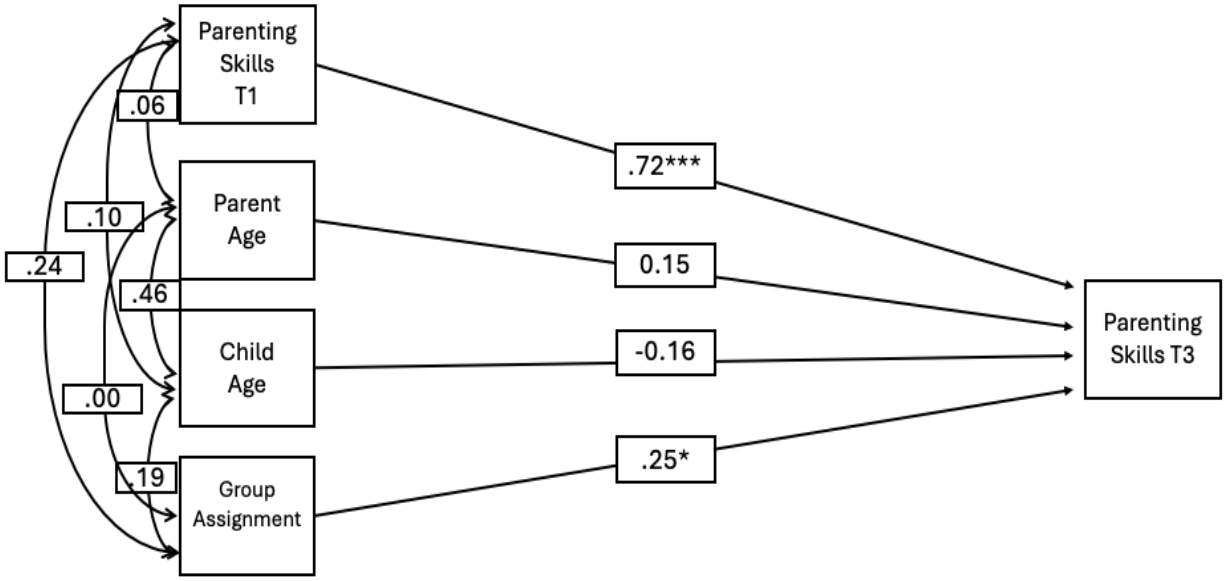
For context, the FCU-OS has 5 modules each of which can be completed in 15-20 minutes. Participants in this study spent an average of 130 minutes engaging with the app (*SD*=81, range= 8-363 minutes) and had an average of 12 visits (*SD*=6.6, range 4-26 visits).

Aim 2: Effectiveness of FCU-OS on Parenting skills and Self-efficacy

The second aim of the study was to analyze the effectiveness of the FCU-OS on increasing positive parenting skills and parenting self-efficacy in a sample of 49 participants, it was hypothesized that there would be an increase in positive parenting skills and parenting self-efficacy between baseline and timepoint 3 for the intervention group when compared to the control group. An autoregressive model with covariates using structural equation modeling was used to examine pre-post changes for positive parenting skills controlling for baseline positive parenting skills, child age and parent age (see Figure 1). The model was just-identified (i.e., n degrees of freedom) and therefore demonstrated perfect fit as evident by the Chi- square of 0.00, CFI of 1.00 and RMSEA of 0.00. Positive parenting skills at baseline were a significant predictor of positive parenting skills at T3, β= 0.580, *SE*= 0.073 p <0.001, suggesting that higher initial parenting skills resulted in improved positive parenting skills over time. Engagement with the FCU-OS (i.e., group assignment) was also found as a significant predictor of positive parenting skills at T3, β= 6.062, *SE*= 2.545, p <0.05, indicating that participants in the intervention group showed greater improvement in positive parenting skills compared to the control group. Both child and parent age were not significant predictors of positive parenting skills at T3. Overall, 67% of variance was explained by the efficacy model and 5% was explained by the intervention.

Figure 1

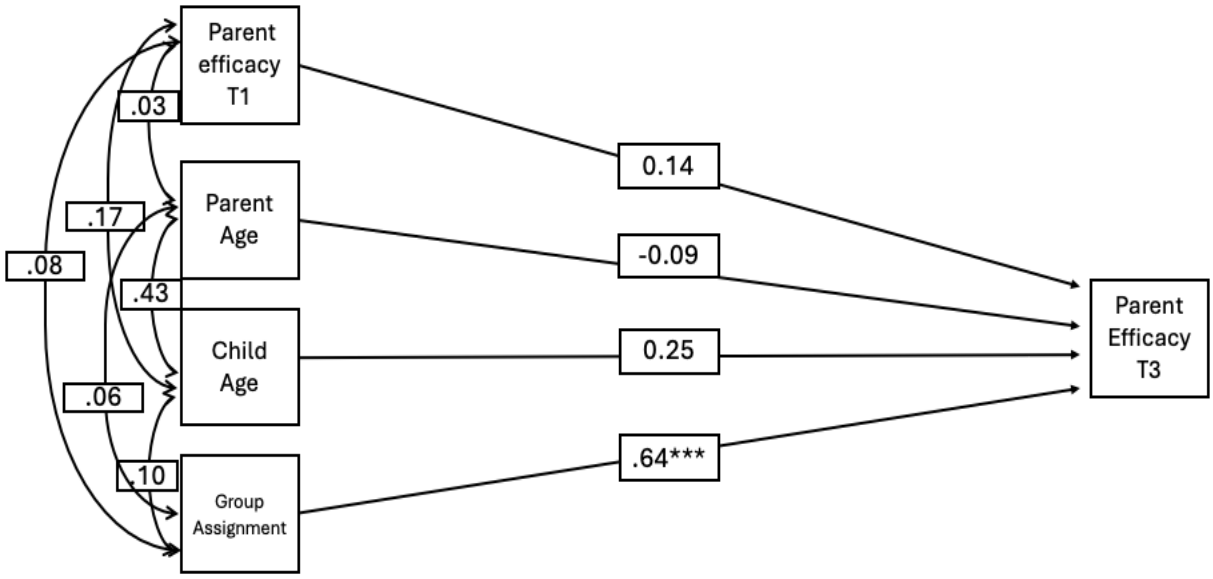
Parenting Skills Model 1A



A second autoregressive model with covariates was used to examine pre-post changes in parenting self-efficacy while controlling for baseline parenting self-efficacy, child age and parent age (see Figure 2). This model was also just-identified (i.e., n degrees of freedom) and therefore demonstrated perfect fit as evident by the Chi- square of 0.00, CFI of 1.00 and RMSEA of 0.00. Group assignment was a significant predictor of parenting self-efficacy at T3, β= 9.814, *SE*= 2.30, p <0.001, suggesting that after engaging with the FCU-OS the intervention group had a greater increase in parenting self-efficacy compared to the control group. Overall, 47% of variance was explained by the efficacy model and 37% was explained by the intervention. Both models and results support the hypothesis that engagement with the FCU-OS would result in an increase in positive parenting skills and parenting self-efficacy when compared to the control group.

Figure 2

Model 1B

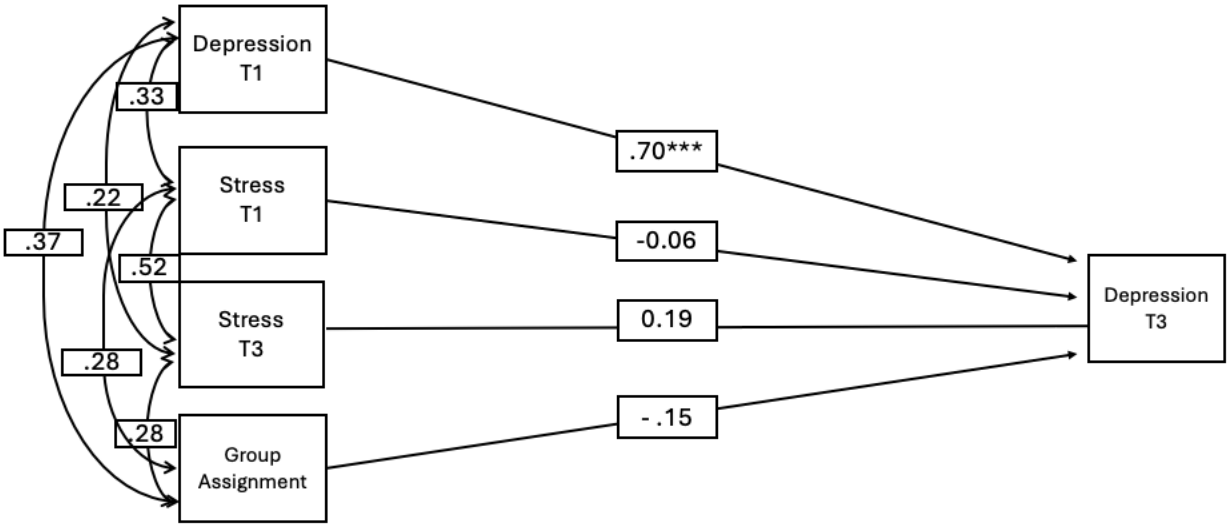


Aim 3: Direct effects of FCU-OS on Parental Mental Health

The third aim of the study was to examine the impact of the FCU-OS on parental stress and depression. It was hypothesized that there would be a decrease in parental depression and parental stress at T3, because of engagement with the FCU-OS. A pre-post SEM model was used to assess changes in depression while controlling for baseline depression, baseline stress, and stress at T3 (see Figure 3). As a just-identified model (n degrees of freedom), the fit was necessarily perfect, with $\chi^2 = 0.00$, CFI = 1.00, and RMSEA = 0.00. Baseline depression was the only significant predictor of depression at T3, β= 0.592, *SE*= 0.111, $p < 0.05$. Stress at both timepoints were insignificant predictors. Group assignment was also found to be an insignificant predictor of depression at T3, β= -1.615, $p = .301$, indicating that the FCU-OS did not have a direct impact on the reduction of depressive symptoms reported by parents.

Figure 3

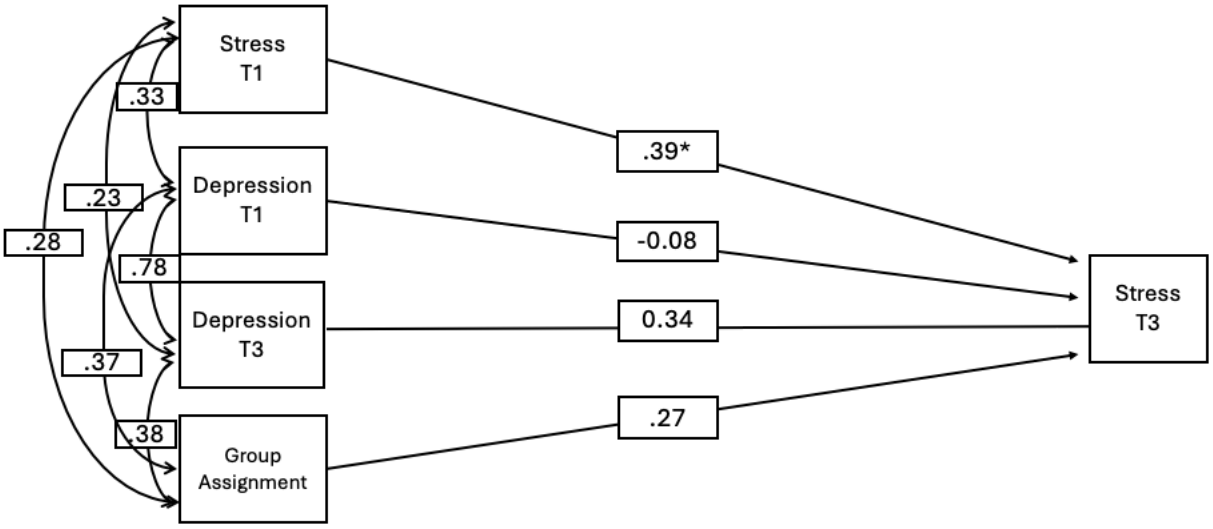
Depression Model 2A



Similarly, the pre-post SEM model for the direct influence of FCU-OS on stress, was a just-identified model indicating great fit, Chi-square= 0, CFI =1, RMSEA =0. The only significant predictor of stress at T3 was baseline stress β= 0.592, *SE*= 0.259, p <0.001(See Figure 4). Depression at both time points were not significant predictors of stress at T3. Group assignment was also not a significant predictor β= 4.335, p = .12, indicating that the intervention group's stress levels did not decrease as a direct result of the FCU-OS. Overall, the hypothesis that the FCU-OS would decrease stress and depression in this sample was not supported.

Figure 4

Stress Model 2B

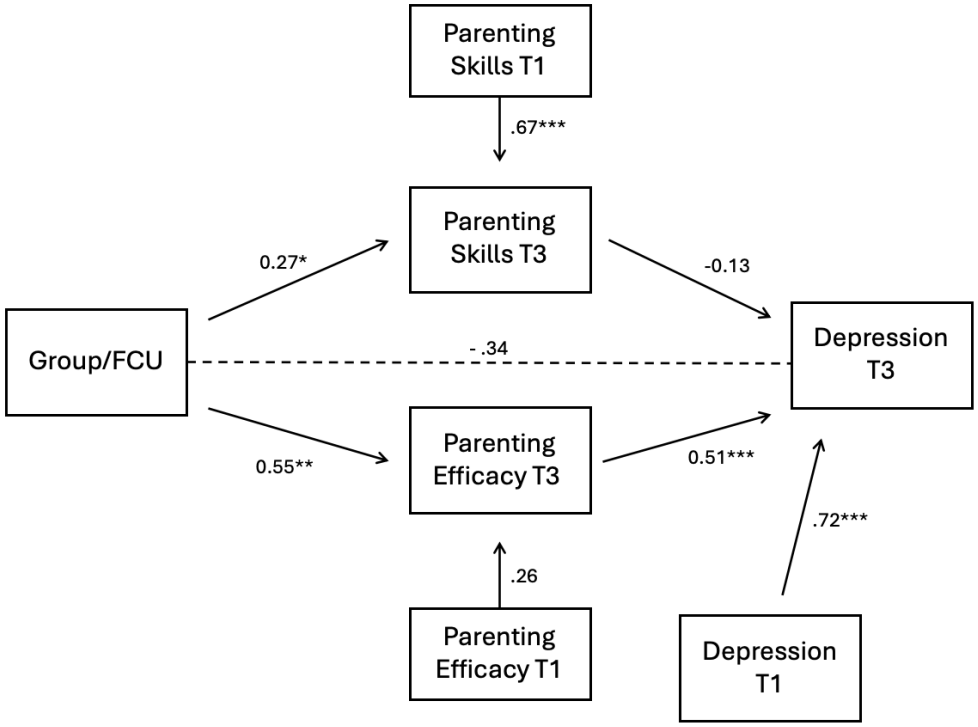


Aim 4: Indirect effects of FCU-OS on Parental Mental Health

The last aim was to assess the indirect effect of the FCU-OS on parental depression and stress through the mediators of parenting skills and increased self-efficacy. The indirect effect of FCU-OS through parenting self-efficacy on depression was β= 2.939, $p<.05$, indicating that there was in fact an increase in depression as a result of increased parenting self-efficacy. However, inspection of the change in variance between depression at T1 and T3 was nonsignificant, therefore, the significance of the indirect effect is not meaningful. The indirect effect of the FCU-OS on depression through positive parenting skills was not significant β= -0.353, $p= .391$.

Figure 5

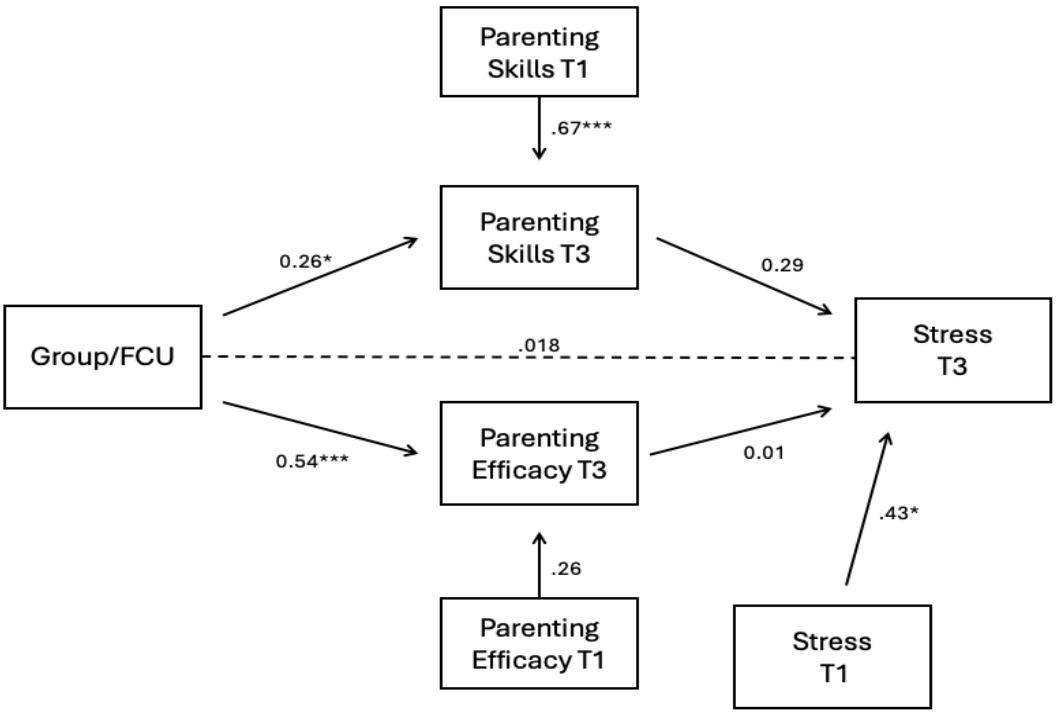
Depression Mediation Model 3A



In the stress mediation model, the indirect effect of proactive parenting skills was β= 1.261, *p*= .251 and the indirect effect of parenting self-efficacy was β= -0.054, *p*= .976 both indicating that the indirect effects were not statistically significant. Overall, both mediation models do not support the hypothesis that positive parenting skills and parenting self-efficacy mediate the impact of the FCU-OS on parental depression and stress. Although mediation models were hypothesized and tested the sample size is underpowered to test indirect effects.

Figure 6

Model 3B



CHAPTER IV

DISCUSSION

Latine families face heightened stress due to a range of contextual stressors and unique life experiences, which can impact parenting practices and youth adjustment. Latine identifying youth tend to experience higher rates of behavioral and mental health challenges, with issues such as substance use, delinquency, and suicidal ideation often rooted in childhood difficulties (Gomez & Gudiño, 2022). Parenting interventions have been shown to improve both parental well-being and child behavior, but much of this research has focused on White, middle-class families, limiting its relevance for diverse populations. Therefore, it is important to examine the cultural fit of these interventions and address the specific needs and barriers of the Latine community, to avoid inaccurate assumptions about parenting practices and child outcomes across different cultural contexts. The current study aimed to examine the appropriateness and effectiveness of the FCU-OS, with Latine identifying, Spanish-speaking caregivers. Utilizing a combination of qualitative methods and quantitative methods the study addressed four aims: (a) to assess the acceptability, feasibility, and cultural relevance of the FCU-OS (b) analyze the effectiveness in increasing parenting self-efficacy and positive parenting skills among participants (c) examine the impact of the FCU-OS on parental stress and depression and (d) assess whether the development of parenting skills and increased self-efficacy predict improvements in parent mental health

To address the first aim, focus groups were conducted to gather feedback on the FCU-OS'S relevance, ease of using based on the design and features, and how well it aligned with participants' cultural beliefs about parenting. The findings suggest that certain aspects of the online intervention were viewed as helpful and applicable to participants' everyday parenting,

fostering feelings of motivation and validation. Conversely, there were also examples where acceptability was limited, particularly regarding content that felt unrealistic and the intervention's inability to acknowledge the challenges of making changes or provide strategies for troubleshooting when the skills are not resulting in the expected outcome. Interestingly, many of the concerns related to lack of acceptability appeared to be alleviated by the coaching component of the intervention. Receiving personalized support increased participant engagement and made the content feel more relevant, supportive, and attuned to their needs. Coaching also helped address individual concerns and provided encouragement, which also increased satisfaction with the intervention.

Similar findings emerged regarding feasibility, as participants expressed ease in navigating the application and appreciated features like progress tracking and the introduction at the start of each module, which provided definitions of the theme and associated terms. Additionally, across both groups, participants were comfortable with the language, finding it clear and understandable, contributing to the overall feasibility of the FCU-OS. On the other hand, participants reported the web-based design at times made it difficult to navigate the app on their phones, especially when there was a large amount of text on the page. Some participants highlighted that the length of the modules and activities was a barrier, recommending shorter, more frequent modules to allow for quicker completion and alleviate time constraints. Overall, while the language and features were appreciated, there were clear barriers that impacted the overall feasibility of the FCU-OS.

With regards to cultural relevance, although the FCU-OS was highly acceptable to this group of participants, there were also areas where they found misalignment between the FCU-OS content and their own cultural upbringing. Most participants stated it was a matter of getting used

to thinking differently and being able to tailor content in a way that worked for them but still voiced a desire for content to reflect that or support around cultural dissonance. These findings align with previous research suggesting that including unique cultural experiences can increase overall satisfaction and effectiveness of culturally adapted interventions (Martinez et al., 2021; Parra-Cardona, 2021). They suggest that cultural nuances should be better understood and implemented throughout existing modules and that the FCU-OS would benefit from additional modules that address experiences specific to Latine families such as cultural differences between parents and children. In addition to cultural misalignment, participants also reported gaps in the intervention that they felt were integral to their parenting. They suggested that including such experiences and identities would have strengthened the app. Some participants also expressed the need for supplementary resources, such as psychoeducation on developmental stages in childhood or just expanding the existing modules to offer further support in the implementation of parenting skills. Engagement data was high also very high and comparable to previous studies consisting of a predominantly non-Hispanic White sample (Hails et al., 2025). Collectively, qualitative and engagement data suggest high acceptability, with focus group feedback suggesting some aspects of feasibility need improvement and cultural fit needing to be better incorporated.

The second aim of the study examined the impact of the FCU-OS on increasing positive parenting skills and parenting self-efficacy in Latine, Spanish-speaking participants. Findings revealed that those who participated in the FCU-OS showed greater improvements in both positive parenting skills and parenting self-efficacy compared to the control group. These findings align with previous research demonstrating the effectiveness of the FCU-OS in enhancing parenting self-efficacy and building positive parenting skills, achieving similar

outcomes as the original FCU and FCU-Online in English (Resnik et al., 2023; Stormshak et al., 2019). The ability of the FCU-OS to achieve similar outcomes is particularly significant, as this marks the first time the content has been formally offered in Spanish and disseminated to Spanish-speaking participants. The FCU-OS specifically addresses key barriers to treatment, including language barriers, access to healthcare and other financial constraints, which are commonly experienced by Latine parents in the U.S. (Cervantes et al., 2016; Lee, 2017). Both parenting self-efficacy and the use of proactive parenting skills have been linked to positive child outcomes. These results suggest that the FCU-OS may contribute to increased parenting self-efficacy and, as prior research indicates, greater willingness to engage in supportive parenting practices that promote child well-being for Latine families.

The third aim of the study explored the effect of the FCU-OS on parental stress and depression. The findings suggest that the FCU-OS did not have a direct impact on reducing participants' depressive symptoms or stress levels. While previous research has demonstrated reductions in these symptoms (Connell & Stormshak, 2023), the primary focus of the FCU-OS is on strengthening parenting skills. Although the program includes modules addressing stress and well-being, its core emphasis remains on parenting. Therefore, it is reasonable that no direct effect on mental health outcomes was observed.

The fourth aim was created to explore the indirect effect of the FCU-OS on stress and depression through parenting self-efficacy and parenting skills. However, due to the small sample size there was not enough power to test indirect effects resulting in insignificant results.

Implications

The findings of this study highlight key considerations for future studies and interventions with Latine parents. First, this study contributes to existing research supporting the effectiveness of online interventions in improving both parenting self-efficacy and the use of positive parenting skills (Stormshak et al., 2019). Qualitative findings also align with previous research on the benefits of coaching in tailoring and clarifying content in a meaningful way that contributes to the parent's engagement and growth (Day & Sanders, 2018; Florean et al., 2020). This study also contributes to previous research emphasizing that the FCU can be effective for individuals from diverse racial and ethnic backgrounds (Smith et al., 2014).

This study also provided direct feedback from the community on the strengths and growth areas for the FCU-OS. While effective in increasing parenting self-efficacy and positive parenting practices, focus group feedback suggested the addition of cultural experiences would certainly strengthen the app. The feedback supports the need to culturally adapt interventions and aligns with previous research on the significance of including distinct cultural experiences in these adaptations. Specifically, it supports the notion that while not necessary, cultural adaptations can influence the overall effectiveness of parenting interventions (Parra-Cardona et al., 2017).

Limitations and Recommendations for Future Research

While this study provided valuable insights, there were limitations that are important to discuss. One limitation of this study was the sample itself. First, the sample of this study was relatively small which limited the possibility of assessing mediation models. Having small samples can also impact the generalizability of the findings and the accuracy of measured effects. Recognizing the potential limitations of the small sample size, a qualitative component was incorporated to provide deeper context and enhance the interpretation of the quantitative

findings. However, future studies should seek to have larger and more diverse sample of Latine identifying, Spanish-speaking participants to further assess the topics of acceptability and cultural relevance. Another limitation of the sample specifically was that it combined participants across two separate studies who used two versions of the FCU-OS. Although the statistical analysis only looked at shared topics across both and accounted age differences, it will be important that future research assess the effectiveness, acceptability and relevance of each version separately.

The second limitation of this study was that no measures were included to assess specific cultural experiences, such as acculturation, which has been shown to influence parenting and parent-child relationships (Conger & Conger, 2007; Miller & Csizmadia, 2021). For example, family conflict tends to result from acculturation gaps, typically, parents hold values and traditions from their country of origin while their children quickly adopt U.S. customs and norms. The two main issues that arise are parents wanting their children to maintain and practice native cultural values and dissonance between values adopted by youth and values held by their family members (Lee &Liu, 2001; Coatsworth et al., 2005). Martinez (2006) found that acculturation gaps between Latine parent-child dyads resulted in ineffective parenting practices, changes in parent-child relationships, and negative youth outcomes. Additionally, the stress of balancing two sets of cultural values and standards can lead parents to feel incapable of dealing with everyday parenting responsibilities (Boruszak-Kiziukiewicz & Kmita, 2020). These studies highlight the impact of acculturation and highlight the need for future research to measure and consider its influence when assessing effectiveness of interventions with Latine parents.

Although in this study the mediation model for depression should be interpreted with caution, the possibility that increased parenting self-efficacy may in fact increase depression

levels should not be discarded since it may reflect a more complex dynamic. For instance, it may be that parents who become more confident may also become more aware of challenges in their environment, contributing to elevated depressive symptoms. For Latine parents, this could involve experiences of cultural dissonance, where increased engagement in a parenting intervention rooted in Western values might create tension as parents attempt to integrate new strategies and begin to feel that their own culturally informed practices are being questioned, leading to emotional discomfort or self-doubt. Future research should further explore this hypothetical relationship through longitudinal studies to examine if this relationship is true and if depression stabilizes over time and as a result of what intervention or ecological factors.

While this study included a qualitative approach to center the voice of Latine parents and is currently being used to pave the path for cultural adaptations. Future research should strive towards a community-based research approach like the one outlined by Domenech-Rodriguez & Wielding (2005) which emphasizes collaboration with the community from the start of the process, ensuring that services are being shaped by the community it is intended for. Moreover, researchers should be open not only to engaging communities in the development and adaptation of interventions but also be willing to center these interventions in the cultural values that already exist, exploring only where appropriate, how Western-based principles might build on the values of the communities being served.

Lastly, during the focus groups, one key piece of feedback emerged as particularly significant. Participants reported an appreciation for having a space to discuss their experiences in groups with others facing similar challenges. While this was not the intended purpose of the focus groups, participants reported wishing it had been part of the intervention. Considering the Latine community's cultural emphasis on interconnectedness and mutual support this could be

considered as a potential cultural adaptation for future implementations of the FCU-OS that would Help reduce isolation and foster community care and support.

Conclusion

This study assessed the feasibility, acceptability and cultural relevance of the FCU-OS for Latine identifying, Spanish-speaking parents through direct feedback, engagement data and key outcomes of parenting self-efficacy and positive parenting. The results indicate high acceptability of the FCU-OS, and moderate feasibility with some adjustments needed to further enhance feasibility. The findings also suggest the FCU-OS is effective in increasing supportive parenting and improving parenting self-efficacy. Critically, the study also amplifies the voices of Latine parents, who identified strengths of the FCU- OS while also stressing the value of integrating cultural experiences. Their feedback underscores the importance of culturally adapting interventions not as a requirement, but as a meaningful approach that can improve engagement and impact. Lastly, this study provided valuable insights that advance our understanding of how to approach cultural adaptations of the FCU-OS in the future.

APPENDIX A: DESCRIPTION OF FCU-OS MODULES

Parenting Young Children	Middle School	Notes:
Wellness: Focus on self-care to cope with stress and depression. Normalized stress associated with parenting young children**.**	**Healthy Behaviors for Stressful Times:** Focus on emotional well-being and coping with stress. It emphasized the behavioral, emotional, cognitive and relational changes that occur during times of stress for adolescents and ways for parents to help their child cope.	Both modules included ways to improve family relationships and addressed topics on eating, sleeping, physical activity and screen time as important factors to improve well-being in parents and children.
Positive Parenting: Emphasis on noticing and acknowledging positive behavior through praise, encouragement and incentives (rewards). Also includes information on building strong parent-child relationships through collaboration and effective ways of giving directions.	**Positive Parenting:** **	Both versions had the same skills but were geared or adapted to be age appropriate.
Rules and Consequences: Focus on establishing rules that are clear, simple, reasonable and consistent. Also includes education on logical consequences and ignoring unwanted behavior	**Rules and Consequences** **	Both versions had the same skills but were geared or adapted to be age appropriate.
Proactive Parenting: Focus on planning to manage problem behavior before it occurs. Encourages identifying behavior, communicating with the child	**Communication:** Provides suggestions for improving communication including restating comments, asking questions and non-verbal signs of listening.	Although the focus of each module is slightly different the idea is to have parents communicate with their child to decrease problem behavior

before to increase collaboration on, adjusting when that approach does not work and praising when it does.	There is also a focus on Family problems with an emphasis on collaboration, compromise and being flexible to adapt when something is not working.	and hence family conflict. There is also a common theme of adapting and being flexible.
Parenting and Substance Use: Provided suggestions on how to be safe when using substances as a parent of young children.	**School:** Emphasis on the importance of having routines for school success. Guidance on how to establish a plan with the child to help with schoolwork and avoid common barriers.	These modules were unique to the specific study. The middle school version emphasized success in school and the parenting of young children focused on helping parents that may have had substance use challenges.

Note: ** similar module content

APPENDIX B: FOCUS GROUP QUESTIONS

1. Tell me your experience navigating the modules, specifically the videos and interactive activities?
2. Was the language used in the app easy to understand or defined enough to be understood?
3. Was the content presented something you could see yourself applying to your parenting why or why not?
4. Are there everyday parenting challenges you face that were not addressed in the modules? If so, what are they?
5. Was the coaching beneficial in applying the strategies presented in the app?

APPENDIX C: CODEBOOK

Code	Definition	Example	Theme
Motivation	Comments about feeling inspired or encouraged to learn a new perspective or change a behavior.	"Cuando ya empecé a ver los videos ya veía que teníamos que hablar tranquilos que teníamos que este guardar la calma entonces eso ayudo mucho"	**Acceptability**
Relevance	Comments on the content being generally helpful and being applied. Does not include mention of culture.	"Creo que los videos uh ayudaron mucho, el contenido también porque son cortitos y nos ayudaba como uhm como se dice refine"	
Language	Comments on language being clear and understandable. This includes whether they had any difficulty understanding the words or concepts presented.	"Yo sí entendí todo este no recuerdo ahorita alguna palabra que digiera ay esto que significa."	
Normalizing	Comments that participants felt their experiences were validated and understood.	"Okay entonces no es la mía la única este está dentro de lo esté pues no normal, pero es parte de la edad"	
Lack of acceptability	feeling that the content feels unrealistic, unrelatable or difficult to apply. If comment includes cultural reference do not include here.	"sí se pueden aplicar, pero a veces como uhm los jóvenes a esa edad a veces no quieran escuchar es muy bonito los episodios, pero cuando ves a la realidad, no te van a escuchar tan rápido"	
Usability- Unhelpful	**Difficulty** using and navigating the app. This includes comments about how content was	"cuando yo veía eso sentía como que era	**Feasibility**

	displayed, flexibility to review materials/ app features and time commitment struggles.	demasiado en una sola [pantalla]..." “‘‘ la información esta buena y tienes que dedicarle el tiempo para leerlo y entender... [hija] quería mi atención entonces decía no solamente hasta que ella se duerma yo le dedicaba tiempo a leer”	
Usability- helpful	**Ease** using and navigating the app. Comments on app features, content and flexibility to review.	“fue muy, muy fácil usar la aplicación”	
Cultural misalignment	Comments about the content feeling like it does not align with who the participants are.	“Al principio se me hacía como que “No, esto es como lo haría un gringo.” Decía yo. Así lo haría un gringo”	**Cultural Relevance**
Experiences	Comments on specific experiences that felt unaddressed by app content. Comments about the disconnect between the content and the participant’s lived experience.	“Ay otras habilidades para como convencer a otro tipo de niño. Hay que enfocarse en una más, en un tipo de niño no neuro-general también, ay niños especiales ay niños con deficiencias.”	**Missing Content**
Additional resources	Comments on additional resources and supports that would make the app more helpful. This also includes topics that should be emphasized or included.	“sería bueno como tener ese “background” de lo que es el desarrollo del niño.”	

Content Support	Comments about coaching being helpful in understanding and applying context as well as troubleshooting and staying engaged.	“Ya me dio tips y me daba consejos para que ellos convivieran más y si me funcionaban. Y me gustó mucho.	**Coaching**
Interpersonal Support	Comments where participants mention the relationship with the coach, feeling supported, and the human connection being important.	“Entonces para mi [Consultante] fue como... fue mi terapista, fue mi coach, fue mi amiga, fue como... como mi hermana, como así sentí esa... esa colaboración con ella.”	

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