ABSTRACT

Title of Dissertation:	*YO SOY PAZ* (I AM PEACE): PILOT STUDY OF A TRAUMA-INFORMED, COMMUNITY AND MINDFULNESS-BASED PROGRAM FOR LATINO IMMIGRANTS IN MARYLAND.
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Background: One in three Latinos in the US is an immigrant. Immigrants face particular stressors that are heightened by previous traumatic experiences before, during, and after migration. Latino populations report the highest level of stress of all racial/ethnic groups in the US and the second-highest prevalence of mental health illness. Mindfulness-Based Interventions (MBIs) have shown to be successful at reducing stress and strengthening mental health in diverse populations, yet little is known about the effects of these interventions on this particular population.

Methods: The pilot study tested the *Yo Soy Paz* (I am Peace) online synchronous program, an evidence and trauma-informed mindfulness-based intervention that was adapted for immigrant Latina mothers and the community staff members that work with them in a community setting. The eight session pilot intervention was delivered to three

cohorts for a total of 41 participants, including staff and parents of youth receiving services at a local community-based organization that serves Latino immigrants. The study used the Consolidated Framework for Implementation Research (CFIR) to examine the feasibility, acceptability, appropriateness, and fidelity of the *Yo Soy Paz* online program. The study also examined the initial effects of the program on stress, mindfulness, mind-body connection, and subjective well-being. Qualitative and quantitative data were collected through self-reported pre-post questionnaire, fidelity checklists, and focus groups with parents and staff.

Results: Acceptability, feasibility, fidelity and appropriateness scored high on the quantitative measures. Inner compatibility with the organization's mission and vision, clients' needs and the organization's receptivity to implement the intervention scored in the medium range. Mothers' and *promotoras*' self-reported mean scores for subjective wellbeing and perceived physical and mental health increased significantly from baseline- to post-test. No significant changes were observed in surveys completed by the staff, even though focus group participants reported meaningful improvement.

Discussion: Overall the pilot feasibility study was well received and relevant for the organization and the population they serve. MBIs for Latino immigrants and the staff that works with them have the potential to improve well-being and overall mental and physical health. The study's findings provide guidance to others in implementing online mindfulness practices with Latino immigrants and the staff that works with them.

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by

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List of Abbreviations

AIM: Acceptability of Intervention Measures

ACE: Adverse Childhood Events

CFIR: Consolidated Framework of Implementation Research

EBI: Evidence-Based Interventions

FG: Focus Group

FIM: Feasibility Implementation Measure

IAM: Intervention Appropriateness Measure

IRB: Institutional Revision Board

MBI: Mindfulness-Based Intervention

MBSR: Mindfulness-Based Stress Reduction

MD: Maryland

PTSD: Post-Traumatic Stress Disorder

TIC: Trauma Informed Care

Chapter 1: Dissertation Overview

Section 1: Problem Statement.

Latinos make up 18% (60 million) of the total U.S. population, being the second largest group after non-Latino whites and being the youngest of all the racial and ethnic groups in the United States (Velasco-Mondragon et al., 2016). Latinos account for half (52%) of the U.S. population's growth in 2019 (Bustamantes et al., 2020). Currently, Latino populations report the highest level of stress of all racial/ethnic groups in the U.S. (American Psychological Association, 2017) and the second highest lifetime prevalence of mental health disorders (38.8%) after Whites (45.6%), followed by Blacks (37%) and Asians (23.5%) (Alvarez et al., 2019).

Out of the 60 million Latinos living in the U.S., 23 million are immigrants (Batalova & Bolter, 2020). Recent immigrants are confronted with post-migration stressors, such as poor neighborhood factors, poor working and living conditions, acculturation stress, separation, transnational family dynamics and discrimination (Sangalang et al., 2019). Post-migration stressors in Latinos are heightened by prior trauma experienced in their home country and during migration, such as prolonged periods in camps or dangerous border crossing. Immigrant Latinos, in particular Latinos coming from Central America, carry a high burden of trauma-related experiences linked to external factors, such as internal wars and political violence (Eisenman et al., 2003), and internal factors, such as poverty, deprivation, inequality and lack of opportunities, that may lead to pervasive family and social dynamics

(Kaltman et al., 2011). Because of the strong link between trauma exposure and mental disorders (O'Donnell et al., 2004), it is imperative to address stress, trauma and their connection to improve mental health in immigrant Latinos.

Section 2: Problem Rationale and Justification.

Interventions that aim to reduce stress and improve mental health in Latino immigrants need to consider trauma-informed approaches (Carter, 2007; van der Kolk, 2014). These approaches consider the lived experiences of Latino immigrants in the way they approach and cope with daily stressors. Previous and current trauma can be viewed at the three time points of the migration journey: departure, transit and resettlement (Berger & Weiss, 2002). Traumatic experiences can include discrimination, culture shock, loss, abuse, isolation, deprivation, neglect, domestic violence, external violence, massacres, forced relocation, state violence and lack of documentation (Eisenman et al., 2003; Garza-Guerrero, 1974; Kaltman et al., 2011; Sangalang et al., 2019).

The Stress Response in the Face of Trauma

During the stress response, the sympathetic nervous system activates, releasing adrenaline and cortisol in the body to activate the fight-or-fly response. Chronic low-levels of stress, such as the ones minority populations experience (Torres et al., 2012), keep the body out of balance since the stress response continues to release adrenaline and cortisol, harming the nervous, endocrine and immune system (Chu et al., 2020).

Prior trauma and adverse childhood events (ACEs) before, during, and after migration can contribute to an overactive nervous system. People who have

experienced ACEs and trauma are more likely to have an increased allostatic load (increased stress hormone levels) (Dich et al., 2015), which has been associated with physical dysregulation and can lead to impairments in behavior, learning, ability to adapt to adversity, and physical and mental well-being (Miller & O'Callaghan, 2002; Yaribeygi et al., 2017). An increased allostatic load may lead the person to perceive every stimulus as a threat and act accordingly.

Traumatic experiences have also shown to have short and long term consequences in the emotional and physical well-being of a person. Emotional common responses to trauma include sadness, anxiety, depression, guilt, anger and general irritability (Carter et al., 2016; McFarlane, 2010). For highly threatening events, intrusion of ruminative thoughts is common. Physical consequences of trauma and post-traumatic stress include fatigue, muscle tension, hypertension, obesity, and cardiovascular disease (McFarlane, 2010).

Another common effect of trauma in the short and long term is dissociation from thought, time, body and emotion (Frewen & Lanius, 2015). Dissociation can occur as a defense mechanism from emotional and physical distress caused by a traumatic experience from which no physical escape was possible (van der Kolk, 2014; Vermetten et al., 2007). According to Frewen and Lanius (2015), dissociation can occur in **time:** reliving flashbacks, intrusive memories and reminder distress; **thought:** voice hearing and negative self-referential thinking about self or the world; **body**: numbness or hyperarousal; and **emotion:** emotional numbing/shutdown and compartmentalized emotion versus general negative affect.

Therapies and approaches that are present centered (Frost et al., 2014), that foster kindness for self and other (Kearney et al., 2013), that help with the mind-body connection, and interventions that help the individual connect with their emotions, and map the physical bodily sensations of emotions (Kabat-Zinn & Hanh, 2009), can help individuals overcome dissociation and improve trauma-related negative effects (van der Kolk, 2014). Adaptation strategies and the cognitive-emotional process to cope with stress and trauma also play a big role on whether or not the person copes in an adaptive or maladaptive way (Lazarus & Folkman, 1984) and in the case of trauma, if the person experiences post-traumatic growth after the crisis (Tedeschi & Calhoun, 2004). People who perceive to have enough emotional, mental and physical resources to deal with stressors, are more likely to cope better with stress (Lazarus & Folkman, 1984).

Studies have found that people who have characteristics such as optimism, intimacy, gratitude, a thriving mentality and contentment or a spiritual connection have actually shown to grow from trauma in different domains such as personal strength, closer relationships, greater appreciation for life, new possibilities and spiritual development (Tedeschi & Calhoun, 2004). Fostering these characteristics as a mechanism to cope with stress and trauma as well as cultivating a resilient nervous system through a constructive cognitive-emotional processing of events (Pereira et al., 2017) could be considered an adequate approach to tackle stress in populations exposed to traumatic events.

Mindfulness and the Stress Response

Mindfulness-Based Interventions (MBIs) have shown to be an effective tool to strengthen mental health in diverse populations by improving the response to stressors, increasing adaptability characteristics and resources and reducing psychological outcomes, such as depression, anxiety, trauma-related symptoms, substance use and stress (Brewer, Bowen, Smith, Marlatt, & Potenza, 2010; Brown, Ryan, & Creswell, 2007; Gu, Strauss, Bond, & Cavanagh, 2015; Hofmann, Sawyer, Witt, & Oh, 2010; Ortiz & Sibinga, 2017). While there is a small yet growing body of evidence that shows the benefits of MBIs in Latino populations, limitations of existing research include the very small sample sizes, lack of a community participatory approach to culturally adapt MBI programs for this particular population (Cotter & Jones, 2020), and addressing participation barriers, such as lack of interest, lack of transportation, lack of childcare, and other family needs (Roth & Robbins, 2004).

Barriers and Facilitators for the Acceptability of an Online MBI

There is a vast body of research that shows the advantages and effectiveness of using online platforms and channels for mental health interventions (Andersson, 2016; Spijkerman et al., 2016). Some advantages of online delivery include lower costs and higher reach by decreasing some access barriers, such as lack of health insurance or transportation. Previous research has found that the most successful MBIs are led by experienced facilitators who practice mindfulness (Kabat-Zinn, 2003; McKeering & Hwang, 2019), and where participants feel they are being supported by the instructor (Apolinário-Hagen et al., 2017). Some of the barriers to the uptake of online MBI include people's preference for face-to-face interventions even when awareness of online programs is high (Apolinário-Hagen et al., 2017). High attrition rates and low

adherence are also presented as challenges, especially for unguided formats (Fleming et al., 2018).

Overview of Methods

The current study aimed to pilot an eight-weeks online group-based mindfulness intervention to be delivered with the staff and parents of youth receiving services at Identity, a community-based positive youth development organization. Identity is the lead agency at three of the Montgomery County, Maryland's high school-based Wellness Centers. The Centers provide the students with a variety of extra-curricular opportunities, mentoring and case management services, mental health counseling and on-site health screenings and care. Identity also works through bilingual Parent Outreach Workers/Case Managers who assess family needs and develop action plans, connecting families to sources of food, clothing, housing, emergency assistance, health and mental health care, legal assistance and public benefits.

The pilot study tested the *Yo Soy Paz* (I am Peace) program, an evidence-based (Kabat-Zinn, 1982) and trauma-informed (Van der Kolk, 2014) stress reduction MBI for Latinos delivered to three groups: one with staff currently delivering services and two with parents currently receiving services from Identity. To address barriers of implementation of online mindfulness-based programs, a knowledgeable, bilingual instructor delivered the lessons through a guided, synchronous format. We offered the program to Spanish speaking staff and existing parent groups of *promotoras* and Café con Mamas (a parent support group), for a total of 44 participants.

For the purpose of the study, we tested the implementation strategy while observing and gathering information on the participants' change on expected outcomes, such as

stress, overall physical and mental health, mindfulness (living in the present moment), mind-body connection and flourishing (positive relationship with self, future and others). To evaluate implementation outcomes, we used the Consolidated Framework for Implementation Research (CFIR) (Damschroder & Lowery, 2013). This framework captures the elements in the inner and outer setting and the process of the intervention (fidelity, acceptability, appropriateness and feasibility) to assess barriers and facilitators to implement and sustain an intervention in different settings (Damschroder & Lowery, 2013; Keith et al., 2017).

Due to the high levels of trauma and stress that was expected in immigrant Latino groups (Conway, Andrew; Lewin, 2018; Kaltman et al., 2011), the program was adapted to match their particular cultural and personal circumstances. We followed the ADAPT-ITT framework (Wingood & DiClemente, 2008) to adapt the Mindfulness-Based Stress Reduction program developed by Jon Kabat-Zinn and broadly tested in different contexts and populations (Brewer et al., 2010; Brown et al., 2007; Gu et al., 2015; Hofmann et al., 2010; Ortiz & Sibinga, 2017; Sancho et al., 2018). The ADAPT-ITT framework was closely implemented with the community organization and experts in the field and community leaders (Manuela Muñoz, Psychologist; Jorge Julio Mejia S.J, General Direction of the Apostolic Region Inter-provinces in the Border (RAIF); Diana Parra Ph.D., M.P.H, P.A; Carolyn Camacho, Program Director, Identity).

Aims and Hypotheses

This study has two aims and tests two primary hypothesis as described below:

AIM 1. Examine implementation outcomes (feasibility, acceptability appropriateness, and fidelity) of the Yo Soy Paz program using the five domains

of the Consolidated Framework of Implementation Research (CFIR) through a mixed-methods approach.

H1. The program demonstrates strong appropriateness and acceptability for parents.

H2. The program demonstrates strong feasibility, appropriateness and acceptability to be implemented by staff, while being implemented with high fidelity.

AIM 2. Assess changes in our primary outcomes: stress and overall physical and mental health; and secondary outcomes: mindfulness, mind-body connection and flourishing in parents and staff participating in the *Yo Soy Paz* program using a self-reported pre-post questionnaires.

H3. Parents and staff participating in the *Yo Soy Paz* program have lower stress levels and better self-rated overall physical and mental health, as well as higher mindfulness, mind-body connection and flourishing levels at the end of the program compared to before participating in the program.

Anticipated Impact

Through the pilot of "Yo Soy Paz," we are hoping to inform the feasibility, appropriateness and acceptability of implementing similar programs in community settings that serve primarily Latino immigrants and show that programs can be implemented with high fidelity. Mindfulness programs have shown to increase adaptability capabilities and resources to face trauma (Kabat-Zinn, 1982), increase cognitive-emotional appraisal of trauma (Gu et al., 2015) and stress, improve bodily functions (Brown et al., 2007), and reduce physical outcomes on an overreactive stress

response. We acknowledge the limitations of the approach to target external stressors for Latino immigrants. We highlight that the program should be included in community settings as part of their broader program offerings, as is the case for Identity.

Chapter 2: Literature Review

Latinos in the US and the Immigration Effects

Latinos contribute to the economy (Becerra et al., 2012), cultural diversity, and health of the nation, yet they report the highest levels of stress (American Psychological Association, 2017) and the second highest lifetime prevalence of mental health disorders (Alvarez et al., 2019) in the US. Out of 60 million Latinos in the US (Velasco-Mondragon et al., 2016), one in three Latinos is an immigrant (Batalova & Bolter, 2020). Immigration is linked to high stressors and unique traumas that may impact the way people experience their everyday life and difficult situations (Berger & Weiss, 2006, Sangalang et al., 2019). Everyday life might be more challenging for recent immigrant in comparison to second and third generation Latinos as recent immigrants tend to report lower household income, level of education, health care coverage and ability to save money for the future (Pew Research Center, 2004).

Post-migration stress, paired with before and during migration experiences, can be considered a robust predictor of poor mental health outcomes, psychological distress and diminished well-being in immigrant populations (Sangalang et al., 2019). Post-migration stressors in immigrants can be divided into tangible and intangible stressors. Tangible stressors can be categorized as neighborhood factors, poor working and living conditions, and lack of employment and/or health benefits (Sangalang et al., 2019). Intangible stressors can be identified as acculturation stress, discrimination, threats of deportation, anti-immigrant rhetoric, harassment and transnational family conflicts and separation (Conway et al., 2020; Parker et al., 2020; Sangalang et al., 2019). The

combination of tangible and intangible stressors can be identified as post-migration stressors. These types of stressors can persist throughout the life time in the new country (Berger & Weiss, 2002). Post-migration stressors and trauma are heightened by prior trauma experienced in home countries and during migration (Sangalang et al., 2019) and to have an effect on how the person experiences the stress response (Kleber, 2019).

The Stress Response

Stress has been associated with both short and long term physical and mental health negative outcomes as a result of changes in the brain, the endocrinological and the immune system (Lazarus & Folkman, 1984). The stress response has been broadly documented and occurs through three different stages: Primary appraisal, secondary appraisal and the stress response. The primary appraisal starts with an internal or external demand or stimulus. Daily stressor or perceptions of confrontation or discrimination can be perceived as a threat, a challenge or a loss based on previous experiences and beliefs (Lazarus & Folkman, 1984). During the secondary appraisal, the individual assesses his or her available resources to deal with the threat or challenge and can either remain in equilibrium or activate the stress response (Lazarus & Folkman, 1984). Both the primary and secondary appraisal are subject to past experiences and current internal and external resources to deal with a stressful situation (Miller & O'Callaghan, 2002; Yaribeygi et al., 2017). The third stage occurs once the stress response is activated and the resources assessed, then the individual chooses how to deal with the stress response. The individual can choose to use adaptive or

maladaptive coping mechanisms to deal with the perceived stressed based on previous experiences and available resources.

The way an individual experiences stress can directly impact the neurological and biological processes in the body (Miller & O'Callaghan, 2002; Sandi, 2013; Shonkoff & Garner, 2012; Yaribeygi et al., 2017). For example, a person with a previous history of adverse childhood events or other traumatic events may experience low stress situations with the same intensity of high stress situations, based on the primary appraisal. This results in an increased allostatic load (increased stress hormone levels), which impacts physiological processes, behavior, learning, ability to adapt to adversity, and physical and mental well-being (Miller & O'Callaghan, 2002; Sandi, 2013; Shonkoff & Garner, 2012; Yaribeygi et al., 2017). Increased allostatic loads can cause someone to perceive neutral stimuli as threatening and act in a way that might harm the individual's health either through maladaptive coping strategies or through prolonged biological and neural processes that affect the body's functioning in the short and long term. People who have experienced trauma and high stressful situations in life tend to have increased levels of allostatic loads (Dich et al., 2015; Glover et al., 2006).

Trauma and the Stress Response.

Definition of Trauma

Traumatic events have been identified in a wide number of circumstances and different degrees of impact, from the most common ones such as war, natural disasters, injuries, sudden loss, illness, sexual assault and violence (Kleber, 2019), to more hidden ones such as racism (Carter, 2007; Carter et al., 2016), psychological violence (Kutcher, 1982), and adverse childhood events (Kalmakis & Chandler, 2014). Another

way to understand trauma is as "sets of circumstances that represent significant challenges to the adaptive resources of the individual and that represent significant challenges to the individuals' way of understanding the world and their place in it" (Janoff-Bulman, 2004, p.30).

Literature has documented that trauma and difficult circumstances can have psychological effects, as well as short and long-term physical and mental negative impacts. Some common responses to trauma include sadness, anxiety, depression, guilt, anger and general irritability (Carter et al., 2016; McFarlane, 2010). For highly threatening events, intrusion of ruminative thoughts is common. Physical consequences of trauma and post-traumatic stress include fatigue, muscle tension, hypertension, obesity and cardiovascular disease (McFarlane, 2010). These processes might be consequences of an increased allostatic load and continuous dysregulation of an individual's neurobiology every time the traumatic event is remembered or by repeated environmental triggers (McFarlane, 2010).

Trauma Dissociation

A very common effect of trauma in the short and long term is dissociation from thought, time, body and emotion (Frewen & Lanius, 2015). Dissociation can occur as a defense mechanism from emotional and physical distress caused by a traumatic experience from which no physical escape was possible (van der Kolk, 2014; Vermetten et al., 2007). Dissociation can occur during normal waking consciousness (NWC) or during trauma-related altered states of consciousness (TRASC) (Lanius, 2015). The dimensions of consciousness (Time, Thought, Body and Emotion) are not exclusive from each other, and dissociation can present itself in different dimensions

at the same time (Lanius, 2015). According to Frewen and Lanius (2015, p.2), dissociation can occur in "*(1)* ***time*** *(reliving flashbacks [TRASC] versus intrusive memories and reminder distress [NWC]); (2)* ***thought*** *(voice hearing [TRASC] versus negative first-person self-referential thinking [NWC]); (3)* ***bod****y (depersonalization [TRASC] versus hyperarousal [NWC]); and (4)* ***emotion*** *(emotional numbing/shutdown [TRASC] and compartmentalized emotion versus general negative affect [NWC])"*.

In the dimension of *time*, traumatized individuals can often relieve traumatic memories through flashbacks and intrusive memories (Lanius, 2015). The body can experience the same emotions and activate the stress response as if the person was experiencing the traumatic event once more (Van der Kolk, 2014). A clinical approach to counteract this dissociation includes strengthening the sense of self through the use of **present-centered therapies** (Frost et al., 2014), such as mindfulness-based practices that link the individual to the present moment.

For the dimension of *thought*, people who have experience traumatic events may experience a distorted narrative around the event (Lanius, 2015). Trauma survivors may exhibit negative self-referential thinking about themselves or the world, which include distorted blame and sense of worthlessness (Cox et al., 2014). In more extreme cases, distorted thinking can develop into voice hearing from trauma-related disorders (Lanius, 2015). For the milder cases of distorted thinking, **fostering self-compassion for self and others,** can be effective as a strategy to counter the distorted narrative (Kearney et al., 2013).

Dissociations occurring in the *body* dimension weakens the mind-body connection. Thoughts and perceptions can impact the functioning of the body, and the other way around (Lazarus & Folkman, 1984). The polyvagal theory is an expansive brain-body model that emphasizes the bi-directional communication between brain and body (Porges & Dana, 2018). The main premise of the theory is that the natural state of mammals is to have their guard up as a protective mechanism (Porges & Dana, 2018). For people to have emotionally close relationships with others, they need to stop their defensive system or natural vigilance (Porges & Dana, 2018).

Traumatized individuals can get stuck in the fight/flight response or chronic shut-down as a defensive mechanism, making it difficult for them to engage with others significantly or to let their defenses down to enjoy life (Van der Kolk, 2014). People who have suffered from trauma can become either too vigilant or too numb to experience life in a relaxed way (Van der Kolk, 2014). Befriending the body has been used as an approach to treat trauma victims by helping them become familiar with and accept the sensation in their bodies (Van der Kolk, 2014). Physical self-awareness can act as a mechanism to understand the way we relate to the external world, to release tension and to experience the world in a more relaxed manner (Van der Kolk, 2014). **Body-focused interventions** such as yoga (Macy et al., 2018; Parker et al., 2020), the body scan (Kabat-Zinn & Hanh, 2009) and breathing (Longacre et al., 2012), when paired with a more comprehensive treatment plan and done in a trauma-informed way to prevent revictimization, have been found successful in reducing depression, anxiety and PTSD symptoms (Kabat-Zinn & Hanh, 2009; Longacre et al., 2012; Macy et al., 2018).

Dissociation of emotions can present itself through emotion dysregulation which ranges from experiences of painful states of fear, anger guilt and shame (McFarlane, 2010; Miller & Resick, 2007) to experiences of emotional detachment such as emotional numbing and affective shut-down (Lanius 2010). **Interventions aimed to help the individual feel a wide range of emotions** to connect with the physical bodily sensation and to help people connect with emotions of joy and gratitude may assist individuals to reduce numbness and post-traumatic symptoms (Kabat-Zinn & Hanh, 2009; Richardson & Gallagher, 2020). Mind-body connection interventions are key to help individuals connect with more positive emotions if they are stuck in painful states or to overcome emotional detachment by identifying where emotions are experience in the body (Nummenmaa et al., 2014).

Race-Based Traumatic Stress Injury Model

The race-based traumatic stress injury model explains how a discriminatory environment for minority racial and ethnic groups can trigger emotional pain, social exclusion and race-based traumatic stress symptoms (Carter et al., 2016). The theory divides race/ethnicity related injuries into three categories: discriminatory practices such as being ignored, refused service at a store, or being denied housing or a bank loan; hostile forms of harassment such as police profiling, name calling, physical threats, and stereotyping; and discriminatory harassment such as being denied a promotion at work, having higher expectations, and expecting the worse outcome from the person and then denying these behaviors in relation to race or ethnicity (Carter et al., 2016).

Emotional pain is a natural response when faced with different discrimination and harassment circumstances. Additionally, pain felt from social exclusion is experienced the same way as physical pain, since social and physical pain share the same neural pathway (Hollingshead et al., 2016). In certain Latino cultures, feeling and talking about pain is frowned upon, since cultural values such as being strong in the face of adversity, being stoic, and placing hard work above mental and physical health is highly regarded (Parker et al., 2020). Prolonged, unexpressed pain, can become normalized, minimized and ultimately denied, expressing itself in self-defeating, self-sabotaging behaviors such as negative coping mechanisms like drugs or alcohol, emotional eating or procrastination (Carter, 2007; Torres & Vallejo, 2015; White et al., 2019). Both emotional pain and social exclusion can lead to race-based traumatic stress symptoms such as fear, tension, anxiety, depression, sadness, anger, low-self-esteem, suspiciousness, distrust, shame, and guilt (Carter & Forsyth, 2010)

Cultivating Adaptability Characteristics and Healing Trauma

Posttraumatic Growth

Even though research has mostly focus on the negative outcomes that can occur after a traumatic event, there is a growing body of literature that has documented how trauma can also be a precursor for growth (Tedeschi & Calhoun, 2004). The term posttraumatic growth refers to positive psychological changes experienced as a result of the struggle with highly challenging life circumstances, threats or shattering events (Tedeschi & Calhoun, 2004). It goes beyond an ability to resist and not be damaged by a highly stressful situation, and it encompasses more than just resilience, hardiness or

optimism moving the individual beyond the pre-trauma adaptation levels (Tedeschi & Calhoun, 2004).

Studies have found that post-traumatic growth usually coexist with continuing personal distress, hence distress and growth are not exclusive from each other (Tedeschi & Calhoun, 2004). Trauma itself cannot generate growth, but the individual's struggle and adaptation tools with the new reality after trauma determine the extent of posttraumatic growth. People with very high adaptation and coping capabilities experience little growth in comparison to people with less capabilities that could experience a bigger change in personal growth as a result of trauma (Tedeschi & Calhoun, 2004). People who have experienced trauma often mention growth in five domains: Personal Strength, Closer Relationships, Greater Appreciation for Life, New Possibilities, and Spiritual Development (Tedeschi & Calhoun, 2004). Research has found that certain processes and personal traits can contribute in higher proportions to growth. In terms of personal characteristics, extraversion (sociable, fun-loving, affectionate), openness to experiences and optimism (e.g. confident about goals, expects good outcomes, overcomes adversity) can help people experience a higher growth from trauma in comparison to people who are introverted, close to experiences, and negative (Tedeschi & Calhoun, 2004).

Trauma-Informed Care

Trauma-informed care (TIC) has been broadly recognized as an effective strategy for working with immigrant Latino youth and their families (Jolie et al., 2021). From a strengths-based approach, TIC can draw from personal and community strengths to allow for growth and healing after experiencing trauma (Miller, Brown,

Shramko, & Svetaz, 2019). Past studies have identified important components in providing TIC.

These components include:

- Focusing on the person's agency and ability to heal and grow from previous trauma through a strengths-based approach:
- Creating an immigrant-friendly environment to avoid re-traumatization by advocating for safe and inclusive environments that are culturally sensitive;
- Promoting trusting relationships within the service providers since trusting relationships can provide a buffer for toxic stress;
- Asking for permission to discuss difficult subjects and not forcing clients to share information prematurely;
- Recognizing the impact of trauma on the brain as well as its various manifestations. This can be addressed by screening for trauma and other health conditions as well as being aware that some behavioral and mental issues may stem from traumatic experiences (Miller et al., 2019);
- Treating trauma-related disorders appropriately and to the extent of the possibilities of the organization. This could be as simple as providing clients with exercises that help address dissociation in the body, thought, emotion and time;
- Partnering with trusted organizations to provide additional resources to immigrant families and youth;

- Recognizing the role of post-migration stressors such as language barriers, lack of comfortable living and working conditions, lack of social networks and family separation as a source of new trauma; and finally,
- Taking care of providers who are treating people who have experience trauma (Miller et al., 2019).

Mindfulness as an Intervention

Mindfulness intercepts the stress response at the primary and secondary appraisal by allowing the individual to observe a situation or stimuli in a non-reactive and non-judgmental manner, and by providing a sense of increased personal resources to deal with the stressor (Kabat-Zinn, 2003). Kabat-Zinn describes mindfulness as "*a direct and very convenient way to cultivate greater intimacy with your own life unfolding and with your innate capacity to be aware*" (Jon Kabat-Zinn, 2021. p.1). This occurs by developing awareness and connection in a non-judgmental way with one's thoughts, body and emotions. It also fosters a sense of interconnectedness with self and others, and the practice of gratitude through practices such as loving-kindness and maitri (self-compassion and self-love) (Jon Kabat-Zinn, 2021). Mindfulness intercepts the stress response to a stimulus by increasing the cognitive control of the behavior in an emotionally charged situation through non-response and non-judgment, which can be measured through self-regulation and mindfulness abilities. By increasing cognitive control, the person is more likely to adopt approach-oriented coping mechanisms (i.e. seeking social support, looking for solutions), instead of maladaptive coping responses (i.e. substance use, hostility, or avoidance).

Mindfulness-based Interventions (MBIs) can also help repair biochemical and neurobiological changes caused by exposure to ACEs and chronic stress, giving the person stronger tools and increasing their cognitive capacity to deal with stressful situations in the future (Jha, Stanley, Kiyonaga, Wong, & Gelfand, 2010; Malinowski, 2013; Miller & O'Callaghan, 2002; Ortiz & Sibinga, 2017; Zeidan, Johnson, Diamond, David, & Goolkasian, 2010). Previous research has made reference to what is known as the Mindfulness Stress Buffering Account (Creswell & Lindsay, 2014). Studies have shown how mindfulness mitigates the stress appraisals and reduces stress-reactivity responses acting as a buffer for stress (Creswell & Lindsay, 2014), especially in populations for which stress is known to trigger the onset or exacerbation or disease (such as PTSD) or maladaptive coping strategies such as smoking or drinking (Cohen et al., 2007).

Mindfulness has shown to reduce the reactivity of the central stress processing regions in the brain which then signals the rest of the stress-response as well as to alter the function and structure of the amygdala. The amygdala is in charge of emotion processing and the fight-or-flight stress response (Arnsten, 2009). Finally, MBIs have been found to help with physical acute and chronic pain severity and duration (Bakhshani, Amirani, Amirifard, & Shahrakipoor, 2015; Rosenzweig et al., 2010). Due to the connection of pathways between physical and social pain, programs that help reduce physical pain, such as mindfulness programs and yoga, could and should be explored as a way to alleviate social pain (Eisenberger, 2012).

In-person mindfulness-based programs with Latinos have shown feasibility in implementation, high acceptance and uptake by the participants, as well as potential efficacy by reducing symptoms of depression and anxiety (Cotter & Jones, 2020; Ryan et al., 2018). It is important to mention that most studies did not have a comparison group, hence measuring effectiveness is an important future step (Cotter & Jones, 2020). Limitations of existing research include the very small sample sizes, lack of a community participatory approach to culturally adapt MBI programs for this particular population (Cotter & Jones, 2020), and a lack of strategies to address participation barriers, such as lack of interest, lack of transportation, lack of childcare, and other family needs (Roth & Robbins, 2004).

The Consolidation Framework for Implementation Research

The Consolidation Framework for Implementation Research (CFIR) is one of the most currently used conceptual frameworks to guide assessments of implementation at different levels while looking at the different contexts that might influence the implementation and effectiveness of the intervention (Keith et al., 2017). The CFIR is composed by five major domains:1) *Intervention characteristics*: features of the program that might influence implementation; 2) *Inner setting*: features of the implementing organization, such as leadership engagement and implementation climate; 3) *Outer setting*: features of external context, such as external policies and incentives; 4) *Characteristics of individuals* involved and knowledge and beliefs of the people who participated in the intervention; and 5) *Implementation process*: strategies or tactics that might influence implementation, like engaging appropriate individuals

in the implementation and use of the intervention, reflecting and evaluating (Keith et al., 2017). Each domain has subcategories for a total of 26 subcategories across the framework. While all subcategories can be used for the analysis of the implementation process, it is not necessary to include all of the subcategories (Keith et al., 2017)

Chapter 3: Study Methodology

Introduction

This chapter provides an overview of the methodology for the dissertation study. It includes the adaptation and outline of the curriculum, the characteristics of the site and population, program implementation, data collection, and planned analyses to address study aims. As described in Chapter 1, the current study aimed to pilot an online, group-based, eight-session mindfulness intervention adapted for Latino immigrants. Aim 1 focused on examining the implementation outcomes, such as feasibility, acceptability, appropriateness, and fidelity of the *Yo Soy Paz* program guided by the Consolidated Framework of Implementation Research, while Aim 2 focused on assessing changes in stress and overall physical and mental health (primary outcomes), as well as mindfulness, mind-body connection and flourishing (secondary outcomes) post-intervention in parents and staff participating in the *Yo Soy Paz*.

Adaptation of the Program Using the ADAPT-ITT Framework

The curriculum was modified using the ADAPT-ITT Framework (Wingood & DiClemente, 2008). The ADAPT-ITT framework is made up of eight steps, (Table 1) and it was created to facilitate implementation, encourage ownership, and increase acceptability with different populations, mostly for HIV interventions. It was designed to enhance programs without competing or contradicting core elements or theoretical underpinnings of the original EBIs.

Table 1 ADAPT-ITT 8 Steps Framework

ADAPT-ITT 8 Steps Framework	
Step 1	Assessment: Identify the needs of the population
Step 2	Decision: Select the intervention that best addresses the needs
Step 3	Adaptation: Pretest materials to better understand how to adapt them for the target population and identify needs for refinements related to the content, delivery channels, and materials
Step 4	Production: Create adaptation plan and determine goals for the adapted EBI
Step 5	Topical Experts: Ask for substantive content and technical assistance
Step 6	Integration: Include topical experts feedback on the first adaptation draft
Step 7	Training: Train all relevant implementation staff
Step 8	Testing: Conduct the pilot test

Source: Wingood & DiClemente, 2008.

Adaptation Steps

Step 1- Assessment. A meeting was held between community partners at Identity and the research team. The community partners expressed the need for mindfulness-based programs and shared their barriers to implement such programs in the past, including a lack of resources and having access to a trained facilitator. Identity works closely with parent and staff groups and is constantly assessing the overall needs of the population they serve. Mental health was identified as high priority.

Step 2 - Decision. Based on previous work conducted by the researcher, Mindfulness-Based Stress Reduction (MBSR) was identified as an adequate program for this population given its high success in different contexts and with different populations (Brewer, Bowen, Smith, Marlatt, & Potenza, 2010; Brown, Ryan, & Creswell, 2007; Gu, Strauss, Bond, & Cavanagh, 2015; Hofmann, Sawyer, Witt, & Oh, 2010; Ortiz & Sibinga, 2017).

Step 3 - Adaptation. The researcher and two trained members of the expert panel who had participated in the original Mindfulness-Based Stress Reduction (MBSR) program by Kabat-Zinn (Manuela Muñoz, M.A. and Diana Parra, Ph.D.), went through

the original eight session curriculum to identify needs for refinements related to the content, delivery channels, and materials based on the target population needs.

Step 4 - Production. The researcher then created the adaptation plan, which included trauma-informed approaches, specifically linked to the migration experience. The adaptation plan was also informed by adapted mindfulness-based and yoga programs for minority populations such as Pertaenecer (Cuervo, 2019) and Restorative Yoga for Ethnic and Race-Based Stress and Trauma (Parker et al., 2020).

Step 5 – Topical Experts. Once the adapted curriculum was completed, it was reviewed and revised by topical experts (Manuela Muñoz, Facilitator and Psychologist; Jorge Julio Mejia S.J, General Direction of the Apostolic Region Inter-provinces in the Border (RAIF); Diana Parra Ph.D., M.P.H, P.A; Carolyn Camacho, Identity Program Director). Revisions were incorporated into the curriculum (Table 2.).

Step 6 - Integration. Feedback by the topical experts was included into the pilot.

Step 7 - Training. The facilitator was one of the main contributors to the curriculum revisions. She was trained on the research procedures and theory behind the activities.

Step 8 - Testing. We implemented the pilot of the program with three cohorts (n=44) which included one group of staff and two existing mothers groups.

Table 2 Comparison between Original and Adapted Program

Week No.	Original Program Session Topics	Adapted- Yo Soy Paz Program Sessiom Topics
Week 1	Overview of the course and theory; evidence behind mind-body medicine	Overview of the course. What is Mindfulness? Learning about productive coping strategies and Beginners mind.
Week 2	Becoming aware of our perceptions, assumptions, and the perspective we use to interact with	Connecting with one's [migration] story.

	the world around us; what is the stress response?	
Week 3	Yoga as medicine.	What is the stress response? (original program week 2) Effects of stress in the body and mindfulness exercises to counteract them (original program week 4).
Week 4	Effects of stress in the body and mindfulness exercises to counteract them.	Understanding difficult emotions, adapted from becoming aware of our perceptions, assumptions, and the perspective we use to interact with the world around us (original program week 2)
Week 5	Expanding knowledge about learned techniques. Beginners mind.	Yoga as medicine (original program week 3)
Week 6	Learning about resilience, productive coping strategies, and interpersonal mindfulness	Compassion and kindness (original program week 7) and interpersonal mindfulness
Week 7	Integrating the practice of mindfulness into everyday life. Compassion and kindness	Integrating the practice of mindfulness into everyday life (original program week 7) through gratitude and optimism- The Tree of [my] Life.
Week 8	The program closes with a review of the course content, a focus on how to carry on practicing mindfulness.	Focus groups to understand how participants perceived the course and if they plan to implement what they learned in the future

University of Maryland members (n=2), Identity members (n=2), and Topic Experts (n=3) were involved in adapting a MBI intervention for Latina mothers and the staff workers that work with them. Multiple needs emerged from the needs assessment in Step 1 of the adaptation process regarding the mental health needs that the Latino immigrant population, as well as the staff workers that work with them, might have.

Based on the information provided by the community organization, and experts in the field who had received the intervention before Step 3, we made numerous

adjustments to the original Mindfulness-Based Stress Reduction program created by Kabat-Zinn.

Adjusted Activities

Online Delivery. One of the major adaptations that was incorporated into the intervention was its online delivery. The dissertation committee raised technology literacy and internet access concerns related to delivering the course online. Since the intervention was delivered at the end of the lockdown due to the COVID-19 pandemic (March 2021 to May 2021), most of the parents and staff already had experience using online tools, for example to communicate with their children's school or to receive services from the community organization. Staff from the community organization were also skilled at communicating via Zoom with their clients and co-workers. This external circumstance facilitated the online delivery of the program. One beneficial adaptation was the inclusion and collaboration with the leader staff members from the *promotoras* and mothers' groups with sending reminders via Whatsapp to participants and promoting a trusting environment.

To create engaging content, the curriculum incorporated open-source videos in Spanish that explained some of the concepts (i.e. migration stress, acculturation stress, trauma); reflection questions were added before each lesson to allow participants to reflect on the topic that would be covered in advance, and practical exercises. The videos engaged people who learn from visual cues and the questions allowed the instructor to introduce some of the class content before the lesson began. Even though

we developed visual presentations for each class, the instructor seldomly used them as open discussions seemed more valued by parents and staff.

Shorter delivery time. Given the online nature of the course and previous experience with other online courses, the advisors suggested shortening the course to seven weeks and allowing the eighth week for a focus group discussion, which also served the purpose of reviewing the course content and asking participants about their plans to continue their mindfulness practice, as suggested in the original program. For Week 1, we decided to cover productive coping strategies (original Week 6) and beginners mind (original Week 5) when explaining what mindfulness is and why it is important. We decided to merge Week 2 (what is the stress response) and Week 4 (effects of stress in the body) into our Week 3 class to give room for more migrant-based content. We covered mindfulness techniques throughout the whole course instead of having a single session on this topic. We also moved yoga to one of the later sessions to build participant's trust in the course since yoga can be a sensitive topic for highly religious participants. Finally, given the online version, we shortened all lessons from 90 minutes to 60 minutes.

New Activities

Adding immigrant-based content. As part of the steps 1 to 7 from the ADAPT-ITT model, it was clear from the conversations with the community organization and the experts in the field, that the migration experience needed to be covered as part of the curriculum. Migration can be a source of trauma for many people and the post-migration experience is a source of different stressors for our target population. To

avoid triggering participants, we decided to focus on home and host culture differences, similarities and ways to integrate the best aspects of both of them as a necessary step for integration in the new context. We did ask about reasons for migration as an opening question, which led participants to share very personal and painful stories. Nevertheless, participants seemed to enjoy talking about their migration journey but staff recommended giving more sessions and time to process this topic.

On our last content class (week 7), we asked participants to draw their "Tree of Life". The roots represented their origins, identity, culture and family traditions. The trunk represented their emotions, the soil and water represented their thoughts and perceptions and the branches represented their accomplishments and dreams. We decided to incorporate this activity since it was important for participants to acknowledge their roots through a gratitude lens all the way to the branches representing their dreams, life purpose and goals.

Trauma-informed, strength-based approach. When doing mindfulness exercises with immigrant populations, the topic of trauma was mentioned often. Certain mindfulness exercises like closing the eyes, connecting with a body part, or connecting with a difficult emotion can be triggering for some participants. One of the subject matter experts talked about working with participants as agents of strength and resilience while respecting their own processes through certain traumatic experiences. The facilitator of the classes, who was a trained psychologist, was aware of this approach and provided a safe environment to debrief after the exercises in order to

discuss any triggering circumstances and allow participants to share their feelings and thoughts (Reeves, 2015).

Program Characteristics

Participants were asked to participate in a weekly, one hour, synchronous Zoom session for eight weeks. Participants met in a password-protected Zoom room to receive the intervention. The *Yo Soy Paz* curriculum was inspired by the Mindfulness-Based Stress Reduction program developed by Jon Kabat-Zinn (Kabat-Zinn, 1982). Table 3 gives the description of the weekly topics and assignments.

The format for each class included a short mindfulness exercise at the beginning of the lesson (i.e., stretches, mindful listening, breathing exercise), followed by two or three opening reflection questions, and then the lesson content. Sessions ended with a second mindfulness practice.

Table 3 "Yo Soy Paz" 8 Week Program

Week	Topic	Activity
1	Overview of the course and theory and evidence behind mindfulness.	Body Scan
2	Reconnecting with my story. A talk about reasons for migration and differences in cultures.	Breathing Meditation
3	Effects of stress in the body and mindfulness exercises to counteract them. (Present-based therapies)	Breathing Meditation
4	Understanding and managing difficult emotions through mindfulness. (Mind-body connection)	RAIN Guided Mediation to Connect with Emotions in the Body.
5	Exercise as health. Practicing yoga exercises at home. (Mind-body connection)	Yoga
6	Integrating the practice of mindfulness into everyday life. Loving Kindness. (Compassion for self and others)	Tonglen Meditation
7	Belonging in life mindfully. Connecting with my roots and with gratitude.	The Tree of Life

8	The program closes with focus groups to talk about lessons learned, likes and dislikes and ways to continue practicing mindfulness.	Focus Groups

Site Characteristics

The intervention was delivered to the staff and mothers of youth receiving services at Identity, a community-based positive youth development organization. Identity focuses on academic, social/emotional, and job readiness/workforce development supports for Latino youth in Maryland. Identity is the lead agency at three of the Montgomery County's high school-based Wellness Centers. Through a partnership with Montgomery County Public Schools and the Department of Health and Human Services, the Centers offer a range of programs and services that improve students' cognitive, physical, social and emotional development. Identity also works through bilingual Parent Outreach Workers/Case Managers who work with families to assess family needs and develop action plans, connecting families to sources of food, clothing, housing, emergency assistance, health and mental health care, legal assistance and public benefits. These connections are strengthened through a variety of group-level interventions Identity offers, such as the Parent Leadership Academy, a *promotoras* program, Café con Mamas (a parent support group), stress management support groups, and the family reunification and strengthening program. Identify serves approximately 2,600 families, was established in 1998, and is located in Gaithersburg, MD.

Population Characteristics

The pilot study was implemented with three groups: Spanish-speaking staff, promotoras (Latina mothers trained as community health workers) and Latina mothers. The promotoras and mothers groups were grouped together for analytical purposes due to the similarity in demographic characteristics and lived experiences. The majority of the staff enrolled at baseline were between 18 to 25 years of age (33%), followed by 41-45 (20%) and older than 50 years old (20%). For the *promotoras* and mothers' groups, the majority of the participants were between the ages of 41-46 (61%), followed by 36 to 40 (22%) and older than 50 years old (17%). Most of the participants reported being Latino for both the Staff (87%) and the *promotoras* and mothers' groups (100%). Sixty percent of staff participants were female, and 100% of the *promotoras* and mothers were female. All the staff was fully (87%) or partially (13%) employed, in comparison with the *promotoras* and mothers, most who were employed part-time (31%), followed by unemployed and not seeking employment (26%), unemployed, seeking for employment (26%) and fully employed (18%).

Table 4 Population's Characteristics

Characteristics	Total Population (*n*=38)	Staff (*n*=15)	*Promotoras*/Mothers (*n*=23)
Female Gender, n (%)	32 (84%)	9 (60%)	23 (100%)
Race, n (%)			
Non-Hispanic White	2 (5%)	2 (13%)	0 (0%)
Hispanic or Latino	36 (95%)	13 (87%)	23 (100%)
Age, n (%)			
18-35	8 (21%)	8 (53%)	0 (0%)
36-50	23 (61%)	4 (27%)	19 (83%)
50+	8 (18%)	3 (20%)	4 (17%)
Country of Origin, n (%)[1]			
USA	5 (13%)	5 (34%)	0 (0%)
Central America	15 (40%)	4 (26%)	11 (48%)

South America	5 (13%)	3 (20%)	2 (9%)
Mexico	3 (8%)	0 (0%)	3 (13%)
Missing	10 (26%)	3 (20%)	7 (30%)
Education Level, n (%)			
Less than High School	8 (21%)	0 (0%)	8 (35%)
High School, Some College or Technical Degree	16 (42%)	3 (20%)	13 (56%)
College or Higher	14 (37%)	12 (80%)	2 (9%)
Employment, n (%)			
Full time	17 (44%)	13 (87%)	4 (18%)
Part time	9 (24%)	2 (13%)	7 (31%)
Unemployed-seeking	6 (16%)	0 (0%)	6 (26%)
Unemployed- not seeking	6 (16%)	0 (0%)	6 (26%)
Time living in US, n (%)[1]			
Born in USA	5 (13%)	5 (33%)	0 (0%)
1-5 years	5 (13%)	4 (27%)	1 (4%)
11-15 years	8 (22%)	2 (13%)	6 (26%)
More than 15 years	10 (26%)	1 (7%)	9 (40%)
Missing	10 (26%)	3 (20%)	7 (30%)

1. Data collected at post-test.

Project Design and Settings

The program was delivered online by a psychologist who is also a mindfulness educator with over 10 years of experience. Inclusion criteria were that participants were 18 years of age or older, Spanish speaking, were receiving or delivering services at the community organization and self-identified as Latinos if part of the mothers and *promotoras*' groups. All procedures were approved by the Institutional Review Board at the University of Maryland, College Park. The program was delivered through a password protected Zoom room to three groups, one with staff (N=15), one with the *promotoras* group (N=7) and one with mothers attending a support group (N=16). Baseline surveys measuring the primary and secondary outcomes as well as

demographic information were collected at study entry in March 2021. Attendance data were collected throughout the program but discarded due to issues with the self-identifying IDs. In May 2021 we collected post-intervention data which included additional questions for attendance, country of origin and previous practice of mindfulness. We collected data for 38 respondents of the 41 participants at baseline (92.6%) and 28 respondents at post-intervention (68.2%). At week eight, 11 of the 15 staff (73%) participating in the intervention also completed an implementation questionnaire via Qualtrics to assess acceptability, feasibility, appropriateness and inner and outer setting of the intervention.

In week eight of the program, the principal investigator conducted a focus group in Spanish over Zoom with each of the participant groups (staff, *promotoras*, mothers). The three one-hour long focus groups ($N=3$) with staff ($n=11$), mothers ($n=10$) and *promotoras* ($n=9$) were audio-recorded and transcribed in Spanish. In the promotoras group, two of the participating members were the staff leads who received the intervention along with the promotoras. 73% of the participants participated in a focus group.

Identity staff conducted the recruitment and informed consent with parents participating on existing groups. CITI certified staff explained the benefits of participating in this study and assured participants their participation was voluntary and in no way would harm the relationship with the community organization. Spanish-speaking staff received a recruitment email with a link to the informed consent. They were invited to the first session in the recruitment email, and they had the opportunity

to consent to the research portion of the course in the first session by completing the consent statement on the Qualtrics survey.

The study aimed to set the stage for a large-scale randomized trial to examine the feasibility of the *Yo Soy Paz* intervention program. Feasibility, acceptability, appropriateness and fidelity data were used to assess success of adaptation and propose new implementation changes that will increase uptake of the program by community organizations serving similar populations. We looked at changes in the primary and secondary outcomes but since this was a pilot study, we did not plan to measure effect size or efficacy of the program.

Conceptual Framework

The pilot program aimed to reduce stress and improve overall physical and mental health by increasing the adaptation characteristics and resources; reducing time, thought, body and emotion dissociation and improving the cognitive-emotional process of addressing a crisis. The mechanisms that were identified were: a stronger mind-body connection, higher presence in the present moment with non-judgement and non-reaction, and higher sense of self or others (flourishing or well-being). We also expected the intervention to increase gratitude and optimism (also captured in the flourishing measure), which have been identified as positive adaptation characteristics that lead to post-traumatic growth; however, this was not captured on the quantitative scales as requested by the organization to reduce participant burden. As mindfulness increases, perceived stress should decrease by targeting the cognitive-emotional pathways of the stress response, which in turn, should improve perceived overall physical and mental health. Mind-body connection and flourishing constructs aimed to

capture factors that can reverse dissociation from time, thought, body and emotions as a result of a traumatic situations. An increase in the mind-body connection and flourishing should increase perceived overall physical and mental health as well as decrease perceived stress.

Data Collection and Analysis.

Data Collection for Aim 1.

AIM 1. To examine implementation outcomes such as feasibility, acceptability, appropriateness and fidelity of the *Yo Soy Paz* program guided by the Consolidated Framework of Implementation Research using a mixed methods approach to collect data in the five domains of the framework.

We collected quantitative and qualitative using a multi-methods approach to assess feasibility, acceptability, appropriateness and fidelity through the five domains of the CFIR. Quantitative data included fidelity checklists completed by the instructor and the PI after each session, attendance records at the beginning of each session through a Qualtrics survey (participants), and four implementation measures (staff) that measured feasibility, acceptability, appropriateness and the inner and outer setting as perceived by the organization (Weiner et al., 2017). At the end of the program, we collected qualitative data during focus groups with the participants (parents and staff), and the facilitator to elicit information about feasibility, acceptability and appropriateness. Detailed information about measures and types of questions for both types of data can be found in Table 4.

Quantitative Data Analysis.

We examined quantitative data (dosage, fidelity rate, and implementation measures) using univariate statistics (means, SD, frequencies) (see **Appendix A** for quantitative tools).

Qualitative Data Methodology.

We conducted three focus groups (FGs) with staff (n=1), *promotoras* (n=1) and mothers (n=1) during the eighth session of the program. FGs were conducted by the principal investigator who was a native-speaker and trained interviewer. Questions prompted participants to talk about likes and dislikes of the program, lessons learned and overall perceptions of the course (see **Appendix B** for focus group guides). *Promotoras* and mothers received $20 dollars for their participation through gift cards emailed to them. All qualitative data were analyzed in Spanish using Dedoose by two native Spanish speakers (JM and JB). Using Template Analysis (Crabtree & Miller, 1999), we first prepared a codebook that was organized by anticipated themes based on CFIR to assess the feasibility, fidelity, acceptability and appropriateness of the intervention. Second, two coders coded each transcript line by line, refining the codebook as needed. Finally, we compiled final themes and subthemes and translated selected quotes into English. Results from focus groups and questionnaires were analyzed in parallel to see similarities and differences.

We conducted informal feedback sessions with the educator and the leadership team to ask about fidelity, feasibility, acceptability and appropriateness. The researcher took notes during the meeting and added pertinent comments to the joint display. Joint displays are visual displays that are used to integrate quantitative and qualitative data

during data collection, analysis and interpretations (McCrudden, Marchand, & Schutz, 2021).

Mixed Methods Integration.

Quantitative and qualitative data were analyzed separately answering the same implementation questions of fidelity, acceptability, appropriateness and feasibility. Once data were analyzed, it was presented using joint displays to strengthen the interpretation of combined findings (Aparicio et al., 2019; Guetterman et al., 2015). During the interpretation, we focused on the complementarity, divergence or convergence of the data. More detail about the joint display can be found in Table 5.

Table 5 Measurements for Aim #1

Implementation Outcome: Fidelity		
Quantitative	Fidelity Checklist External Reviewer	
	Fidelity Checklist Educator	
Qualitative	*CFIR Construct/Domain*	*Sample Questions for educator*
	Process: strategies that might influence implementation	Educator: What facilitators and barriers did you identify while delivering the lesson?
		Educator: Were there any noteworthy observations about participants that impacted the process of implementing?
Implementation Outcome: Feasibility		
Quantitative	Feasibility Implementation Measure (FIM) (Weiner et al., 2017)	
Qualitative	*CFIR Construct/Domain*	*Sample Questions FGs*
	Intervention Characteristics: Complexity, adaptability, design quality and packaging	Staff: After having experienced the program, how hard or easy do you think it would be for you to implement this program? Educator: How easy was it for you to use the manual? What did you find challenging about implementing the curriculum?
	Outer setting: Participant's needs and resources	Parents: What are your perceptions of Yo Soy Paz? What barriers did you face to participate in Yo Soy Paz?
	Inner setting: Compatibility	Staff: How does the intervention relate to the organization's mission and vision? Leadership: How does the intervention relate to the organization's mission and vision?
Implementation Outcome: Appropriateness		

Quantitative	Intervention appropriateness measure (IAM) (Weiner et al., 2017) Matching the needs of the clients the organization serve Matching the organization's mission and vision.	
Qualitative	*CFIR Construct/Domain*	*Sample Questions FGs*
	Outer setting: Participant's needs and resources	Parents: How well do you think the intervention meets your needs?
	Inner setting: Tension for change	Staff: How might this intervention meet the needs (or not meet the needs) of the families you serve? How might it be helpful? How might it not be helpful? Leadership: How might this intervention meet the needs (or not meet the needs) of the families you serve? How might it be helpful? How might it not be helpful?
Implementation Outcome: Acceptability		
Quantitative	Acceptability of intervention measures (AIM) (Weiner et al., 2017) Organization's receptivity to implement the intervention	
	CFIR Construct/Domain	*Sample Questions FGs*
	Intervention Characteristics: Relative advantage	Staff: How does the intervention compare to other alternatives that you know about? What advantages/disadvantages does the intervention have compared to these other programs?
	Outer setting: Participant's needs and resources	Parents: What did you like/dislike about the intervention?
	Inner setting: Tension for change	Staff: What is the general level of receptivity in your organization to implementing the intervention? Leadership: How might this intervention meet the needs (or not meet the needs) of the families you serve? How might it be helpful? How might it not be helpful?

(Aparicio et al., 2019; Guetterman et al., 2015)

AIM 2. To assess changes in stress and overall physical and mental health (primary outcomes), as well as mindfulness, mind-body connection and flourishing (secondary outcomes) post-intervention in parents and staff participating in the *Yo Soy Paz* program using a self-reported pre-post questionnaire (see Appendix C) and qualitative data.

Measures.

Participants completed a 10-15 minutes baseline questionnaire (T0) and post-intervention survey (T1) to assess changes in our primary outcomes (stress, overall perceived physical and mental health), secondary psychosocial outcomes (mind-body connection, mindfulness, and flourishing) and program uptake. T1 took place 7 weeks after T0. The outcome variables and secondary variables are found in Table 5.

Table 6 Quantitative Measurements

Measure	Scale Range	Description
Primary Outcomes		
Perceived stress	0-5	The Short-Form Perceived Stress Scale (PSS) (α=.74), is a 4-item measure of the degree to which situations in one's life are appraised as stressful (Cohen et al., 1983), with a 5-point response scale (0 = never to 5=always). Two items were reverse coded so that a higher number equates to higher levels of perceived stress
Perceived overall physical and mental health	1-5	Two questions: How would you rate your overall physical health? How would you rate your overall mental health? The questions were asked on a Likert type scale from poor (=1) to excellent (=5). This measurement has been used in several studies, and its reliability is accepted (Bombak, 2013).
Secondary Outcomes		
Mind-body connection	1-5	The Scale of Body Connection (SBC) (Price, Thompson, & Cheng, 2017), computed alpha of (α=.666 at pre-test and -α=.807 at post-test) consists of 20 self-report items about two distinct dimensions of the mind-body connection: body awareness (BA) and bodily dissociation (BD). Items are on a 5-point Likert-type scale measuring current experiences, scale ranges from never (1) to all the time (5). Two questions were removed following the advice of the community partners (*Aware during sexual activity and Separated during sexual activity*).
Mindfulness	1-7	The Mindful Attention Awareness Scale (MAAS) (α=.757-α=.870) (Osman, Lamis, Bagge, Freedenthal, & Barnes, 2016) is a 15-item scale designed to assess the short-term or current expression of a core characteristic of mindfulness. We used a short-version of the MAAS scale made up by five questions with response choices ranging from 1=not at all to 7=very much.

Subjective wellbeing	1-6	The Mental Health Continuum short form (MHC-SF) (α=.694-α=.749) (Keyes et al., 2008) has 14 items. Item response options are based on a 6-point Likert-type scale ranging from 1=never to 6=every day.

Data Collection for Aim 2.

Prior to session 1, participants were asked to complete a baseline survey. Due to literacy barriers that some parents in the mothers' group experienced, the Identity staff leading the existing mothers' group collected the survey information individually via phone. Identity staff and promotoras were sent a link to the anonymous survey via email. Participants were asked to create a personal ID using the first letter of their first name, the last letter of their last name and the two last digits of their phone number to match baseline and post-intervention data. During the seventh session (approximately 2 months later), participants were asked to complete the post-intervention assessment via Qualtrics.

Data Analysis of Aim 2.

We ran reliability analysis (Chronbach's alpha) and inter-item correlation of the four constructs and compare results to validation studies of the surveys to assess validity and reliability. We then calculated descriptive statistics for the six outcome variables. We identified means and standard deviations for the continuous variables, and frequencies and percentages for the demographic variables, both overall and by completion rates. Mean substitution was conducted to manage missing data with participants that completed 75% of each of the constructs. We used a paired t-test to examine the change between the pre and post-test measurements for our main outcomes (stress, self-rated health) and our secondary outcomes (mind-body connection, mindfulness, and flourishing). We ran simple tests of associations and correlations to

see if the program had a differential impact on participants as a function of their demographic characteristics (staff vs. parents), as well as whether outcomes varied by participation.

Ethical Concerns.

A package was approved by the University of Maryland Institutional Review Board (IRB) in March 2021. It included a protocol for participants who experienced difficult emotions or got triggered during the session. The facilitator was a trained psychologist with experience dealing helping participants navigate difficult emotions. We also made sure participants knew they could refuse answering any question they did not want to ask.

Timeline

The first step in the process was to revise the mindfulness curriculum. This took place in January 2021. IRB approval was given in March. We implemented the program over the course of two months starting in March. Baseline data were collected in March and follow-up data were collected in May. Programmatic data (attendance, fidelity) were collected throughout the duration of the program (March-May). Data analysis occurred from June to August, and results were written between August until October. Results were shared with Identity in November.

Chapter 4: Feasibility of implementing a pilot, online community-based mindfulness-based stress reduction program for Latino immigrants and the staff that works with them

Abstract

Introduction: Immigration stress and trauma impact the way Latino immigrants experience everyday life. Mindfulness-Based Interventions (MBIs) reduce stress and strengthen mental health by improving the response to stressors and promoting physical and psychological health; however, they have not been tested extensively with Latino immigrants in the United States, particularly MBIs implemented online. Thus, more information is needed about the feasibility of online MBIs adapted for Latino immigrants.

Methods: This study focuses on the feasibility of an online pilot MBI for Latina mothers and the community staff members that work with them. The study used the Consolidation Framework for Implementation Research (CFIR) to assess fidelity, feasibility, acceptability and appropriateness of the intervention with pilot participants (n=41). Qualitative (three focus groups) and quantitative data were collected to assess feasibility, appropriateness, acceptability and attendance. Fidelity was collected through fidelity logs completed by the instructor and PI.

Results: Acceptability, feasibility, fidelity and appropriateness scored high on the quantitative measures. Inner compatibility with the organization's mission and vision, clients' needs and the organization's receptivity to implement the intervention scored in the medium range. Themes were identified for ten out of the 26 CFIR subcategories.

Discussion: Overall the pilot feasibility study was well received and relevant for the organization and the population they serve. The study's findings provide guidance to others in implementing online mindfulness practices with Latino immigrants and the staff that works with them.

Introduction

Mindfulness-Based Interventions (MBIs) are effective tools to strengthen mental health in diverse populations by improving responses to stressors, increasing adaptability characteristics and resources, and reducing adverse psychological outcomes such as depression, anxiety, trauma-related symptoms, substance use and stress (Brewer, Bowen, Smith, Marlatt, & Potenza, 2010; Brown, Ryan, & Creswell, 2007; Gu, Strauss, Bond, & Cavanagh, 2015; Hofmann, Sawyer, Witt, & Oh, 2010; Ortiz & Sibinga, 2017). While a small yet growing body of evidence shows the benefits of MBIs in Latino populations, existing research often reflects a lack of a community participatory approach to culturally adapt MBI programs for this particular population (Cotter & Jones, 2020), and there is little attention paid to access and participation barriers, such as lack of interest, lack of access to care, lack of transportation, lack of childcare, and other competing family needs (Roth & Robbins, 2004).

A vast body of research shows the advantages and effectiveness of using online platforms and channels for delivering mental health interventions (Andersson, 2016; Spijkerman, Pots, & Bohlmeijer, 2016). Advantages of online delivery include lower costs and higher reach by decreasing some access barriers, such as lack of health insurance, childcare or transportation. However, barriers to the uptake of online MBI include people's preference for face-to-face interventions even when awareness of online programs is high (Apolinário-Hagen, Kemper, & Stürmer, 2017). High attrition rates and low adherence to online interventions also present challenges, especially for unguided formats (T. Fleming et al., 2018).

Implementation research for evidence-based programs seeks to understand the barriers and facilitators to implement these programs in real settings. The Consolidated

Framework for Implementation Research (CFIR) is a well-recognized framework for exploring implementation constructs that contribute to the barriers and facilitators (e.g., feasibility, acceptability, appropriateness and fidelity) of integrating interventions to real life practice (Keith et al., 2017). CFIR has been previously applied in the context of telemedicine (Batsis et al., 2020; Stevenson, Ball, Haverhals, Aron, & Lowery, 2018) to understand barriers and facilitators to implement prevention programs with hard-to-reach and vulnerable populations.

The CFIR is composed of five major domains: 1) *Intervention characteristics*: features of the program that might influence implementation; 2) *Inner setting*: features of the implementing organization such as leadership engagement and implementation climate; 3) *Outer setting*: features of external context such as external policies and incentives; 4) *Characteristics of individuals*: such as the knowledge and beliefs of persons who participate in the intervention; and 5) *Implementation process*: strategies or tactics that might influence implementation, like engaging appropriate individuals in the implementation and use of the intervention, reflecting and evaluating (Keith et al., 2017). Each domain has subcategories, for a total of 26 subcategories across the framework. While all subcategories can be used for the analysis of the implementation process, it is not necessary to include them all (Keith et al., 2017).

The purpose of this study is to apply CFIR to refine our MBI for Latinas and the staff that works with them in a community setting to inform future implementation and long-term success of the program. This study describes a community participatory pilot in a community organization working with Latino immigrant youth and their families. The primary goal of the pilot project was to adapt a well-known, evidence-

based Mindfulness-Based Stress Reduction (MBSR) intervention created by Jon Kabat-Zinn (Kabat-Zinn, 1982) for Latina mothers and the community-based organization's staff members who work with them and who were also Latino immigrants themselves or reflected secondary traumatic stress from their clients. Our findings could provide useful guidance to others in implementing evidence-based mindfulness programs.

Methods

Study Setting and Sample

The study was implemented with staff, *promotoras* (immigrant mothers trained to be community workers) and mothers in a community organization that serves Latino immigrants in Maryland. This organization supports more than 3,000 in-school and out-of-school Latino youth (ages 8-25) and their families who are living in poverty. The organization runs community and school-based youth centers that provide the youth with social-emotional, academic and workforce development supports and opportunities, as well as mental health counseling. The organization also works through bilingual Parent Outreach Workers/Case Managers who assess family needs and connect families to assistance with food, clothing, housing, health (including mental health) care, legal assistance, and public benefits. Demographic characteristics of the study participants can be found in Table 1.

Table 1. *Participant demographic characteristics*

Characteristics	Total Population (*n*=38)	Staff (*n*=15)	*Promotoras*/Mothers (*n*=23)
Female Gender, n (%)	32 (84%)	9 (60%)	23 (100%)
Race, n (%)			
Non-Hispanic White	2 (5%)	2 (13%)	0 (0%)
Hispanic or Latino	36 (95%)	13 (87%)	23 (100%)
Age, n (%)			
18-35	8 (21%)	8 (53%)	0 (0%)
36-50	23 (61%)	4 (27%)	19 (83%)
50+	8 (18%)	3 (20%)	4 (17%)
Country of Origin, n (%)[1]			
USA	5 (13%)	5 (34%)	0 (0%)
Central America	15 (40%)	4 (26%)	11 (48%)
South America	5 (13%)	3 (20%)	2 (9%)
Mexico	3 (8%)	0 (0%)	3 (13%)
Missing	10 (26%)	3 (20%)	7 (30%)
Education Level, n (%)			
Less than High School	8 (21%)	0 (0%)	8 (35%)
High School, Some College or Technical Degree	16 (42%)	3 (20%)	13 (56%)
College or Higher	14 (37%)	12 (80%)	2 (9%)
Employment, n (%)			
Full time	17 (44%)	13 (87%)	4 (18%)
Part time	9 (24%)	2 (13%)	7 (31%)
Unemployed-seeking	6 (16%)	0 (0%)	6 (26%)
Unemployed- not seeking	6 (16%)	0 (0%)	6 (26%)
Time living in US, n (%)[1]			
Born in USA	5 (13%)	5 (33%)	0 (0%)
1-5 years	5 (13%)	4 (27%)	1 (4%)
11-15 years	8 (22%)	2 (13%)	6 (26%)
More than 15 years	10 (26%)	1 (7%)	9 (40%)
Missing	10 (26%)	3 (20%)	7 (30%)

2. Data collected at post-test.

Intervention study design and description

The study tested the *Yo Soy Paz* (I am Peace) program, a group-based mindfulness intervention delivered over eight weeks in an online synchronous format. The intervention components are outlined in Table 2. The original intervention was created

by Jon Kabat-Zinn to train chronic pain patients in self-regulation (Kabat-Zinn, 1982). The intervention has been adapted using a coordinated and systematically guided process based on the ADAPT-ITT framework (Wingwood & DiClemente, 2008). Each weekly session included two mindfulness exercises, reflection questions, open access videos, PowerPoint slides and life examples. The program was led in Spanish by a facilitator, a knowledgeable Latina psychologist with over 10 years of mindfulness experience. All sessions, with the exception of yoga, which was taught by a yoga instructor, were taught by the same instructor. To keep participants engaged, the intervention used different channels to convey the information and to guide the mindfulness practices. Most of the classes had a short video covering one of the topics for the class. Guided meditations were offered primarily through YouTube, but sometimes led by the instructor. For some of the classes, songs to start or end the class to help participants connect with the topic. Short PowerPoint slide shows were included, with the exception of the yoga class, to present reflection questions and key points of the lecture. Nevertheless, most of the time, was spent with the instructor talking with the participants. Pilot study data came from 41 participants: staff (n=15), *promotoras* (n=7), and immigrant mothers (n=16) currently delivering or receiving services from the community organization.

Table 2. *Yo Soy Paz 8 Week Program*

Week	Topic	Activity
1	Overview of the course and theory and evidence behind mindfulness.	Body Scan
2	Reconnecting with my story. A talk about reasons for migration and differences in cultures.	Breathing Meditation
3	Effects of stress in the body and mindfulness exercises to counteract them. (Present-based therapies)	Breathing Meditation

4	Understanding and managing difficult emotions through mindfulness. (Mind-body connection)	RAIN Guided Mediation to Connect with Emotions in the Body.
5	Exercise as health. Practicing yoga exercises at home. (Mind-body connection)	Yoga
6	Integrating the practice of mindfulness into everyday life. Loving Kindness. (Compassion for self and others)	Tonglen Meditation
7	Belonging in life mindfully. Connecting with my roots and with gratitude.	The Tree of Life
8	The program closes with focus groups to talk about lessons learned, likes and dislikes and ways to continue practicing mindfulness.	Focus Groups

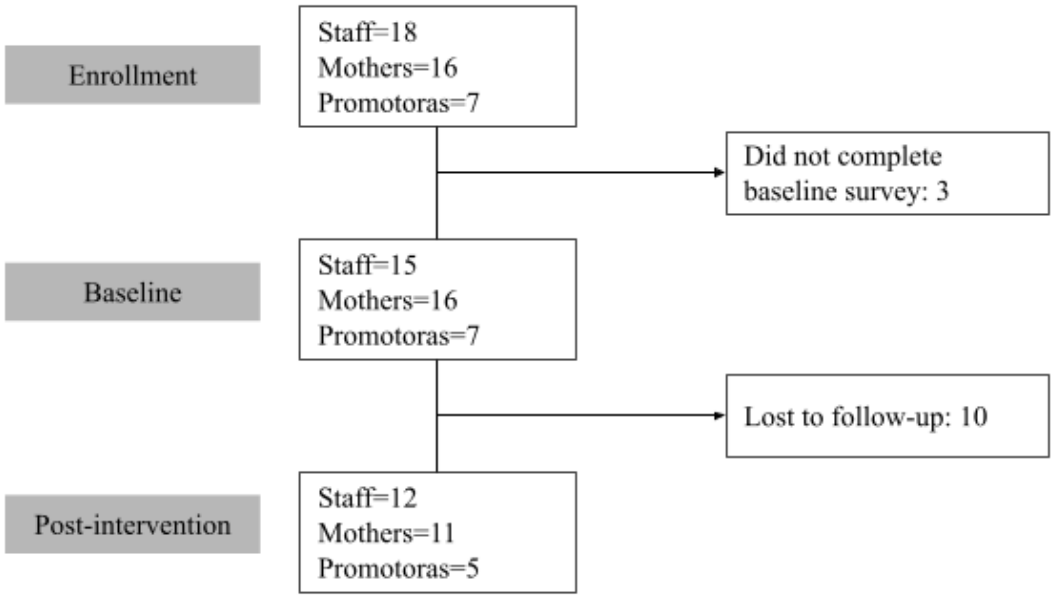
The three groups (Spanish-speaking staff, *promotoras* and mothers) were recruited through the organization. The eligibility criteria for the study were: (a) being 18 years of age or older, (b) fluency in Spanish, (c) receiving or delivering services at the community organization and (d) self-identified as Latina, if part of the *promotoras* or mothers' groups. Non-Latino staff members fluent in Spanish were allowed to participate given the population they serve and secondary traumatic stress they are exposed due to the nature of their work.

Staff members received emails with an invitation to participate in the program along with the informed consent and the link to a required baseline assessment to be completed prior to the first session. *Promotoras* and mothers who were part of the organization's weekly support and training groups were invited to participate. After consenting, the *promotora*s received the link to the baseline survey where demographic information was collected for this paper. Due to literacy barriers in the mothers' group, group leaders conducted the baseline and post-intervention surveys with each participant via telephone. All research procedures were reviewed and approved by the Human Subjects Protection Committee at the University of Maryland.

Data Collection

Demographic data were collected at study entry in March 2021 and attendance data were collected in every session through a self-reported link and at post-intervention in May 2021 for a total of 38 respondents of the 41 participants at baseline (92.6%) and 28 respondents at post-intervention (68.2%). Figure 1 displays the study flowchart. is At week eight, 11 of the 15 staff (73%) participating in the intervention also completed an implementation questionnaire via Qualtrics to assess acceptability, feasibility, appropriateness and inner and outer setting of the intervention.

Figure 1 Study Flowchart



In week eight of the program, the principal investigator conducted a focus group in Spanish over Zoom with each of the participant groups (staff, *promotoras*, mothers). The three one-hour long focus groups (FGs) with n=11 staff, n=9 *promotoras*, and n=10 mothers were audio-recorded and transcribed. In the *promotoras* group, two of the participating members were staff who received the intervention along with the promotoras; 73 percent of the participants participated in a focus group.

Measures

To assess implementation results, we used CFIR's five major domains (intervention characteristics, inner setting, outer setting, characteristics of individuals, and implementation process) and the ten most relevant subcategories for this study. Fidelity was assessed with weekly fidelity checklists completed by the instructor and the PI, along with a log of barriers and facilitators for delivering each lesson for all three groups. Process implementation comments were captured from the barriers and facilitators section of the fidelity checklist and the focus groups. To capture fidelity, a summative score was created for each of the lessons and then converted into a percentage. For lectures where the facilitator and the PI marked all the activities as complete, there was 100% fidelity.

Items to capture appropriateness, acceptability, feasibility and inner and outer setting are detailed in Table 3. Acceptability was assessed with the Acceptability of Intervention Measure (AIM) scale (Weiner et al., 2017), rating the organization's receptivity of the intervention, participant attendance, and the comments about the intervention characteristics such as its design and quality, complexity, and the participants' beliefs about the intervention within the characteristics of the individuals'

domain. Appropriateness was assessed using the Intervention Appropriateness Measure (IAM) scale (Weiner et al., 2017), rating the intervention's fit with the organization's vision and mission, its appropriateness to match the clients' needs, and comments about the inner setting's compatibility and outer setting's clients' needs and resources and tension for change. Finally, feasibility was assessed with the Feasibility of Intervention Measure (FIM) scale (Weiner et al., 2017) and comments about the intervention's characteristics regarding adaptability and cost. All scales were comprised of four items measured on a 5-point scale from 1= completely disagree to 5= completely agree.

Attendance was taken in every class using a short questionnaire at the start of each class, on which participants entered IDs they had earlier created. Since not every participant completed the questionnaires or remembered the ID they had created or would create different IDs for each of the forms they were asked to complete, participants were also asked in post-questionnaires to indicate the classes they attended.

Data Analysis

Quantitative and qualitative data were analyzed concurrently. Means were calculated for all scale items. Higher scores indicate greater acceptability, appropriateness, or feasibility (Weiner et al., 2017). The research team reviewed transcripts for accuracy prior to analysis. All qualitative data were analyzed in Spanish using Dedoose through Template Analysis (Crabtree & Miller, 1999) by two native Spanish speakers (JM and JB). First, we prepared a codebook that was organized by anticipated themes based on CFIR to assess the feasibility, fidelity, acceptability and appropriateness of the intervention. Second, two coders coded each transcript line by

line, refining the codebook as needed. Finally, we compiled final themes and subthemes and translated selected quotes into English.

Results

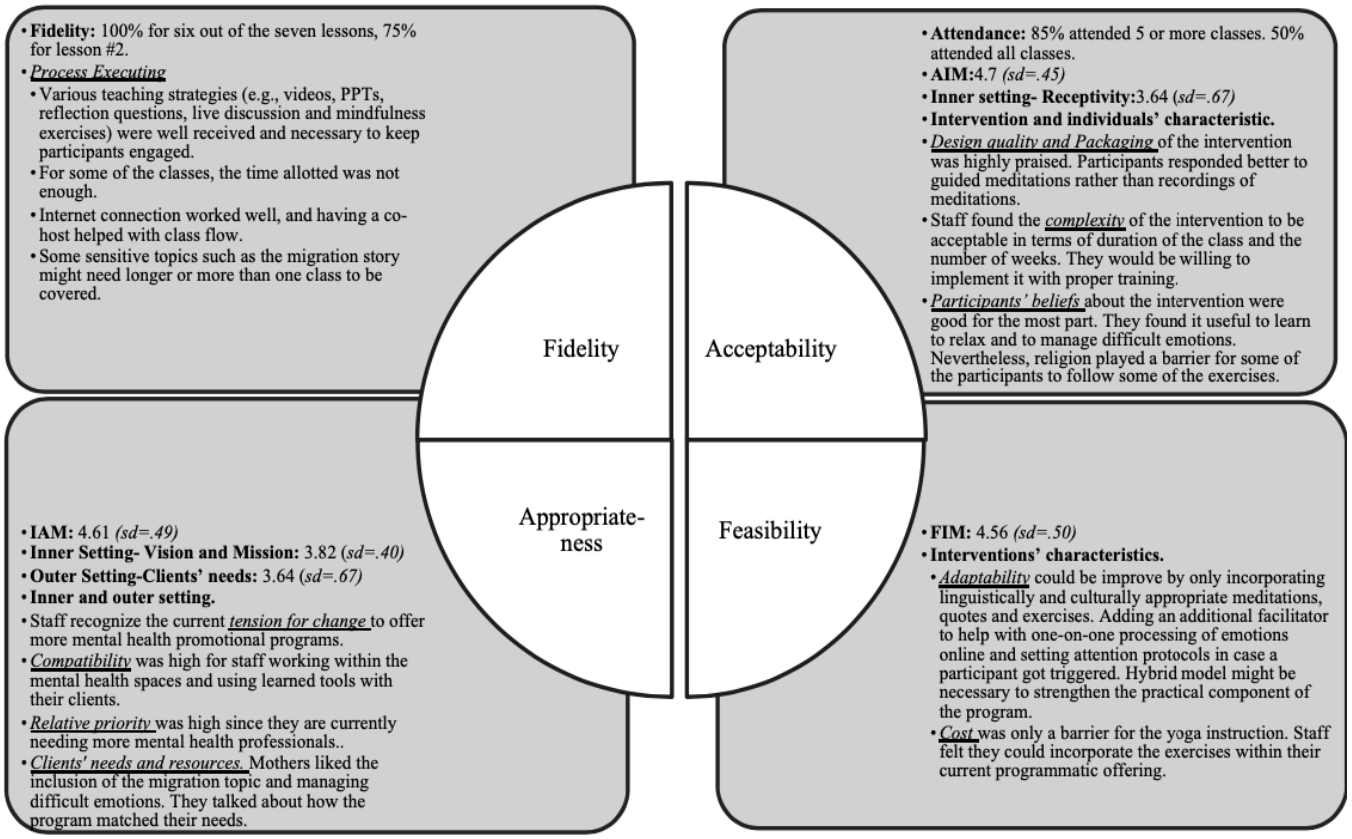
We present the analysis of the data using a joint display (see Figure 1) to focus on the complementarity, divergence and convergence of the data. Acceptability (*m*=4.70 *sd*=.45), appropriateness (*m*=4.61 *sd*=.49), and feasibility (*m*=4.56 *sd*=.50) rated high, and inner and outer setting rated in the mid-range (*m*=3.69 *sd*=.48*) (See Table 3).* Selected quotes reflecting each of the subcategories within the five domains used to assess fidelity, acceptability, appropriateness and feasibility were incorporated in Table 3.

Table 3. *Staff Implementation Questionnaire (n=11)*

	Mean ± SD	**Response Range**
Acceptability	4.70 (.45)	(4-5)
The *Yo Soy Paz* program meets my approval.	4.73 (.46)	
The *Yo Soy Paz* program is appealing to me.	4.73 (.46)	
I like the *Yo Soy Paz* program.	4.73 (.46)	
I welcome the *Yo Soy Paz* program.	4.64 (.50)	
Appropriateness	4.61 (.49)	(4-5)
The *Yo Soy Paz* program seems fitting.	4.64 (.50)	
The *Yo Soy Paz* program seems suitable.	4.64 (.50)	
The *Yo Soy Paz* program seems applicable.	4.55 (.52)	
The *Yo Soy Paz* program seems like a good match.	4.64 (.50)	
Feasibility	4.56 (.50)	(4-5)

The *Yo Soy Paz* program seems implementable.	4.55 (.52)	
The *Yo Soy Paz* program seems possible.	4.64 (.50)	
The *Yo Soy Paz* program seems doable.	4.55 (.52)	
The *Yo Soy Paz* program seems easy to use.	4.55 (.52)	
Inner and Outer Setting	3.69 (.48)	(2-4)
What is the general level of receptivity in your organization to implementing the intervention?	3.64 (.50)	
How does the program relate to the organization's mission and vision?	3.82 (.40)	
How essential is this program to meet the needs of the clients served by your organization?	3.64 (.67)	

Figure 2. *Joint Display Implementation Results*



In terms of fidelity, all sessions except Session 2 had 100 percent fidelity. Session 2 - *Connecting with my [migration] story*, had 75 percent fidelity. In this session, participants spent most of the time answering the opening question *What was your reason for migrating?* The instructor spent some time processing the stories from the participants since most had traumatic elements and thus there was not time for the final meditation.

Process Executing. In some classes the internet dropped while an important discussion was taking place. It was useful to have two co-hosts; if one of the hosts lost internet connectivity, the participants were able to remain online while connectivity was regained. Some parents participated while driving, running errands, taking care of children, or working. This multitasking prevented them from fully engaging with the class content and the practice exercises. Some meditations used at the end of the lessons were long and participants lost focus. The facilitator found that guided meditations under eight minutes worked best for the online environment. Participants also responded better when the meditation was led by the facilitator rather than through a video.

Table 3. General observations per session

Week	Feedback
1	This session was key to set the stage for what was going to be taught during the course. It provided participants with trust about the topics.
2	Lesson time was too short. Mothers and promotoras opened up during the session, but the allotted time was not enough to help them process their emotions surrounding the topic. It was recommended to split the lesson into two or provide a longer session time.
3	Participants responded well to this session and liked learning about the effects of the stress in the body. The Disney video that explains how stress can impact one's health was highly praised and enjoyed by the participants.

4	Participants responded well to session 4, “Managing difficult emotions.” Some participants connected with very difficult emotions. One of them was referred to a mental health specialist by the facilitator.
5	Not all participants had a proper space to do the class, some mothers who joined the session while driving couldn’t participate, and some struggled with flexibility to do the poses. Thus, this class might be better in-person, with an instructor present in the room, and it might be important to consider alternatives strategies such as an all levels chair yoga.
6	Participants reported enjoying the video “empathy vs. sympathy” and the reflection questions.
7	The activity “The tree of life” joined all the concepts learned throughout the course. Sharing the content of their trees was very rewarding for the participants and feedback from the facilitator enriched the discussion even more.

Acceptability

In terms of attendance, out of the 28 respondents that completed the post-questionnaire, 85 percent (n=24) marked they had attended five or more classes. Fifty percent (n=16) marked attending all seven classes. Some of the staff sometimes missed a class due to competing demands. The most inconsistent group was the mothers’ group since most of the mothers participated in the class while also taking care of competing demands like being at work or doing house chores (e.g. babysitting, cleaning a house, picking up children). This was also noted through the participation in the virtual focus groups.

Design Quality and Packaging. From the focus groups responses, participants in all three groups reported enjoying the use of different channels to convey the class content. Some participants preferred the conversations with the facilitator over watching videos that were readily available outside of the session time. Notwithstanding, the staff felt that videos were a good tool for mothers who are more visual and that the videos enhanced the class topic. Parents and staff also liked the combination of learning about new topics and practicing mindfulness strategies during the class.

Complexity. In terms of the length of the class and the number of weeks, participants liked the one-hour duration of the class and the number of weeks. In terms of acceptability of the complexity and long-term sustainability, staff members said they would be willing to teach the program themselves, but that they would require additional training to do so.

Participants' Beliefs about the Intervention. Parents and staff liked the explanation about mindfulness before practicing the mindfulness exercises. This also helped clear some participants' preconceptions around mindfulness. Some mothers and *promotoras* mentioned struggling with practicing yoga, meditation or accepting quotes, videos or stories that were based on other religions since they were taught in their home countries by family members or religious leaders that such practices were negative. Participants claimed they had learned a lot from the class, and that they had benefited from having a space where they could talk about their feelings. They also talked about discovering or rediscovering the benefits of mindfulness for relaxation and as a way to become aware of and take care of their emotional health.

Participants shared learning how to observe their emotions, as well as exercises they could practice to cultivate a non-reactive, non-judgmental response to their emotions or difficult situations. They liked learning about localizing the emotions in their bodies as this would give them insights about the true emotion they were experiencing and clues on how to navigate it. Participants talked about noticing their strengths and learning how to cultivate a non-judgmental, self-compassionate attitude towards themselves.

Feasibility

Adaptability. While having a mindfulness program in Spanish was seen as a great advantage, one staff member recommended having culturally and linguistically appropriate meditations. Another staff member recommended adding additional components to the program when implementing it with youth, such as incorporating an artistic component to help youth express their feelings. On the other hand, staff members talked about setting attention protocols in case some of the exercises or topics triggered a participant, and having a second facilitator that could help triggered participants one-on-one in a breakout room. In order to help participants feel comfortable sharing difficult emotions, one staff member also recommended adding tools to strengthen communication and self-esteem. Finally, staff members recommended not talking about different religions to the mothers. As a solution, they proposed including quotes without the authors or including more neutral quotes and content.

In terms of delivering the class online, the focus groups discussed advantages and disadvantages. One of the biggest disadvantages noted by the staff and commented by mothers was lack of a quiet space in which to practice the meditations and exercises. As noted by one of the group leaders, getting mothers to participate was also more difficult. To address this, a staff member recommended calling mothers by their names and rotating who gets to share in each of the sessions. Staff also shared that online delivery made it difficult to help mothers with literacy barriers for activities that required writing. Staff also reported that mothers had multiple distractions while online and an in-person program would help alleviate this issue. Nevertheless, mothers reported enjoying the online format since it reduced transportation time and allowed

them more flexibility with their schedule, since they could watch their children and make dinner while listening to the class.

Cost. The only instance where cost was posed as a barrier by staff was for the yoga instructor since this session requires hiring a skilled instructor. In terms of implementing the other course sessions, staff members agreed they could incorporate them into programs offered to existing and new groups.

Appropriateness

Tension for Change. Staff from the focus groups reported the importance of mental health promotional programs for their already vulnerable clients whose mental health needs increased due to the COVID-19 pandemic. Staff mentioned having similar initiatives such as community mental health programs to offer spaces where healing can occur due to the rising demand for these services.

Compatibility. Staff shared how the program aligns with the organization's vision, in particular of those working within the mental health spaces. One staff member specifically cited mindfulness as a useful tool to help clients deal with the stress and anxiety from daily life. Since participating, staff mentioned using the activities or videos from the program with their clients.

Relative Priority. Staff members commented on the usefulness of the program as a preventative tool with community and individual development. Staff members mentioned the importance of helping their clients cultivate awareness of the present moment to improve results and participation of their clients in other programs. The organization also noted the challenge in finding a therapist that can address the needs of their clients and that they currently lack enough therapists to meet demand.

Clients' Needs and Resources. The organization identified the topic of managing emotions and how this can affect family relationships, as a central need for the parents they serve. This was corroborated by the mothers and *promotoras* during the FGS. Group facilitators mentioned how support groups that focus on mental health help parents to process what they are feeling, to not feel alone with their feelings, and to find alternative ways to solve a situation. They also recognized the importance of teaching parents how to manage stress. Parents liked talking about their migration story. They agreed this was an important topic for them, and while remembering their migration stories was painful, they were able to find strength by reflecting on everything they overcame and the people who helped them. See table 4 for selected quotes for the different domains.

Table 4. *Selected Quotes Implementation Elements*

Staff	***Promotoras* and Mothers**
Design Quality and Packaging	
"I liked the way the class was structured because you listen and you learn at the same time. Only talking is not enough. I liked practicing everything that was explained to us, and that way we can also practice it at home. I really liked it that way."	*"The reflection questions helped me to open up to the subject. I used them as a baseline at the start of each lesson and I liked the way they were raised. It was the only time during class that I would actively participate."*
"I really loved that combination of the childhood materials, the creation of the tree of life to gradually structure what we had learned, the body scans, and sharing with the group. And as some people would say, by looking for perfection I would not like to ruin what is already good."	*"I liked listening and learning at the same time. I don't like it when we just talk and talk amongst ourselves. I like to put into practice each thing that was explained to us."*
Complexity	

"I also think the number of weeks was good; they went by really fast, and the amount of time per class was also good."
"Not sure if we have a curriculum, but I would like to receive the curriculum, read it at least three times to really understand it because you are professionals in what you do, but we just facilitate what is given to us so we do need more training."
"I am confident in implementing it and it is something that can help parents to reflect on their past, their present and prepare for their future in a better way."

Participants' Beliefs about the Intervention

"We all have our own problems and if it wasn't for this space of being able to say 'Oh, [co-worker's name] is also going through this. So for us, is a moment where we can be together and learn about methods on how to navigate our emotions."
"I think all tools that can help us focus more in the present moment are important […] I think this is a hard exercise during these hectic times where you have multiple responsibilities and difficult situations […] To be in the present moment, for me that is still very present."
"This class is not much about talking but about learning. We really learned a lot of things that would improve our wellbeing and our health. Everything was great, very interesting."
"I respect other beliefs, but I only believe in one God, Jesus Christ, and that was a barrier for me, because I don't approve of following other traditions."

Adaptability

"Maybe some meditations that are recorded (in YouTube) are very long. Maybe it is because we are at the zoom level so the perception is not the same, making it easy to get distracted."
"I think it is important to find or record someone who is from the countries we work with so that it sounds more familiar. But I know that it is extremely difficult to find meditations in Spanish, because when I find them they are all Spanish from Spain."
"[The program] helped me a lot and I think it would help our clients a lot, both children and parents. We already have that notion of our emotions at a certain age, to accept them but perhaps we need more training."

"When we do these types of exercises [it is important] to have [an attention] route. We call it a route, a care protocol for when that particular moment occurs [people having a critical moment when exteriorizing their emotions]."

Tension for change

"Some of our youth clients are going to need professional therapy. By introducing some of the strategies we learned, we can help them deal with their current stress and they might not need the help of a professional therapist. This can be a tool that we can introduce to them and they can dig deeper if they want to do so."
"Recently we have more youth with strong emotions and more families with problems, including violence within the family."

Compatibility

"By talking, listening, and sharing, clients can find healing […] and that's exactly what we try to do every day."
"I really liked what the videos that you chose taught us. Many times I wrote the title of the video to show it to our group of parents where we talk about resilience, communication, relationships and such. It really helped us to implement the same activities that we were learning in the course with them."

Relative Priority

"When we are with our clients, we always ask them to be present in mind and body during the activity. Some of the mothers need to cook or watch their children but we have started asking them to be fully present in the session to be able to work better with them. That has been a great lesson."
"The therapists we have are not enough. If we could implement this program, with the proper training, I think it would be very useful."

Clients' needs and resources

"For the mothers to be able to identify their emotions and to acknowledge how these are affecting their lives, stress levels, and family environment helps them not to feel so guilty or so alone. To be able to connect with other mothers, to know that they might be feeling in a similar way and to know that it is normal to feel certain emotions in particular occasions [is helpful]."

"My favorite part was when we talked about migration. In this country we are migrants. But we won't give up. We can accomplish something of ourselves and thanks to God we have these programs to be able to improve our lives."

"Even though it is sad to remember (our migration story), everything we have been through, it is very nice to remember what we have been through, what we are currently living, and how we are moving forward in life. There are a lot of people that help you move forward in life. When you are about to give up, someone shows up and gives you a hand. It is really nice, and the migration topic is very nice."

"Before the program, I felt that I couldn't solve my problems. I felt more frustrated, before I was more frustrated than now."

Discussion

The project was intended to evaluate the appropriateness, acceptability and feasibility of an adapted MBI pilot for immigrant Latina mothers and the staff workers who work with them. Overall the pilot study was well received and deemed relevant for the organization and the population they serve. The execution process comments provided insights on which elements of the program could be improved, such as the long recorded meditations, and which should remain, such as the informational videos as well as the *"effects of stress"* and "*managing emotion"* sessions.

Data collection had two main barriers. The first barrier was the use of self-created IDs. IDs had to be matched and not all participants remembered the first IDs they wrote or used a different format (e.g., caps, written month of birth, only one initial) for the baseline ID, the attendance ID and the post-intervention ID. Future studies should consider sending the surveys directly to the emails of the participants with a predetermined ID which will make pairing data much easier. The second barrier with data collection was found in the mothers' group due to low literacy levels. Some of the mothers did not know how to write or read. As a way to address this barrier, the group leader had to collect the information through the phone for both the baseline and post-intervention questionnaires. No attendance data through weekly questionnaires was collected for this group. Future interventions should keep this in mind as they design the data collection protocol since it might require hiring a cultural sensitive person who speaks the language of the focus population to collect the data with each of the participants in person or by phone.

Acceptability and attendance scored high by those who completed the implementation and post-intervention questionnaire. Nevertheless, organization's receptivity was rated lower than its acceptability, which could be a result of competing demands that are tackled by the organization preventing them from engaging in additional programs. The design and the quality of the intervention seemed fitting to help participants learn and incorporate mindfulness techniques into their everyday lives, manage stress and understand difficult emotions. This is congruent with other mindfulness studies conducted with similar populations (Li et al., 2021; Ryan, Maurer, Lengua, Duran, & Ornelas, 2018; Tobin et al., 2021). Nevertheless, given the concerns

expressed by some mothers and staff members about learning or practicing other religions, we recommend a more neutral approach that does not conflict with cultural or religious beliefs, as it has been brought up in other studies (Cotter & Jones, 2020; Tobin et al., 2021).

Acknowledging and addressing the needs of the focus population within the different levels of the socio-ecological model is imperative when implementing these types of programs. In other words, MBIs should be complementary to other programs and not the sole focus. Staff members did highlight an increasing tension for change to offer more promotional mental health programs, for youth and their families as a way to help clients cope with strong emotions and stress and deal with the shortage of therapists that the organization is currently facing. Though recruiting the organization's staff as participants was not an original objective of the program, it became clear that mindfulness-based stress reduction interventions could be useful for both staff and clients. This is an innovative approach since MBIs focusing on Latino immigrant populations seldom include the staff that works with them.

By working with the community organization, we were able to address critical engagement and participation barriers and challenges such as recruitment, training to use Zoom and other online tools, and weekly motivation to participate in the classes. Strong relationships between the staff members who were supporting the mothers' and *promotoras* groups logistically allowed for a trusting environment from the beginning, which is crucial for trauma-informed care (Miller et al., 2019). Programs that seek to deliver MBIs to Latinos should strongly consider partnering with an organization that already has existing relationships with the community as well as considering the

cultural competence of the people developing and implementing MBIs with Latino immigrant populations (Fleming et al., 2022).

To increase appropriateness of MBIs interventions with Latinos, experts have noted the importance of doing no harm through mindfulness interventions since some mindfulness exercises can be triggering and resurface past trauma (Baer, Crane, Miller, & Kuyken, 2019; Van Dam et al., 2018). Additionally, previous research has found that the most successful MBIs are led by experienced facilitators who practice mindfulness (Kabat-Zinn, 2003; McKeering & Hwang, 2019) and where participants feel they are being supported by the instructor (Apolinário-Hagen et al., 2017). Therefore it is recommended that the curriculum is delivered by someone with an extensive background and experience on mindfulness and/or psychology, and who understands the culture and background of the population that is being served.

Even though the migration topic discussion was challenging for the staff members, the mothers and *promotoras* reported the greatest benefit from this topic. We recommend moving this section to a later week of the curriculum, allowing for two sessions or a longer session to cover the topic, providing spaces for the mothers to process their emotions and avoiding triggering questions such as "What were your reasons for migration?" and instead focusing on what they learned and how they have grown since they migrated to the new country.

While cost was not mentioned as a barrier, it could be an issue if the organization needs to hire an external facilitator with knowledge and a personal practice in mindfulness who could implement the curriculum. Even though the program was well received and the need for a similar program was brought up several times,

there still seems to be some restrictions within the inner setting such as the organizations' and clients' priorities that could act as barriers to implement these types of programs in the future.

Internet connectivity barriers and the availability of a quiet space should be considered when implementing this program online. Competing demands, in particular for the mothers and *promotoras*' groups such as house chores, taking care of children and being at work should be noted as barriers for full engagement of these groups in the online program. Mothers with low literacy levels were more likely to not complete some of the exercises that were assigned (e.g. "The Tree of Life") and could have benefited from in-person guidance. Nevertheless, online delivery was well received by the mothers, staff and promotoras, yet the staff would have preferred to have a hybrid model when they themselves deliver the program to their parents or youth groups. Mothers enjoyed the flexibility of learning online and connecting with others, while still being able to take care of their children, avoid commuting, and do some house chores. Future studies should consider including a clause in the informed consent that prevents people participating while driving to avoid accidents. Nevertheless, these same advantages were also barriers for being fully present and having an adequate space to practice the meditations and physical exercises (yoga). A hybrid model of the program could address this issue where most of it is done online but the particular practical tools – meditation and yoga -- are taught in-person.

Strengths, Limitations and Future steps.

This study was unique in the sense that it was culturally and linguistically adapted to the needs of the population served using a community-based approach, it was

delivered completely online, and it included staff members within the community organization. Participants had a trusting relationship with the organization and among themselves, which helped with the class flow and with receiving the information. Using both qualitative and quantitative methods also helped to provide a better understanding about the effects and implementation outcomes of the program.

Other studies have highlighted the current gap in research of MBIs for Latinos that include a comparison or control group to assess efficacy of the intervention (Cotter & Jones, 2020; Van Dam et al., 2018). Using physiological markers for stress in addition to self-reported measures and capturing data beyond the post-intervention could have strengthen the results. Future studies could benefit from collecting trauma-related follow-up data and physiological markers to assess the real impact of these types of programs on stress, PTSD and well-being, among other outcomes.

Chapter 5: Pilot results from an online, trauma-informed, mindfulness-based stress reduction program for Latino immigrants and the staff that works with them

Abstract

Objective: Immigration is often associated with high stress and unique traumas that may impact the way people experience their everyday lives and difficult situations. Trauma-informed interventions may help to reduce post-migration stress in Latino immigrants and the staff working with them.

Methods: The pilot study tested *Yo Soy Paz* (I Am Peace), an evidence- and trauma-informed mindfulness-based intervention for immigrant Latinos in a community setting. The eight session pilot intervention was delivered through synchronous online sessions to three cohorts (N=41) of participants: mothers, *promotoras* (mothers trained as community health workers), and staff at a community-based organization in Maryland. Quantitative (pre-post questionnaires, n=38) and qualitative (focus groups, n=30) data were collected to examine participant perspectives and self-reported impacts of the program on stress, mindfulness, mind-body connection, subjective well-being, and perceived physical and mental health.

Results: Mothers' and *promotoras*' self-reported mean scores for subjective wellbeing and perceived physical and mental health increased significantly from baseline- to post-test. No significant changes were observed in surveys completed by the staff, even though focus group participants reported meaningful improvement. Participants in the three groups indicated the program was appropriate for Latina immigrant mothers and the staff serving them.

Conclusion: Mindfulness-based, trauma-informed stress reduction programs that have been culturally adapted for Latino immigrant populations and the staff that work with them could improve well-being and overall mental and physical health. Implications for practice, policy, and research are discussed.

Keywords: Mindfulness, Immigration, Latino/Hispanic/Latinx, Trauma, Stress, Community-Based Intervention

Introduction

One in three Latinos living in the US is an immigrant (Batalova & Bolter, 2020). Immigration is linked to high stressors and unique traumas that may impact the way people experience their everyday life and difficult situations (Berger & Weiss, 2006, Sangalang et al., 2019). Post-migration stress, linked to experiences before and during migration, can be a robust predictor of poor mental health outcomes, psychological distress and diminished well-being in immigrant populations (Sangalang et al., 2019), and can have an effect on how people tackle daily stressors (Kleber, 2019). Post-migration stressors include dangerous neighborhoods, adverse working and living conditions, and lack of employment and/or health benefits, as well as acculturation stress, discrimination, threats of deportation, anti-immigrant rhetoric, transnational family conflicts, separation and harassment (Parker et al., 2020; Sangalang et al., 2019). Such significant stressors can persist throughout the lifetime in the new country (Berger & Weiss, 2002).

The way an individual experiences stress can directly impact neurological and other biological processes in the body (Miller & O'Callaghan, 2002; Sandi, 2013; Shonkoff & Garner, 2012; Yaribeygi et al., 2017). For example, a person with a previous history of adverse childhood experiences or other traumatic events may react to low stress situations with the same intensity as in high stress situations. This hyperactivation of the stress response system results in an increased allostatic load (i.e., increased stress hormone levels), which negatively impacts physiological dysregulation, behavior, learning, ability to adapt to adversity, and physical and mental well-being (Miller & O'Callaghan, 2002; Sandi, 2013; Shonkoff & Garner, 2012;

Yaribeygi et al., 2017). Traumatic experiences also have short- and -long-term consequences for the emotional and physical well-being of a person. Common emotional responses to trauma include sadness, anxiety, depression, guilt, anger and general irritability (Carter et al., 2016; McFarlane, 2010). Physical consequences of trauma and post-traumatic stress include fatigue, muscle tension, hypertension, obesity, and cardiovascular disease (McFarlane, 2010).

Therapies and approaches that are present-centered (i.e., programs that connect the individual with the present moment such as mindfulness exercises) (Frost, Laska, & Wampold, 2014), that foster kindness for self and others (Kearney et al., 2013), that help with the mind-body connection, and that help the individual connect with their emotions in their body (Kabat-Zinn & Hanh, 2009) can help to overcome dissociation and improve trauma-related negative effects (van der Kolk, 2014). Trauma-informed care (TIC), which is based on the knowledge and understanding of trauma and its far reaching implications (SAMSHA, 2014), has been broadly recognized as an effective framework for working with immigrant Latino youth and their families (Jolie et al., 2021). In a strengths-based – rather than a deficits-based -- approach, TIC can draw from personal and community strengths, to allow for growth and healing after experiencing trauma (Miller et. al., 2019). Interventions that aim to reduce stress and improve mental health in Latino immigrants should consider incorporating a trauma-informed approach (Carter, 2007; Miller, Brown, Shramko, & Svetaz, 2019; Van der Kolk, 2014) that takes into consideration the lived experiences of Latino immigrants in the way they cope with daily stressors.

Mindfulness-Based Interventions (MBIs) are effective tools to strengthen mental health in diverse populations by improving people's responses to stressors, increasing adaptability characteristics and resources, and reducing psychological outcomes such as depression, anxiety, trauma-related symptoms, substance use, and stress (Brewer, Bowen, Smith, Marlatt, & Potenza, 2010; Brown, Ryan, & Creswell, 2007; Gu, Strauss, Bond, & Cavanagh, 2015; Hofmann, Sawyer, Witt, & Oh, 2010; Ortiz & Sibinga, 2017). While there is a small yet growing body of evidence that shows the benefits of MBIs in Latino populations (Cotter & Jones, 2020; Li et al., 2021; Ryan, Maurer, Lengua, Duran, & Ornelas, 2018; Tobin et al., 2021), limitations of existing research include lack of a community participatory approach to culturally and linguistically adapt MBI programs for this particular population (Cotter & Jones, 2020), inclusion of caregivers of Latino immigrants who might experience second-hand trauma and may be Latino immigrants as well (Akinsulure-Smith, Espinosa, Chu, & Hallock, 2018; Lusk & Terrazas, 2015), and addressing participation barriers, such as lack of interest, lack of transportation, lack of childcare, and other competing family needs (Roth & Robbins, 2004).

The current article describes the results of the pilot study for the *Yo Soy Paz* (I am Peace) program, an online, synchronous, one-hour per week over eight weeks, group-based mindfulness intervention delivered to the staff and parents at a community organization serving Latino immigrants in Maryland. The study tested an evidence-based (Kabat-Zinn, 1982) and trauma-informed (van der Kolk, 2014) stress reduction MBI that was adapted using the ADAPT-ITT framework (Wingood & DiClemente, 2008) to meet the needs of the focus population. This pilot study uses mixed methods

to describe pre-post changes in stress, mindfulness, mind-body connection, subjective well-being, perceived physical and mental health, management of difficult emotions, and ability to relax.

Methods

Participants

Pilot study data came from 41 participants: staff (n=18), *promotoras* (immigrant mothers trained as community workers) (n=7) and immigrant mothers (n=16) delivering and/or receiving services from a community organization. The Maryland organization provides of school and community-based positive youth development services with youth and their families. Parent Outreach Workers/Case Managers also assess family needs and develop action plans to connect families to needed resources. The eligibility criteria to participate in the pilot were: (a) being 18 years of age or older, (b) fluency in Spanish, (c) receiving or delivering services at the community organization and (d) self-identified as Latinos if part of the *promotoras* or mothers' groups. Non-Latino staff members fluent in Spanish were allowed to participate due to the population they serve and the similarities of topics and second-hand trauma they are exposed in their work. Participant demographics are shown in Table 1.

Table 2. *Sample Demographics (N=38)*

Characteristics	Total Population (*n*=38)	Staff (*n*=15)	*Promotoras*/Mothers (*n*=23)
Female Gender, n (%)	32 (84%)	9 (60%)	23 (100%)
Race, n (%)			
Non-Hispanic White	2 (5%)	2 (13%)	0 (0%)
Hispanic or Latino	36 (95%)	13 (87%)	23 (100%)
Age, n (%)			

18-35	8 (21%)	8 (53%)	0 (0%)
36-50	23 (61%)	4 (27%)	19 (83%)
50+	8 (18%)	3 (20%)	4 (17%)
Country of Origin, n (%)[1]			
USA	5 (13%)	5 (34%)	0 (0%)
Central America	15 (40%)	4 (26%)	11 (48%)
South America	5 (13%)	3 (20%)	2 (9%)
Mexico	3 (8%)	0 (0%)	3 (13%)
Missing	10 (26%)	3 (20%)	7 (30%)
Education Level, n (%)			
Less than High School	8 (21%)	0 (0%)	8 (35%)
High School, Some College or Technical Degree	16 (42%)	3 (20%)	13 (56%)
College or Higher	14 (37%)	12 (80%)	2 (9%)
Employment, n (%)			
Full time	17 (44%)	13 (87%)	4 (18%)
Part time	9 (24%)	2 (13%)	7 (31%)
Unemployed-seeking	6 (16%)	0 (0%)	6 (26%)
Unemployed- not seeking	6 (16%)	0 (0%)	6 (26%)
Time living in US, n (%)[1]			
Born in USA	5 (13%)	5 (33%)	0 (0%)
1-5 years	5 (13%)	4 (27%)	1 (4%)
11-15 years	8 (22%)	2 (13%)	6 (26%)
More than 15 years	10 (26%)	1 (7%)	9 (40%)
Missing	10 (26%)	3 (20%)	7 (30%)

1. Data collected at post-test.

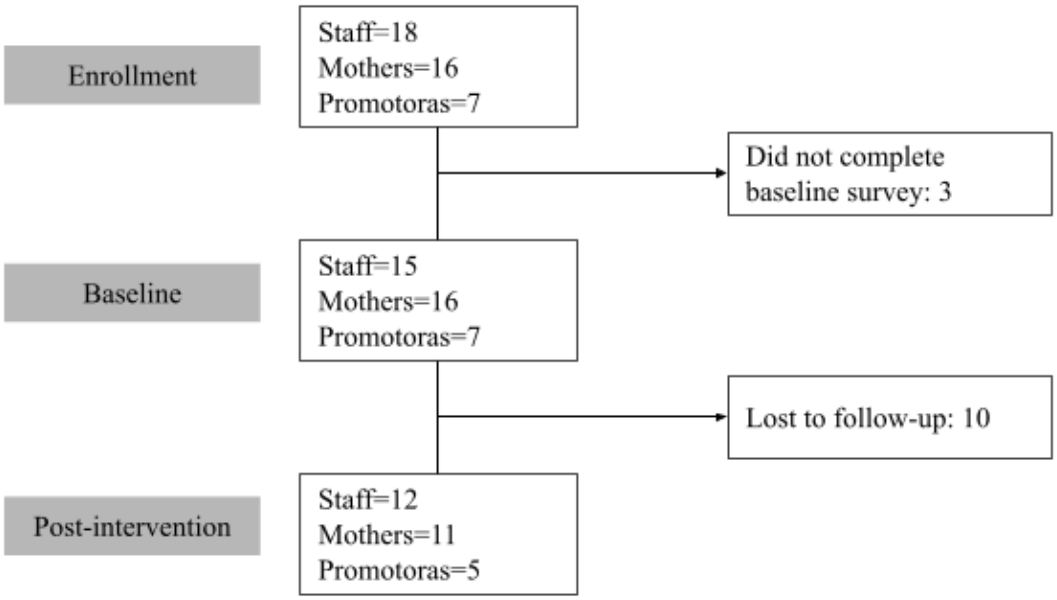
Data Collection

Survey data were collected at study entry in March 2021, and self-report attendance data were collected in May 2021 for a total of 38 respondents of the 41 participants at baseline (92.6%), and 28 respondents at post-intervention (68.2%). The study flowchart is presented in Figure 1. The three MBI groups (Spanish-speaking staff, *promotoras*, and mothers) were recruited through Identity. Staff members received emails inviting them to participate in the program along with the informed consent information and the link to the baseline assessment to be completed prior to the first

session. *Promotoras* and mothers who were part of weekly education and support groups were verbally consented by the group leaders. After providing consent, *promotora*s received the link to a Qualtrics survey to be completed prior to the first session. Due to literacy barriers for those in the mothers' group, the organization's group leader conducted the baseline questionnaires individually via phone in Spanish.

Demographic characteristics as well as primary and secondary outcome measures were collected through the questionnaires. In addition, attendance was collected on the post-intervention questionnaire. All documents were provided in Spanish. Similar to the baseline questionnaires, post-intervention questionnaires were conducted online via a Qualtrics survey for the staff and the *promotoras* groups, and over the phone for the mothers' groups. On week eight of the program, the principal investigator conducted focus groups in Spanish with each of the three groups of participants. *Promotoras* and mothers received a $20 gift card for their participation.

Fig 3. Study flowchart



Primary and Secondary Outcome Measures

The study's primary outcomes were perceived stress and perceived overall physical and mental health. The study's secondary outcomes included mind-body connection, mindfulness, and subjective well-being (flourishing). Table 3 outlines the instruments that were used to capture the primary and secondary outcomes.

Table 3. *Data Collection Instruments*

Measure	Scale Range	Description
Primary Outcomes		
Perceived stress	0-5	The Short-Form Perceived Stress Scale (PSS) (α=.74), is a 4-item measure of the degree to which situations in one's life are appraised as stressful (Cohen et al., 1983), with a 5-point response scale (0 = never to 5=always). Two items were reverse coded so that a higher number equates to higher levels of perceived stress
Perceived overall physical and mental health	1-5	Two questions: How would you rate your overall physical health? How would you rate your overall mental health? The questions were asked on a Likert type scale from poor (=1) to excellent (=5). This measurement has been used in several studies, and its reliability is accepted (Bombak, 2013).
Secondary Outcomes		
Mind-body connection	1-5	The Scale of Body Connection (SBC) (Price et al., 2017), computed alpha of (α=.666 at pre-test and - α=.807 at post-test) consists of 20 self-report items about two distinct dimensions of the mind-body connection: body awareness (BA) and bodily dissociation (BD). Items are on a 5-point Likert-type scale measuring current experiences, scale ranges from never (1) to all the time (5). Two questions were removed following the advice of the community partners (*Aware during sexual activity and Separated during sexual activity*).
Mindfulness	1-7	The Mindful Attention Awareness Scale (MAAS) (α=.757-α=.870) (Osman et al., 2016) is a 15-item scale designed to assess the short-term or current expression of a core characteristic of mindfulness. We used a short-version of the MAAS scale made up by five questions with response choices ranging from 1=not at all to 7=very much.
Subjective wellbeing	1-6	The Mental Health Continuum short form (MHC-SF) (α=.694-α=.749) (Keyes et al., 2008) has 14 items. Item response options are based on a 6-point Likert-type scale ranging from 1=never to

6=every day.

Focus Groups

To assess acceptability and appropriateness of the intervention, a focus group guide was developed to structure the focus groups. Participants were asked about their satisfaction with the program, the benefits of the program, their interest in the content, and their use of skills outside the program. Focus groups were conducted via Zoom in Spanish by the PI, a native-speaker, using the interview guide developed by the research team. All focus groups were recorded and transcribed verbatim prior to analysis to be analyzed in their original language.

Statistical Analysis

We used a self-created ID number to link the baseline questionnaire (n=38) to the post- intervention questionnaire (n=28). We ran descriptive statistics to assess the demographics of the group. Items in each scale were added and divided by the total number of items to get an average score for each of the scales. Higher scores represent a more desired level of the attribute measured. Internal consistency reliability was calculated using Cronbach's alpha for all the scales at baseline and post-test. All scales had a Cronbach's alpha above α=.65 indicating acceptable reliability. We also reviewed the data for missing values. We calculated the mean from available items if a respondent was missing one question from the scale. This was done for two participants for the Flourishing scale who were missing one item (12% of the scale at post-test) and five participants for the Mind-Body scale who were missing an item (5% of the scale at post-test). All other data were complete. One sample t-tests were used to assess

changes mean scores of perceived stress, flourishing, mindfulness, and mind-body connection from baseline to post-test.

The focus groups (*N=3*) with staff (*n*=11), mothers (*n*=10) and *promotoras* (*n*=9) were audio-recorded and transcribed in Spanish. In the promotoras group, two of the participating members were staff who received the intervention along with the promotoras. The research team reviewed the transcripts for accuracy prior to analysis. All qualitative data were analyzed in Dedoose using Template Analysis (Crabtree & Miller, 1999). First, we prepared a codebook that was organized by anticipated themes. Second, two coders who are native Spanish speakers (JMB and JB) coded each transcript line by line, refining the codebook as needed. After the first round of coding, the codebook was refined with additional codes discussed by the two coders and transcripts were recoded with the additional codes. Finally, we compiled final themes and subthemes and quotes were translated into English.

Results

Primary and Secondary Outcomes

As shown in Table 3, staff reported an increase in overall physical health, overall mental health, subjective well-being, and perceived stress; but also reported lower body dissociation but lower body awareness. However, none of the mean differences were statistically significant. For the mothers and *promotoras* groups, participants' reported significant increases in subjective wellbeing (t=3.24, *p*=.006), perceived physical health (t=3.59, *p*=.003) and perceived mental health (t=4.18, *p*< .001). Body awareness increased and body dissociation decreased but the change

was non-significant.

Table 3. *Sample Descriptive for Primary and Secondary Outcomes by Group*

		Staff *(n=12)*					***Promotoras* and Mothers *(n=16)***				
		Pre		**Post**			**Pre**		**Post**		
	Range	**M**	**SD**	**M**	**SD**	**t-test**	**M**	**SD**	**M**	**SD**	**t-test**
Perceived Stress	1-5	2.06	0.57	2.08	0.40	.00	2.35	0.73	2.18	0.68	-1.43
Perceived Physical Health	1-5	3.75	0.71	3.83	0.86	-.43	2.65	1.11	3.60	0.91	3.5**
Perceived Mental Health	1-5	3.25	0.62	3.42	0.67	1.00	2.96	0.98	3.73	0.96	4.18**
Subjective Well-being	1-6	4.28	0.40	4.35	0.40	.84	4.34	0.37	4.57	0.28	3.24*
Body Awareness	1-5	3.57	0.65	3.54	0.72	-.20	3.80	0.46	3.92	0.64	.55
Body Dissociation	1-5	2.25	0.54	2.16	0.61	-.39	2.30	1.02	2.38	.42	-.24
Mindfulness	1-7	4.62	1.15	4.55	0.78	.00	5.21	1.23	5.20	1.66	-.02

*p<.05 **p<.001

Template analysis of qualitative focus group data resulted in two themes - acceptability and appropriateness - and three subthemes - perceived benefits, interest in content, and use of skills outside the program, as described below. Quotes from staff and from *promotoras* and mothers to support these themes are presented in Table 4.

Acceptability: Perceived Benefits of the Program and Interest in Content

Nearly all participants reported that they benefited from receiving the program and that they found the content interesting. Their comments ranged from becoming aware of the present moment, learning the benefits of slowing down to live more intentionally and discovering or rediscovering the benefits of mindfulness for relaxation and as a way to become aware of and taking care of their emotional health. Some participants mentioned being aware of mindfulness as a practice but not really

incorporating it into their lives and some others mentioned how the topic was new to them and they have found it useful to relax. Participants enjoyed learning about the different topics, such as managing difficult emotions and learning about the response and physiology of stress.

Appropriateness: Practical Application of Learned Skills

Most of the participants talked about their experience using the exercises learned in class to foster relaxation and manage difficult emotions, especially in personal relationships or painful situations. Some participants also shared that they learned to cultivate a non-judgmental attitude towards themselves and to foster self-love. Participants learned how to observe their emotions, to not be as reactive in difficult situations. They learned exercises to cultivate a non-reactive, non-judgmental response to their emotions, and mentioned benefiting from this practice, in particular as it related to improving family dynamics. Participants from all three groups found comfort in sharing their difficult emotions with others since it made them feel like they were not alone in going through a difficult situation.

Staff shared how they had been using the tools that they had learned from the program to help and to better understand their clients. One staff member specifically cited mindfulness as a useful tool to help clients deal with the stress and anxiety from daily life. Since participating, staff mentioned using the activities or videos from the program with their clients. They also commented on the usefulness of the program as a mental health promotional tool at the community and individual level. Staff members mentioned the importance of helping their clients cultivate awareness of the present

moment to improve results and participation of their clients in other programs offered by the organization.

A strong testimony regarding the benefits of mindfulness came from a staff member who, after experiencing trauma in her home country, found asylum in the US. She shared that the program had helped her to reduce her PTSD scores from 55 to 14, as measured by her psychologist, after participating in the program.

Table 4. *Selected Quotes Acceptability and Appropriateness*

Staff	**Mothers and *Promotoras***
Acceptability- Perceived benefits of the program	
"I think all tools that can help us focus more in the present moment are important […] I think this is a hard exercise during these hectic times where you have multiple responsibilities and difficult situations […] To be in the present moment, for me that is still very present."	"*That has gotten stuck with me every morning, I take my coffee, I don't work, I stop doing everything and it has worked really well. I enjoy my morning coffee in peace*."
"I liked the first class very much because it gave us the framework of what we were going to cover and it gave us context. It also conceptualized what mindfulness was, which is something we have heard people talking about but it is a topic that we had never before covered, with its concepts or the philosophy that is behind it."	*"[I learned] how to manage my emotions. I learned that and many other things. I can't read but I learned a lot."*
"I didn't use to give importance to taking care of my emotional health, to seeking balance. I knew it existed and that you have to do it, but applying it in my life wasn't a priority. Now I am conscious about it, and I try to apply it, even though I still need more practice."	*"This has been a call of action for me to pay more attention to my emotional health. To reflect about having balance in my life and to learn how to prioritize."*
Acceptability- Interest in the content	

"I really liked learning about the physiology of stress since it taught us about the connection between stress, emotions and how our brain works."

"This is all new to me, to try to concentrate, but I liked it, I felt good while doing the exercises. Sometimes I would feel very stressed but this would help me and relax me."

"The connection with the body. It was one of the things I struggle to feel. But with what we have learned in class, I have been able to identify it a little bit more. And the relaxation, wow! I think it is excellent."

"All of the topics have been very interesting. We have learned a lot about how to manage stress, about emotions and all the topics were very important. I am grateful for your time."

<u>Appropriateness- Use of skills outside the program</u>

"Yes, there was a drastic change. Sometimes I am very calm, but when I get upset and such, I don't like to see myself that way. This [program] has helped me a lot because now I start thinking 'well, my body is telling me something in this moment', I self-sooth with the instructions you gave us, and since then, results have been much better. It has helped me a lot."

"When I am in a situation where a person is talking and I am uncomfortable, I try to focus on my body, and I say 'well, this is how I am feeling'. So I start doing the exercises you taught us, I start breathing and I start doing certain things so that I can control the situation and not the other way around."

"I had a session with the psychologist I got when I first arrived to this country. I had to do a PTSD test […]. She explained me that the highest level on the test is 80 but that people need help when they have a level starting at 35. My baseline score, from the year I was able to get insurance and treatment, was 59. When I started treatment, after a month, my level was 55. I kept working and doing all the exercises and such but she told me she wouldn't be able to see me during the two months when this course took place. She was afraid I would regressed back to my original number. I was shocked when I heard my score yesterday, it was after taking this course and my score was 14."

"I can control myself better. Before starting the course I used to start fights with my children and many other things. Not anymore. I know how to calm myself a bit better. I know things won't get resolved by fighting."

"We all have our own problems and if it wasn't for this space of being able to say 'Oh, [co-worker's name] is also going through this, or this other coworker'. So for us, is a moment where we can be together and learn about methods on how to navigate our emotions."	*"For the mothers to be able to identify their emotions and to acknowledge how these are affecting their lives, stress levels, and family environment helps them not to feel so guilty or so alone. To be able to connect with other mothers, to know that they might be feeling in a similar way and to know that it is normal to feel certain emotions in particular occasions [is helpful]."*
"I really liked what the videos that you chose taught us. Many times I wrote the title of the video to show it to our group of parents where we talk about resilience, communication, relationships and such. It really helped us to implement the same activities that we were learning in the course with them."	*"For me, the biggest lessons was when you focused in cultivating a non-judgmental attitude. I think this is a vital tool for me because I don't usually judge others but I do judge myself a lot."*
"The therapists we have are not enough. If we could implement this program, with the proper training, I think it would be very useful."	

Discussion

Even though the quantitative findings were modest (with three notable statistically significant differences), the qualitative findings suggested that this pilot program was beneficial for mental, emotional and physical health. The findings of this study are consistent with other mindfulness-based stress reduction program in regards to participant's improvement in mental health and ability to relax, to cope with daily stressors by living in the present moment, and to foster self-kindness (Castellanos et al., 2020; Cotter & Jones, 2020; Li et al., 2021; Ryan et al., 2018; Tobin et al., 2021). Participants from our study also cited improvement in family dynamics and their ability to recognize and manage difficult emotions (Castellanos et al., 2020; Cotter & Jones, 2020; Li et al., 2021; Ryan et al., 2018; Tobin et al., 2021). Since this was a pilot program, it was not powered to detect statistically significant differences; however, post-intervention scores for all three groups increased from the pre-test as expected for

our primary outcomes of perceived physical and mental health. These differences might be statistically significant in a larger sample, which would provide greater statistical power. We noted reduction in stress levels among the promotoras and mothers' groups. In contrast, stress levels increased slightly albeit non-significantly among the staff group. This could be explained by external and competing demands in a highly stressful time as this study was conducted during the COVID-19 pandemic, or to participants being more aware of their sources of stress after participating in the training during Spring 2021.

Participants' accounts of acceptability and appropriateness of the program were evident for all three groups. Demand for these types of programs seemed high as many staff members, promotoras and mothers reported valuing and utilizing the skills learned throughout the program. Staff also reported using the exercises in their personal as well as their professional lives. The majority of participants reported noticing concrete benefits as a result of their participation and enjoying the weekly opportunities to learn and to share with their peers. This experience made them feel less alone, and in the case of the mothers and promotoras, less guilty for experiencing certain emotions.

During the sessions, primarily the "connecting with my [migration] story," participants shared prior traumatic events from their pre-migration and migration experiences, highlighting the need for using a trauma-informed and trauma-based approach when working with this population (Nagy et al., 2022). Even though no trauma-related information was collected, to avoid triggering participants, all groups seemed to benefit from learning about the impact of chronic stress and trauma and the tools to counteract it. Dissociation of the body can be a sign of PTSD (van der Kolk,

2014), and many participants reported becoming more aware of their body and their emotions, as well as their emotional health as a way to counteract mind-body dissociation.

Some participants reported the surfacing of difficult emotions or connecting difficult emotions with a previous event in their life as a result of practicing a mindfulness exercise. This suggests that they were fully engaged in the practice. It is a common result from practicing mindfulness that unidentified emotions may surface, and with the appropriate guidance these practices can increase acceptance of emotions and contribute to improve self-awareness and growth (Van der Kolk, 2014). Participants who experienced difficult emotions during the sessions were guided through them at the time of the practice by the facilitator and later referred to the organization's psychologist. The possibility of these situations arising during the practice raises important considerations for future mindfulness programs with similar populations (Baer, Crane, Miller, & Kuyken, 2019; Van Dam et al., 2018).

This intervention was unique in that it was delivered online during the period of Covid-19 restrictions. Some of the factors that helped this program reached its objectives through an online format were: 1) the strong, pre-existing relationship with the community organization including the staff, *promotoras,* and mothers, 2) the cultural adaptation of the program through a community-based participatory research approach, and 3) the inclusion of a knowledgeable psychologist/mindfulness instructor who was able to deliver the classes in Spanish. The community organization where the pilot took place was already providing services that incorporate a TIC approach (Miller et al., 2019). All participants trusted the organization and the staff members

accompanying the mothers and promotoras' groups. The information was culturally sensitive, and it was adapted to avoid re-traumatization and to recognize the effects of trauma in the body (Miller et al., 2019). Participants freely shared their emotions in a group that they already trusted, and the instructor answered questions as needed, provided guidance if staff members were dealing with a particular situation with a client, and helped participants process difficult situations and emotions. While there is a growing interest in mind-body health, critical research featuring minorities' perspectives and experiences are rare (Fleming, Womack, & Proulx, 2022). Incorporating topics such as cultural humility while developing and implementing MBIs with Latino immigrant populations is imperative for future research (Fleming et al., 2022; Nagy et al., 2022).

This study was also unique in that implementation included staff members, whose own mental health needs are often overlooked, even when they share similar traumatic experiences from migration, or secondhand trauma from their client's experiences (Akinsulure-Smith et al., 2018). The inclusion of staff members, who might be immigrants themselves and/or dealing with trauma or secondhand trauma, offered them additional tools to cope with stress and difficult emotions, and to become aware of their emotional health. The provision of such information enabled staff to gain tools to provide better services to their clients by understanding the consequences of chronic stress and trauma, as well as available tools to counteract them.

Few studies of MBIs with Latino populations have incorporated the topic of trauma in this population (Cotter & Jones, 2020). More studies are needed to understand the impact of MBIs with immigrant populations that have been exposed to

trauma and secondhand trauma, and who currently face immigration stressors (Nagy et al., 2022). Benefits of these types of programs may extend to family members, and future research should capture this impact in a more systematic way. Given the current literature regarding MBIs and Latino immigrants, there is a need for more rigorous studies with larger sample sizes and with the ability to infer causation (Cotter & Jones, 2020, Nagy et al., 2022).

This study contributes to an understanding about how TIC-informed mindfulness-based stress reduction programs that have been adapted for Latino immigrant populations could be beneficial in improving well-being and overall mental health. Culturally adapting MBI programs for Latinos, and having a culturally sensitive, Spanish-speaking, psychologist or mental health professional who practices mindfulness and who can guide participants if difficult emotions arise are important considerations for future programs (Nagy et al., 2022).

Chapter 6: Discussion

Summary of the Study

Tangible and intangible immigration stressors are often times heighten by previous trauma experienced before and during the migration journey (Berger & Weiss, 2006, Sangalang et al., 2019). Chronic stress, such as immigration stress, combined with unsolved trauma can generate short and long-term negative mental and physical outcomes (Carter et al., 2016; McFarlane, 2010). It can also contribute to an overactive stress response system which in the long-term can result in impairments related to behavior, learning abilities, and adversity adaptation skills (Miller & O'Callaghan, 2002; Yaribeygi et al., 2017).

Latinos report the highest levels of stress (American Psychological Association, 2017) and the second highest lifetime prevalence of mental health disorders (Alvarez et al., 2019) in the US. Trauma and chronic low-levels of stress, such as the ones minority populations experience (Torres et al., 2012), have negative impacts on the nervous, endocrine and immune system (Chu et al., 2020). Because of the strong link between trauma exposure, chronic stress (e.g., migration stress) and mental disorders (O'Donnell et al., 2004), it is imperative to address stress, trauma and their connection to improve mental health in Latino immigrants.

Mindfulness programs have shown to increase adaptability capabilities and resources to face trauma (Kabat-Zinn, 1982), increase cognitive-emotional appraisal of trauma (Gu et al., 2015) and stress, and reduce the physical responses of an overreactive stress response (Brown et al., 2007). This dissertation described the implementation

and outcome results of a brief, online, synchronous, group-based mindfulness pilot study over eight sessions that was delivered to Latina mothers and the staff working with them at a community organization. The study aimed to examine the implementation outcomes (feasibility, acceptability, appropriateness, and fidelity) of the *Yo Soy Paz* program using the five domains of the Consolidated Framework of Implementation Research (CFIR) through a mixed-methods approach. The pilot also sought to assess changes in our primary outcomes: stress and overall physical and mental health, and secondary outcomes: mindfulness, mind-body connection and flourishing in the mothers and staff participating in the *Yo Soy Paz* program. Participant data were collected via pre-post questionnaires at the beginning and immediately following the program. Fidelity checklists were completed after each session by the facilitator and the PI. Qualitative (focus groups) were conducted with participants during the eighth session.

We followed the ADAPT-ITT framework (Wingood & DiClemente, 2008) to adapt the Mindfulness-Based Stress Reduction program developed by Jon Kabat-Zinn to match the needs of Latina mothers and the community staff members that work with them. Through the pilot of *Yo Soy Paz* we hoped to inform on the feasibility, appropriateness and acceptability of implementing similar programs in community settings that work primarily with Latino immigrants. We also expect that results from this program could lead to better adaptations of similar programs for Latino immigrants and can inform more robust studies in the outcomes that are being captured to assess the impact of the program. We highlight that the program should be included in community settings as part of a broader program offering. The rest of this chapter

provides the summary of the findings as well as the conclusions and future steps for this type of research.

Summary of Results

Primary and secondary outcomes

Pre-post questionnaires showed that staff had an increase in overall physical health, overall mental health, subjective well-being, mind-body connection and body awareness, as well as perceived stress; however, none of the mean differences were statistically significant (p's>.05). For the mothers and *promotoras* groups, participants' self-reported subjective wellbeing (t=3.24, p=.006), perceived physical health (t=3.59, p=.003) and perceived mental health (t=4.18, p< .001) increased significantly from pre- to post-test.

Through our qualitative data, staff and mothers reported an increase in their relaxation levels, ability to cope with daily stressors by staying in the present moment, ability to pay more attention to their mind-body connection, ability to cope with difficult emotions, acknowledgement of their personal strengths and practice of self-compassion.

Even though the quantitative findings were modest, with three notable statistically significant differences, the qualitative findings suggested that this pilot program was beneficial for mental and physical health. The findings of the study are consistent with other mindfulness-based stress reduction program as participants expressed an improvement in their mental health, ability to relax and to cope with daily stressors by living in the present moment, ability to foster self-kindness, improvement

in family dynamics and ability to recognize and manage difficult emotions (Cotter & Jones, 2020; Li et al., 2021; Ryan et al., 2018; Tobin et al., 2021).

During the sessions, primarily the "Connecting with my [migration] story," participants shared traumatic experiences that were part of their reason for migration, highlighting the importance of trauma-informed care with this population. Even though no trauma-related information was collected in the questionnaires to avoid triggering participants, there was a significant mention of how the program was able to help one of the participants reduce her post traumatic stress disorder (PTSD) levels in a significant way. Participants also mentioned how the program had helped them connect with their bodies and learn to identify where emotions can be found in the body, which is key for patients who have experience trauma in the past (Van der Kolk, 2014). The qualitative findings suggest great promise of online mindfulness interventions with Latino populations.

Implementation Outcomes

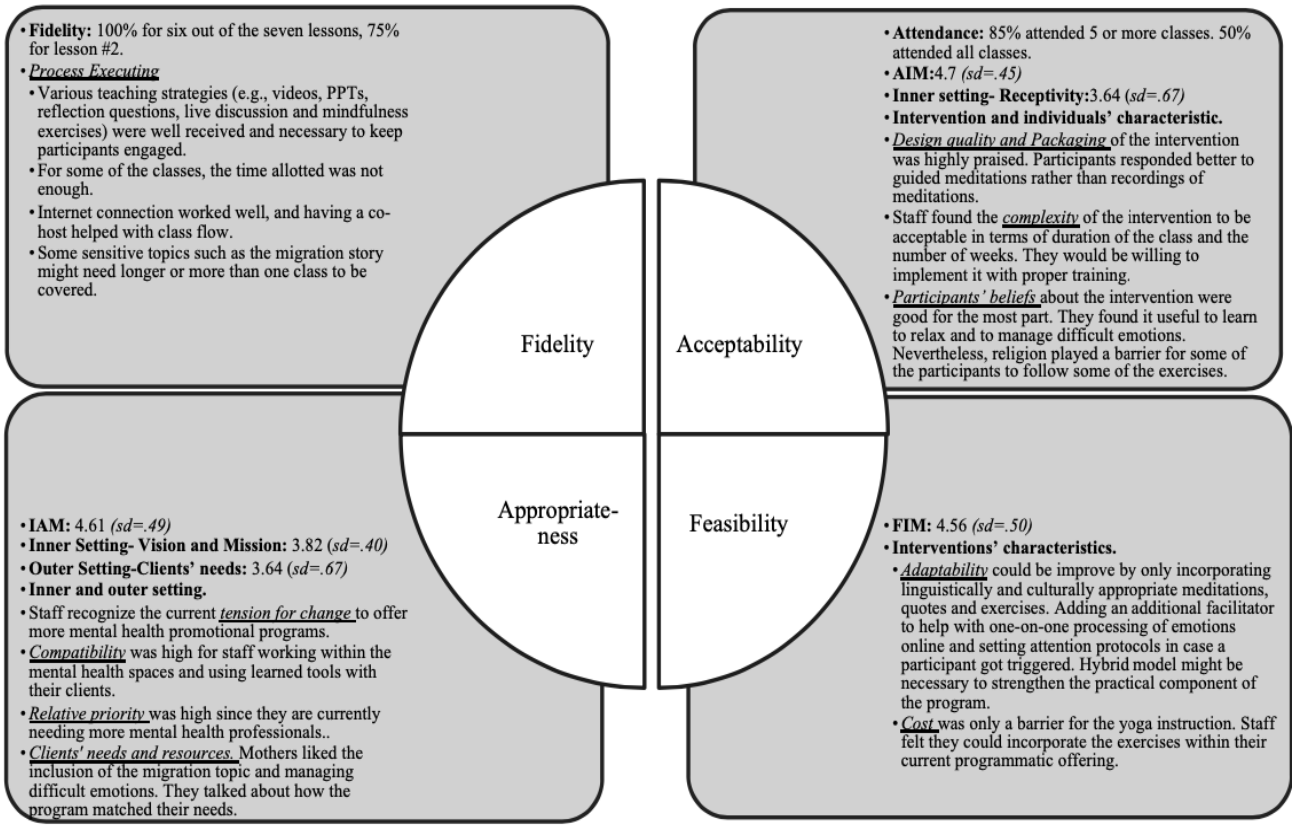
Working with the community organization was a key aspect for the adaptation process and delivery of the pilot. The initial needs assessment based on organization's intake interviews with new clients and previous qualitative research conducted by the principal investigator with youth from the organization was crucial to identify the mental health needs of the community. This was corroborated in the focus groups where staff members reported the need for more mental health promotion programs for youth and their families. Staff highlighted the importance of these programs as a way to help clients cope with strong emotions and stress and to deal with the shortage of therapists that the organization is currently facing. Even though, recruiting the

organization's staff as participants was not the main objective at the start of the pilot, it became clear that mindfulness-based stress reduction interventions could be beneficial for both groups.

Acceptability (*m*=4.70 *sd*=.45), appropriateness (*m*=4.61 *sd*=.49), and feasibility (*m*=4.56 *sd*=.50) rated high, and inner and outer setting rated in the mid-range (*m*=3.69 *sd*=.48). In terms of fidelity, all sessions except Session 2 had a 100 percent fidelity rate. Session 2- *Connecting with my [migration] story*, had a 75 percent fidelity completion rate due to lack of time to go over all the proposed activities for that section. In terms of attendance, out of the 28 respondents that completed the post-questionnaire, 85 percent (n=24) marked they had attended five or more classes. Fifty percent (n=16) marked attending all seven classes.

We reported on ten out of the 26 subcategories of the CFIR framework in all of the five domains. Results are summarized on the joint-display figure 1.

Figure 1. *Joint Display Implementation Results*



The design and the quality of the intervention seemed fitting to help participants learn and incorporate mindfulness techniques into their everyday lives, manage stress and understand difficult emotions. This is congruent with other mindfulness studies conducted with similar populations (Li et al., 2021; Ryan et al., 2018; Tobin et al., 2021).

For the acceptability component, we looked at the intervention and individuals' characteristics. The design and quality of how the intervention was packaged, using different teaching components (e.g., videos, reflection questions, powerpoint presentations, and practice exercises) was consider successful by the participants. Complexity was found to be in accordance with what the staff could deliver with

additional training on the curriculum. The number of sessions and the time per session were found acceptable by the participants. Some participants were somewhat skeptical of receiving mindfulness content due to preconceived notions about what mindfulness was or religious barriers that prevented them to engage in practices that come from other religions or religious practices such as yoga or Buddhism. Future adaptations of this program would emphasize the science behind mindfulness, leaving behind its spiritual component or linking the spiritual component to the religious beliefs of the participants (e.g., meditation can be a form of prayer for many Christian or Catholic followers).

The intervention was found to be highly appropriate. We looked at components in the inner and outer setting such as tension for change, program compatibility and participants' needs and resources. The staff highlighted the importance of mental health promotion programs due to an increased demand for psychological help as a result of the pandemic and a lack of therapists. The program was compatible, in particular with the community mental health spaces that were already being offered by the organization. Mothers found it important to have spaces where they could learn about their emotions and how to cope with daily stressors, share with other mothers, talk about their migration journey and learn new skills. They also enjoyed the online delivery of the program since it allowed them to watch their children and reduce transportation barriers.

To assess feasibility, we looked at the intervention's characteristics of adaptability and cost. Some changes that were suggested to make the intervention work better included having the meditation videos done by people from the region and not

from Spain and including a second facilitator that could help with one-on-one processing of emotions during the lecture time in case a participant was triggered. Cost was only raised as a concern for the yoga instructor. Staff mentioned that all other activities could be incorporated into the current programmatic offering. An important component of the program was the facilitator who had broad psychological and mindfulness training. Based on the results, staff could benefit from taking the course to then incorporate the tools learned with their clients. The course should be taught by a person who is knowledgeable about mindfulness and who practices mindfulness outside the lecture time. This is in accordance with implementation literature of mindfulness programs (Kabat-Zinn, 2003; McKeering & Hwang, 2019).

Implications

Theoretical implications

This study contributes to the understanding of implementing MBIs with immigrant Latino populations and the staff that works with them. A community-based approach was imperative for the success of the program as well as incorporating trauma-informed care through the community organization that was hosting the program. Given that some participants reported the surfacing of difficult emotions or connecting difficult emotions with a previous event in their life as a result of practicing a mindfulness exercise, it is important that future studies address adverse effects of MBIs in vulnerable populations and provide guidelines on how to best protect participants during these practices (Baer et al., 2019; Van Dam et al., 2018).

Very seldom studies of MBIs with Latino populations have incorporated the topic of trauma in this population (Cotter & Jones, 2020). More studies are needed to

understand the impact of MBIs with immigrant populations that have been exposed to trauma and second-hand trauma and who currently face immigration stressors. Studies would benefit from collecting trauma-related data such as PTSD symptoms, depression and anxiety symptoms at the beginning and at the end of the intervention to assess changes in trauma-related outcomes. Given the current literature regarding MBIs and Latino immigrants, there is a need for longer studies that can assess follow-up outcomes, physiological changes and that incorporate a comparison group (Cotter & Jones, 2020). While there is a growing interest in mind-body health, critical research featuring minorities perspectives and experiences are rare (Fleming, Womack, & Proulx, 2022). Future studies should aim to include a participatory approach that includes the experiences and perspectives of the focus population.

Practical implications

Mindfulness-based stress reduction programs that have been adapted for Latino immigrant populations and that include a TIC approach could be beneficial in improving subjective wellbeing and overall mental health. Culturally adapting MBI programs for Latinos and having a culturally sensitive, Spanish-speaking, psychologist or mental health professional who practices mindfulness and who can guide participants if difficult emotions arise are important considerations for future programs. The online delivery channel seemed to be successful to the extent that it allowed participants to interact with each other and with the instructor. While staff members were not the main target of the intervention, they also benefitted from the program by either learning how to cope with secondary trauma and stress of working with vulnerable populations and by learning tools they could apply with their own clients.

Given the concerns expressed by some mothers and staff members about learning or practicing other religions, we recommend a more neutral approach to the program that doesn't conflict with cultural or religious beliefs, as has been brought up in other studies (Cotter & Jones, 2020; Tobin et al., 2021). Minor changes to the program could be incorporated to future MBIs with Latino immigrants such as avoiding religious references, having two co-facilitators, offering meditations in the language and accents from the region and modifying content and delivery times for the migration lesson. Providing a hybrid program could be more beneficial, in particular for the physical exercises (e.g., breathing exercises and yoga) and written activities (e.g., "The Tree of Life").

The success of the program is partially attributed to the work already conducted by the community organization, which provided the ideal scenario to provide TIC. The organization also helped with recruitment of the participants and the weekly reminders, which could have contributed to the high participation and response rate of the surveys. Programs that seek to deliver MBIs to Latinos, should strongly consider partnering with an organization that already has exciting relationships with the community as well as considering the cultural competence of the people developing and implementing MBIs with Latino immigrant populations (Fleming et al., 2022).

Future Implications

The results of this pilot program suggest that further, more complex studies are needed to assess the effectiveness of trauma-informed, mindfulness-based online programs for Latino immigrants and the staff that works with them. Future studies could include a comparison or control group and include additional family members

such as fathers and children. It is important that future studies collect trauma-related data and follow-up data to assess the full impact of these types of programs on stress and well-being, among other outcomes.

Other studies could also assess the sustainability of the program when is being delivered by trained staff members that have a personal mindfulness practice. Follow-up implementation studies could ask staff and *promotoras* if they have used the tools and exercises they learned from the program with their clients and support groups. The study could also include data collection from the new groups that are only receiving the mindfulness exercises given by the staff and *promotoras* with no further training.

Strengths and weaknesses of the study

This study was unique in the sense that it was delivered completely online and also included staff members of the community organization. One of the biggest strengths was the collaboration from the start with the community organization. Participants had a trusting relationship with the organization and between each other which help with the class flow and with receiving the information. Using both qualitative and quantitative methods also helped with providing a better understanding of the effects of the program.

Having only self-reported measures and lacking trauma measures was a limiting factor of the study. We tried to address this limitation by including both qualitative and quantitative data collection and by providing a trusting environment for participants to share what they were feeling. Retrospective questions for mindfulness and the mind-body connection could have been added in the post-questionnaire to account for lack of understanding of these concepts at the baseline assessment. A bigger sample size

and a comparison group could have provided more clues into the effectiveness of the program for reducing stress, increasing the mind-body connection and improving mindfulness.

The response rate at post-intervention (61.4%) was not as high as we were expecting. Assessing the characteristics of people who were lost at post-intervention could provide clues about the effectiveness of the program for certain subgroups of the focus population. Finally, capturing information at a 6-month follow-up as well as physiological markers at baseline, post-intervention and follow-up could provide more in-depth information about the real results of the program.

Implementation outcomes could be improved by collecting the perspective of the organization's leading team in a more methodological way as well as completing a questionnaire at the beginning of the program to assess readiness of the organization to implement similar programs. This information could benefit other organizations as they prepare to implement MBSR programs with their own clients. Cost might become a barrier for implementation if there is not a person in the organization with a current mindfulness practice, since the cost of the facilitator would have to be incurred by the organization.

Recommendations

Community organizations working with immigrant populations could benefit from adopting culturally tailored MBIs programs led by a knowledgeable facilitator to improve and promote mental health of their clients and the staff working with them. We strongly suggest that the programs adopt a trauma-informed approach as well as

culturally appropriate content to increase uptake of the program. Given the high interest in continuing with the program and implementing some of its components within the current programmatic offering expressed by the organization, we recommend including a sustainability research component to assess further uptake of the program outside of the pilot program.

As we have mentioned, the results of this pilot program are meant to inform future and more comprehensive studies, such as a RCT, to assess the impact of the intervention on mental health outcomes, trauma symptoms, stress and subjective wellbeing. Future studies are also invited to include additional populations such as fathers and youth since they could also benefit from these types of interventions. The organization highlighted the need for these types of programs for these populations, in particular for youth. Future adaptations of the program should consider having two facilitators to help with one-on-one processing of emotions, reduce references to other religions, focus content on the scientific evidence for mindfulness, and provide more lessons to address the topic of migration.

Appendices

Appendix A. Aim 1 Quantitative Instruments

Participants' Attendance Form

Please write your ID# (First Letter of your name, Last letter of your last name, last two digits of your phone number).

_____

1. Number of the session you are attending:

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7

2. How many days this week did you practice a mindfulness exercise for 15 minutes or more (meditation, breathing, mindfull eating, walking, listening or doing a daily activity, yoga or guided meditation).

1. One day this week
2. Two days this week
3. Three days this week
4. Four days this week
5. Five days this week
6. Six days this week
7. Seven days this week

PI and Instructor's Fidelity Checklists

Introduction- Week 1

Date		Observer Name	
Instructor		# of Participants	
Time started		Time ended	
Total time of lesson			

Click "YES" or "NO" to indicate if each teaching point below was covered when the session was taught.

	Yes	No
Introduction Questions		
What is Mindfulness?		
What is Mind-Body Connection?		
Benefits of Practicing Mindfulness		
Maitri (Compassionate Friendship)		
Mindful Exercise In-Class		

Facilitators of the session/curriculum:

1.
2.
3.
4.

Barriers of the session/curriculum:

1.
2.
3.
4.

Overall observations of the class flow

Connecting with my story- Week 2

Date		Observer Name	
Instructor		# of Participants	
Time started		Time ended	
Total time of lesson			

Click “YES” or “NO” to indicate if each teaching point below was covered when the session was taught.

	Yes	No
Introduction Questions		
Difference between Latino and American Culture		
Loneliness and Not Belonging		
Mindful Exercise In-Class		

Facilitators of the session/curriculum:

1.
2.
3.
4.

Barriers of the session/curriculum:

1.
2.
3.
4.

Overall observations of the class flow

Stress Response- Week 3

Date		Observer Name	
Instructor		# of Participants	
Time started		Time ended	
Total time of lesson			

Click “YES” or “NO” to indicate if each teaching point below was covered when the session was taught.

	Yes	No
Body Stretches		
Introduction Questions		
Amygdala: The Emotional Brain		
Chronic Stress		
Stress Response by Disney Video		
Mindfulness Exercise during class		

Facilitators of the session/curriculum:

1.
2.
3.
4.

Barriers of the session/curriculum:

1.
2.
3.
4.

Overall observations of the class flow

Difficult Emotions- Week 4

Date		Observer Name	
Instructor		# of Participants	
Time started		Time ended	
Total time of lesson			

Click “YES” or “NO” to indicate if each teaching point below was covered when the session was taught.

	Yes	No
Body Stretches		
Introduction Questions		
What Are Emotions		
How Do I Experience Emotions in My Body		
Mindfulness Exercise During Class		

Facilitators of the session/curriculum:

1.
2.
3.
4.

Barriers of the session/curriculum:

1.
2.
3.
4.

Overall observations of the class flow

Exercise as Medicine- Week 5

Date		Observer Name	
Instructor		# of Participants	
Time started		Time ended	
Total time of lesson			

Click “YES” or “NO” to indicate if each teaching point below was covered when the session was taught.

	Yes	No
Watch Yoga Video		
Short reflection about the experience		

Facilitators of the session/curriculum:

1.
2.
3.
4.

Barriers of the session/curriculum:

1.
2.
3.
4.

Overall observations of the class flow

Loving Kindness- Week 6

Date		Observer Name	
Instructor		# of Participants	
Time started		Time ended	
Total time of lesson			

Click “YES” or “NO” to indicate if each teaching point below was covered when the session was taught.

	Yes	No
Body Stretches		
Introduction Questions		
Importance of Connecting with Others		
What is Loving Kindness?		
Compassion		
Zen Story		
Mindfulness Exercise during class		

Facilitators of the session/curriculum:

1.
2.
3.
4.

Barriers of the session/curriculum:

1.
2.
3.
4.

Overall observations of the class flow

Living a Full Life- Week 7

Date		Observer Name	
Instructor		# of Participants	
Time started		Time ended	
Total time of lesson			

Click “YES” or “NO” to indicate if each teaching point below was covered when the session was taught.

	Yes	No
Body Stretches		
Introduction Questions		
The tree of life		
Reflection Activity		
Mindfulness Exercise during class		

Facilitators of the session/curriculum:

1.
2.
3.
4.

Barriers of the session/curriculum:

1.
2.
3.
4.

Overall observations of the class flow

Staff's Implementation Questionnaire:

The following questions are about how acceptable this program is for you. Please check for each statement if your level of agreement. 1= Completely disagree 5=Completely agree.

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
The Yo Soy Paz program meets my approval. El programa Yo Soy Paz tiene mi aprobación.	○	○	○	○	○
The Yo Soy Paz program is appealing to me. El programa Yo Soy Paz me interesa.	○	○	○	○	○
I like the Yo Soy Paz program. Me gusta el programa Yo Soy Paz.	○	○	○	○	○
I welcome the Yo Soy Paz program. Le doy la bienvenida al programa Yo Soy Paz.	○	○	○	○	○

The following questions are about how appropriate this program is for your organization. Please check for each statement if your level of agreement. 1= Completely disagree 5=Completely agree.

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
The Yo Soy Paz program seems fitting. El programa Yo Soy Paz parece apropiado.	○	○	○	○	○
The Yo Soy Paz program seems suitable. El programa Yo Soy Paz parece adecuado.	○	○	○	○	○
The Yo Soy Paz program seems applicable. El programa Yo Soy Paz parece aplicable.	○	○	○	○	○
The Yo Soy Paz program seems like a good match. El programa Yo Soy Paz parece un buen complemento.	○	○	○	○	○

The following questions are about how feasible this program is for your organization. Please check for each statement if your level of agreement. 1= Completely disagree 5=Completely agree.

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
The Yo Soy Paz program seems implementable. El programa Yo Soy Paz parece implementable.	○	○	○	○	○
The Yo Soy Paz program seems possible. El programa Yo Soy Paz parece posible.	○	○	○	○	○
The Yo Soy Paz program seems doable. El programa Yo Soy Paz parece factible.	○	○	○	○	○
The Yo Soy Paz program seems easy to use. El programa Yo Soy Paz parece fácil de usar.	○	○	○	○	○

The following questions are about how well the program fits with your organization's needs, mission and vision.

	None/No relation	Low	Medium	High
What is the general level of receptivity in your organization to implementing the intervention. ¿Cuál es el nivel de receptividad de la organización para implementar el programa?	○	○	○	○
How does the program relate to the organization’s mission and vision? ¿Cómo se relaciona el programa con la misión y visión de la organización?	○	○	○	○
How essential is this program to meet the needs of the clients served by your organization? ¿Qué tan esencial es el programa para satisfacer las necesidades de los clientes de su organización?	○	○	○	○

Appendix B. Focus Group Guides for staff and parents.

***Yo Soy Paz* Participant Focus Group for Staff**

Yo Soy Paz Participant Focus Group
Semi-Structured Focus Group Guide

Focus Group Opening:

Good evening/morning and welcome. Thanks for taking the time to join us to talk about your experience participating in the Yo Soy Paz program. My name is _____, and with me is _____. We are from the University of Maryland. We are interested to hear about opinion about participating in the program. We want to hear about what you liked, what you didn't like, what you learned and what you will change from the program.

Your opinion will help us improve the program to deliver it to other people. We do appreciate that you silence your phone and keep it away from the table during our talk. You've probably noticed the recorder here. We are recording the session because we don't want to miss any of your comments, everything that the recorded will be kept in private and confidential.

I've got a number of questions to ask, but my job is really to listen. We want to let you know that there are no wrong answers. It's totally fine to have views that differ from others. This is a conversation, and we are interested in hearing from each one of you. So please feel free to talk to each other, build on what the others said or share a different point of view. It is ok for you to tell other people what you said, but it is not ok to share what other people have said in today's focus group.

Are you willing to keep everything stated here in today's focus group confidential? [pause and wait for verbal "yes." If any "no's" you can excuse them from the focus group now.]

Thank you. Now we can begin our focus group.

BEGIN RECORDING. STATE "Yo Soy Paz Focus Group # _____. TODAY'S DATE IS: _____."

Questions:

1) How did you feel overall about participating in the Yo Soy Paz program?
2) What did you learned from participating in the Yo Soy Paz program?
3) How would you feel if you have to deliver the program?
    a) How complex did you find the program (i.e. duration, scope, number of steps)?
4) How sustainable do you think this program is? What resources does Identity need to keep this program running? (probes: Resources, training, supervision?)
5) Which parts of the program did you think worked well?
    a) Why?
    b) Prompts:
6) Which parts of the program did you think did not worked well?
    a) Why?
    b) Prompts:
7) Which barriers, if any, did you encounter to participate in the program?
8) How does the intervention relate to the organization's mission and vision?
9) How essential is this intervention to meet the needs of the individuals served by your organization or other organizational goals and objectives?
10) How does the intervention compare to other alternatives that you know about?
    a) What advantages/disadvantages does the intervention have compared to these other programs?
11) What is the general level of receptivity in your organization to implementing the intervention?
12) Is there anything else you would like to share?

That's my last question for today. Thank you so much for sharing your thoughts with me. If you want to hear the results of the study, you can get in touch with me. I will send my email via the chat

Yo Soy Paz Participant Focus Group- Parents (Spanish)

Semi-Structured Focus Group Guide

Buenas noches/días y bienvenidos. Gracias por tomarse el tiempo para reunirse con nosotros el día de hoy para hablar sobre su experiencia participando en el programa Yo Soy Paz. Mi nombre es _____, y estoy acompañada por _____. Somos de la Universidad de Maryland. En esta conversación nos gustaría saber sus perspectivas sobre el programa, lo que les gusto, lo que no les gusto, lo que aprendieron y lo que le cambiarían al programa.

Esta información será utilizada para mejorar el programa y poder compartirlo con más personas. Apreciamos que pongan en silencio su teléfono y manténgalo alejado de la mesa durante nuestra conversación. Como pueden ver tenemos una grabadora. Con su permiso, estaremos grabando la sesión porque no queremos perder ninguno de sus comentarios, todo lo que sea grabado se mantendrá en privado y confidencial.

Tengo una serie de preguntas para hacerles, pero mi trabajo es realmente escucharlos. Queremos hacerles saber que no hay respuestas equivocadas. Está bien el tener puntos de vista que difieren de otros. Esta es una conversación, y estamos interesados en saber de cada uno de ustedes. Así que por favor no dude en hablar dirigiéndose a los participantes, o complementar lo que los comentarios de los otros, o compartir un punto de vista diferente. Todo lo que se diga en la conversación es confidencial. Estamos todos de acuerdo en mantener lo que se comparta el día de hoy confidencial? (Dar una pausa hasta que los participantes hayan dando un "si" verbal). Muchas gracias, voy a empezar a grabar.

Así que vamos a empezar por conocer más unos de los otros. Vamos a ir alrededor de la mesa y nos dicen su nombre, con quien vinieron y ... (APERTURA PREGUNTA)

Empezar grabación: "Grupo Focal Yo Soy Paz # _____. La fecha de hoy es: _____."

Preguntas:

1) ¿Cómo se sintió en general sobre su participación en el programa Yo Soy Paz?
2) ¿Cuáles fueron las partes del programa que más le gustaron?
   a) ¿Por qué?
   b) ¿Qué sesión le gustó más?
   c) Prompts: Los ejercisios al inicio de la clase, las preguntas de reflexión, las actividades al final de la clase, el contenido de las clases.
1) ¿ Cuáles fueron las partes que menos le gustaron del programa?
   a. ¿Por qué?
   b. ¿Cuál fue la sesión que menos le gustó?
   c. Prompts: Los ejercicios al inicio de la clase, las preguntas de reflexión, las actividades al final de la clase, el contenido de las clases.
4) ¿De qué manera practicó la atención plena en su día a día?
5) ¿Qué cambios notó al practicar la atención plena?
   a) Prompt: sintió cambios en su salud, niveles de relajación, conexión con su cuerpo, satisfacción con la vida cotidiana o relaciones interpersonales?
6) ¿Qué le cambiaria al programa?
   a) Prompt: Duración (del curso o de las sesiones), el canal por donde se dio (por internet), el contenido, las meditaciones semanales.
7) ¿Qué barreras tuvo para participar en las sesiones?
   a) Prompt: No tener un espacio silencioso, no tener internet, no tener el tiempo suficiente.
8) ¿Qué otros programas le gustaría que se ofrecieran para ayudarla/o a mantener o mejorar su salud mental?
9) ¿Qué cambio le haría al programa para ser implementado en un mundo después de COVID?

Estas eran todas mis preguntas de hoy. Gracias por compartir su opinión conmigo. Si quiere escuchar los resultados del estudio, no dude en contactarme. Voy a poner mi email en el chat.

Appendix C. Baseline Questionnaire Parents and Staff

This study will help researchers know if our mindfulness program can impact participants' ways of dealing with stress. You are being asked to participate in the program and evaluation study. Studies like this one will help community organizations understand the need and acceptability of mindfulness programs for Latinos. It is okay to say "No" if you don't want to be in the study. If you say "Yes" you can change your mind and quit being in the study at any time. This research is being conducted by Juliana Muñoz at the University of Maryland, College Park. If you are 18 years old or older and want to download the copy of consent form, please click here. Would you want to participate in this study?

- ○ Yes, I agree to participate. (1)
- ○ No, I don't agree to participate. (2)

Before you begin, please create your ID number using the First Letter of your name, the First Letter of your last name and the last two numbers of your cellphone number. Ex. **JM63.**

Please remember this ID number since you will have to use it for all following surveys.

_____

What is your age?

- ○ 18-25 (8)
- ○ 26-30 (9)
- ○ 31-35 (10)
- ○ 36-40 (11)
- ○ 41-45 (12)
- ○ 46-50 (13)
- ○ 50+ (14)

What is your gender?

- ○ Male (1)
- ○ Female (2)
- ○ Other (3)

Choose one or more races that you consider yourself to be:

- [ ] Latino/Hispanic (8)
- [ ] White (1)
- [ ] Black or African American (2)
- [ ] American Indian or Alaska Native (3)
- [ ] Asian (4)
- [ ] Native Hawaiian or Pacific Islander (5)
- [ ] Prefer not to answer (7)
- [ ] Other (6) _____

What is the highest level of school you have completed or the highest degree you have received?

- ○ Less than high school degree (1)
- ○ High school graduate (high school diploma or equivalent including GED) (2)
- ○ Some college but no degree (3)
- ○ Associate degree in college (2-year) (4)
- ○ Bachelor's degree in college (4-year) (5)
- ○ Master's degree or higher (6)

Which statement best describes your current occupation status? (check all that apply).

- [ ] Working full-time (1)
- [ ] Working part-time (5)
- [ ] Student (part-time) and working (2)
- [ ] Not working, not looking for job (14)
- [ ] Not working, looking for a job (15)

Are you a parent or staff?

- ○ Parent (1)
- ○ Staff (2)

For how long have you worked in Identity? (Put # of years, and # of Months, i.e. 3.5 years). (For Staff)

_____

For how long have you been receiving services at Identity (Put # of years, and # of Months, i.e. 3.5 years). (Parents)

_____

Please select the schedule of the course you are taking:

- ○ Wed, 2 pm (1)
- ○ Thur, 9 am (2)
- ○ Thur, 6 pm (3)

What is your combined household income?

- ○ Less than $10,000 (1)
- ○ 10,000-19,999 (30)
- ○ 20,000-29,999 (31)
- ○ 30,000-39,999 (32)
- ○ 40,000-49,999 (33)
- ○ 50,000 o more (34)

Have you practice Mindfulness exercises before?

- ○ Yes (1)
- ○ No (2)

These questions are about your overall health.

	Poor (1)	Fair (2)	Good (3)	Very Good (4)	Excellent (5)
In general, how is your physical health? (1)	○	○	○	○	○
In general, how is your mental or emotional health? (2)	○	○	○	○	○

Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

	0 - Not at All	1	2	3 - Somewhat	4	5	6 - Very Much
I find it difficult to stay focused on what's happening in the present. (1)	○	(	(	○	○		○
It seems I am "running on automatic," without much awareness of what I'm doing. (2)	○	(	(	○	○		○
I find myself preoccupied with the future or the past. (3)	○	(	(	○	○		○
I find myself doing things without paying attention. (4)	○	(	(	○	○		○
I rush through activities without being really attentive to them. (5)	○	(	(	○	○		○

Below are 14 statements with which you may agree or disagree. Using the 1–7 scale below, indicate your agreement with each item by indicating that response for each statement. During the past month, how often do you feel:

	(1) Strongly Disagree	(2) Disagree	(3) Slightly disagree	(4) Neither agree nor disagree	(5) Slightly agree	(6) Agree	(7) Strongly agree
happy? (1)	○	○	○	○	○	○	○
interested in life? (2)	○	○	○	○	○	○	○
satisfied with your life? (3)	○	○	○	○	○	○	○
that you had something important to contribute to society? (4)	○	○	○	○	○	○	○
that you belonged to a community (like a social group, your neighbourhood, your city, your school)? (5)	○	○	○	○	○	○	○
that our society is becoming a better place for people like you? (6)	○	○	○	○	○	○	○
that people are basically good? (7)	○	○	○	○	○	○	○
that the way our societiy works makes sense to you? (8)	○	○	○	○	○	○	○
that you liked most parts of your personaity? (9)	○	○	○	○	○	○	○

good at managing the responsibilities of your daily life? (10)	○	○	○	○	○	○	○
that you had warm and trusting relationships with others? (11)	○	○	○	○	○	○	○
that you had experiences that challenged you to grow and become a better person? (12)	○	○	○	○	○	○	○
confident to think or express your own ideas and opinions? (13)	○	○	○	○	○	○	○
that your life has a sense of direction or meaning to it? (14)	○	○	○	○	○	○	○

Please respond to each question or statement by stating how often you have felt this way in the past month.

	Never (0)	Almost Never (1)	Sometimes (2)	Fairly often (3)	Very Often (4)
That you were unable to control the important things in your life? (1)	○	○	○	○	○
Confident about your ability to handle your personal problems? (2)	○	○	○	○	○
That things were going your way? (3)	○	○	○	○	○
That difficulties were piling up so high that you could not overcome them? (4)	○	○	○	○	○

We want to know more about what you think, how you feel, and what you do. Read each sentence. Then, choose the statement (never true to always true) that tells how often each sentence is true for you.

	Never (1)	Sometimes (2)	About half the time (3)	Most of the time (4)	Always (5)
I am aware of the tension in my body (1)	○	○	○	○	○
I find it difficult to identify my emotions (2)	○	○	○	○	○
I breath shallow when I am nervous (3)	○	○	○	○	○
I notice my emotional response to touch (4)	○	○	○	○	○
My body feels frozen or numb during uncomfortable situations (5)	○	○	○	○	○
I notice body change when I am angry (6)	○	○	○	○	○
I feel like I am looking at my body from outside (7)	○	○	○	○	○
I can feel my breath traveling through my body when I take deep breaths (9)	○	○	○	○	○

I feel separated from my body (10)	○	○	○	○	○
It is hard for me to express emotions (11)	○	○	○	○	○
I take cues from my body to understand how I am feeling (12)	○	○	○	○	○
I think about the cause of my physical discomfort (13)	○	○	○	○	○
I listen to my body about my emotional state (14)	○	○	○	○	○
I notice the stress in my body (15)	○	○	○	○	○
I distract myself from discomfort (16)	○	○	○	○	○
I note where tension is in body (17)	○	○	○	○	○
I notice peaceful experiences (18)	○	○	○	○	○
It is difficult to pay attention to my emotions (20)	○	○	○	○	○

Post-intervention Questionnaire Parents and Staff

This study will help researchers know if our mindfulness program can impact participants' ways of dealing with stress. You are being asked to participate in the program and evaluation study. Studies like this one will help community organizations understand the need and acceptability of mindfulness programs for Latinos. It is okay to say "No" if you don't want to be in the study. If you say "Yes" you can change your mind and quit being in the study at any time. This research is being conducted by Juliana Muñoz at the University of Maryland, College Park. If you are 18 years old or older and want to download the copy of consent form, please click here. Would you want to participate in this study?

- ○ Yes, I agree to participate. (1)
- ○ No, I don't agree to participate. (2)

Before you begin, please create your ID number using the First Letter of your name, the First Letter of your last name and the last two numbers of your cellphone number. Ex. **JM63.**

Please remember this ID number since you will have to use it for all following surveys.

_____

Select your affiliation with Identity

- ○ Staff
- ○ Client

Had you practice mindfulness before this course?

- ○ Yes
- ○ No

What is your country of origin?

- ○ Costa Rica (1)
- ○ El Salvador (2)
- ○ Guatemala (3)
- ○ Honduras (4)
- ○ Nicaragua (5)
- ○ Panamá (6)
- ○ Argentina (7)
- ○ Bolivia (8)
- ○ Brasil (9)
- ○ Chile (10)
- ○ Colombia (11)
- ○ Ecuador (12)
- ○ Paraguay (13)

- ○ Perú (14)
- ○ Uruguay (15)
- ○ Venezuela (16)
- ○ México (17)

How many years have you lived in the US?

- ○ I was born in the US (1)
- ○ Less than a year (2)
- ○ 1-5 years (3)
- ○ 6-10 years (4)
- ○ 11-15 years (5)
- ○ More than 15 years (6)

Select the Schedule of the course you are taking

- ○ Wednesday, 2 pm (1)
- ○ Thursday, 9 am (2)
- ○ Thursday, 6 pm (3)

Select the classes you attended:

- ☐ Week 1: Qué es la Atención Plena (1)
- ☐ Week 2: Conectando con mi historia (2)
- ☐ Week 3: La respuesta al estrés (3)
- ☐ Week 4: Emociones difíciles (4)
- ☐ Week 5: Yoga para la salud (5)
- ☐ Week 6: Amor Benevolente (6)
- ☐ Week 7: El arbol que yo soy (7)

These questions are about your overall health.

	Poor (1)	Fair (2)	Good (3)	Very Good (4)	Excellent (5)
In general, how is your physical health? (1)	○	○	○	○	○
In general, how is your mental or emotional health? (2)	○	○	○	○	○

Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

	0 - Not at All	1	2	3 - Somewhat	4	5	6 - Very Much
I find it difficult to stay focused on what's happening in the present. (1)	○	○	○	○	○	○	○
It seems I am "running on automatic," without much awareness of what I'm doing. (2)	○	○	○	○	○	○	○
I find myself preoccupied with the future or the past. (3)	○	○	○	○	○	○	○
I find myself doing things without paying attention. (4)	○	○	○	○	○	○	○
I rush through activities without being really attentive to them. (5)	○	○	○	○	○	○	○

Below are 14 statements with which you may agree or disagree. Using the 1–7 scale below, indicate your agreement with each item by indicating that response for each statement. In the past month how often did you:

	(1) Strongly Disagree	(2) Disagree	(3) Slightly disagree	(4) Neither agree nor disagree	(5) Slightly agree	(6) Agree	(7) Strongly agree
happy? (1)	○	○	○	○	○	○	○
interested in life? (2)	○	○	○	○	○	○	○
satisfied with your life? (3)	○	○	○	○	○	○	○
that you had something important to contribute to society?	○	○	○	○	○	○	○

(4)							
that you belonged to a community (like a social group, your neighbourhood, your city, your school)? (5)	○	○	○	○	○	○	○
that our society is becoming a better place for people like you? (6)	○	○	○	○	○	○	○
that people are basically good? (7)	○	○	○	○	○	○	○
that the way our societiy works makes sense to you? (8)	○	○	○	○	○	○	○
that you liked most parts of your personaity? (9)	○	○	○	○	○	○	○
good at managing the responsibilities of your daily life? (10)	○	○	○	○	○	○	○
that you had warm and trusting relationships with others? (11)	○	○	○	○	○	○	○
that you had experiences that challenged you to grow and become a better person? (12)	○	○	○	○	○	○	○
confident to think or express your own ideas and opinions? (13)	○	○	○	○	○	○	○
that your life has a sense of direction or meaning to it? (14)	○	○	○	○	○	○	○

Please respond to each question or statement by stating how often you have felt this way in the past month.

	Never (0)	Almost Never (1)	Sometimes (2)	Fairly often (3)	Very Often (4)
That you were unable to control the important things in your life? (1)	○	○	○	○	○
Confident about your ability to handle your personal problems? (2)	○	○	○	○	○
That things were going your way? (3)	○	○	○	○	○
That difficulties were piling up so high that you could not overcome them? (4)	○	○	○	○	○

(Post) Please respond to each question or statement by stating how often you have felt this way before participating in the program:

	Never (0)	Almost Never (1)	Sometimes (2)	Fairly often (3)	Very Often (4)
That you were unable to control the important things in your life? (1)	○	○	○	○	○
Confident about your ability to handle your personal problems? (2)	○	○	○	○	○
That things were going your way? (3)	○	○	○	○	○
That difficulties were piling up so high that you could not overcome them? (4)	○	○	○	○	○

We want to know more about what you think, how you feel, and what you do. Read each sentence. Then, choose the statement (never true to always true) that tells how often each sentence is true for you.

	Never (1)	Sometimes (2)	About half the time (3)	Most of the time (4)	Always (5)
I am aware of the tension in my body (1)	○	○	○	○	○
I find it difficult to identify my emotions (2)	○	○	○	○	○
I breath shallow when I am nervous (3)	○	○	○	○	○
I notice my emotional response to touch (4)	○	○	○	○	○
My body feels frozen or numb during uncomfortable situations (5)	○	○	○	○	○
I notice body change when I am angry (6)	○	○	○	○	○
I feel like I am looking at my body from outside (7)	○	○	○	○	○
I can feel my breath traveling through my body when I take deep breaths (9)	○	○	○	○	○

I feel separated from my body (10)	○	○	○	○	○
It is hard for me to express emotions (11)	○	○	○	○	○
I take cues from my body to understand how I am feeling (12)	○	○	○	○	○
I think about the cause of my physical discomfort (13)	○	○	○	○	○
I listen to my body about my emotional state (14)	○	○	○	○	○
I notice the stress in my body (15)	○	○	○	○	○
I distract myself from discomfort (16)	○	○	○	○	○
I note where tension is in body (17)	○	○	○	○	○
I notice peaceful experiences (18)	○	○	○	○	○
It is difficult to pay attention to my emotions (20)	○	○	○	○	○

Reflexivity Statement:

This reflexivity statement aims to capture where I stand in regard to my dissertation topic. I was born in Colombia, in a two-parent household, middle class family. I went to a Franciscan Catholic school where I was taught to care about the less fortunate and to put myself in the shoes of others, even when their reality differed greatly from mine. In a city like Bogota, inequality, poverty and suffering are present in every corner. During the last summers in high school, I was a camp counselor for teens with low resources, all with very difficult family stories, and I also volunteered as a missionary during our Easter breaks. We attended very poor rural communities and spend one week sharing with the *campesinos*, sleeping in the floor of a rural school, walking many hours a day to visit the families and spend time with them, praying, doing activities with the kids and the adults and cooking in charcoal stoves. Those years were some of the happiest in my life.

Once I graduated, I attended a Franciscan college in Wisconsin, where I aimed to continue volunteering and be of service to others. These experiences showed me the importance and benefits of building community and of listening to others. It also showed me how much people can endure and still have an open heart and willingness to contribute to their communities.

My experience of traveling by myself to the US to obtain my bachelors degree also made me realize how difficult it is to arrive to a different country, speak a different language, and try to figure out a whole new system of doing things. Even though I was raised to feel privileged and entitled to opportunities, it was the first time I felt other people perceiving me as a minority, someone with less knowledge,

someone who didn't belong and someone who needed to change to fit in in a society that cared very little about me. I have lived in the US for 12 years, and this is still something I struggle with.

From an early age, my parents encourage me to cultivate a mindfulness practice. We attended day-long meditation retreats as a family, and I was given the opportunity to attend spiritual retreats from very early on. My twin sister, who decided to pursue a career in psychology, was also very involved with meditation and mindfulness, and we would attend these retreats and courses together. Once I arrived in the US and all throughout my time living here, I have deepened my practice of mindfulness, especially in those moments where I have felt alone, discriminated against, or just lacking a social support system.

Through my masters program and my time living in Colombia, I learned about the complex dynamics that impact Latin American countries, including violence, displacement, and corruption. I also learned about the wonderful community-based programs that take place to help the victims of violence and war. I have been able to speak to many community leaders that have been victims of forced displacement themselves and to witness post-traumatic growth in the face of adversity. Once more, I was a witness of people's strengths once they are giving the space to rewrite their stories, find meaning despite of the trauma endured and build meaning social networks.

My dissertation work was based on my lived experiences both as an immigrant and as a witness of growth in the face of trauma when people are aware of their internal resources. I was also made aware of the effects of chronic stress and

how it can hinder the process of cultivating internal resources due to the biological processes that take place when the stress response is overactive for a long time. I became aware of these effects in my own life while pursuing my PhD and feeling the weight of discrimination and micro aggressions in combination with financial stress, overdemanding environment and lack of a strong social support network.

Even though I don't share many of the lived experiences, trauma and stress that my focus population has faced to arrive to the US, I can relate to feeling post-migration stress (to a little extent) and the power I felt once I understood the effects of the stress in the body and the ways to counteract these effects by practicing mindfulness through my own practice. I decided to put these tools at the service of others, my knowledge and my sister's knowledge while still trying to meet people where they were. This included decolonizing mindfulness and trying to change the content of the classes to match the lived experiences of the clients. I have to say, I relied heavily on the community partners and people in Colombia who have worked closely with victims of forced displacement to bring to light these lived experiences and make the program relevant and relatable.

I am beyond grateful for this opportunity, for all I learned from the three groups and from Identity. Once again I am reminded of the power of human connection and of opening spaces for healing.

Glossary

ADAPT-ITT Framework: *The ADAPT-ITT framework was created to facilitate implementation, encourage ownership, and increase acceptability with different populations, mostly for HIV interventions* (Wingood & DiClemente, 2008).

Allostatic Load: *Multisystem construct theorized to quantify stress-induced biological risk* (Szanton et al. 2005).

Consolidated Framework for Implementation Research (CFIR*): A conceptual framework that was developed to guide systematic assessment of multilevel implementation contexts to identify factors that might influence intervention implementation and effectiveness (*Keith et al., 2017).

Flourishing: *Subjective wellbeing or flourishing is a construct that encompasses relationships, optimism, self-esteem, and purpose* (Diener, Wirtz, & Tov, 2010).

Mindfulness: *The awareness that arises from paying attention, on purpose, in the present moment and non-judgmentally* (Jon Kabat-Zinn, 2003).

Trauma: *Describes sets of circumstances that represent significant challenges to the adaptive resources of the individual and that represent significant challenges to the individuals' way of understanding the world and their place in it* (Janoff-Bulman, 2004).

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