

Evaluation of the Amigas Latinas Motivando el Alma (ALMA) Mental Health Intervention

Monserrat Morales Miranda

A thesis

submitted in partial fulfillment of the
requirements for the degree of

Master of Public Health

University of Washington

2022

Committee

India Ornelas

Deepa Rao

Program Authorized to Offer Degree:

School of Public Health

©Copyright 2022

Monserrat Morales Miranda

University of Washington

Abstract

Evaluation of the Amigas Latinas Motivando el Alma (ALMA) Mental Health Intervention

Monserrat Morales Miranda

Chair of the Supervisory Committee:

India Ornelas

Health Systems and Population Health

Objective: The Latina immigrant population is at increased risk for higher levels of depression, anxiety, and stress than other racial/ethnic groups (8,9). However, few studies have implemented and evaluated interventions to improve the mental health disparities among Latina immigrants.

Method: In this exploratory study, we randomly selected a sample of 30 participants to invite them to complete qualitative semi-structured interviews. Both intervention and control group participants were interviewed to assess participant satisfaction and acceptability with the ALMA intervention. *Results:* Findings suggest that Latina immigrant women from both in-person and online interventions found the program supportive and helpful in maintaining their mental health. Participants learned techniques and exercises to help them manage stress, depression, and anxiety and incorporate these into their daily lives. They also learned to connect with themselves and prioritize their mental health needs. Some differences noted by women receiving the intervention online were their ability to connect with other women in the program, and external distractions at home caused them not fully to engage during the online sessions. *Conclusion:* This study illustrates the potential usefulness and feasibility of a mindfulness intervention to improve mental wellbeing among Latina immigrants and other vulnerable populations that experience barriers to accessing mental health care. Future studies should assess the impact of mindfulness-based interventions on Latina immigrants during the COVID-19 pandemic.

INTRODUCTION:

The Latina immigrant population is at increased risk for higher levels of depression, anxiety, and stress than other racial/ethnic groups (8, 9). These problems can be attributed to many factors, including work conditions, family, legal status, social isolation, mental health stigma, socioeconomic, and immigration-related stressors (8,10). Latina immigrant women suffer from higher rates of anxiety and depressive symptoms than their male counterparts and are often found to have worse mental health outcomes than women in other racial/ethnic groups (11). Current social and political factors in the United States can affect the mental health status of Latina immigrants, some of which include deportations, detention, and involuntary separation of parents and children by immigration officials, especially among those that are undocumented (10). Previous research has found that depression is prevalent among Latina women and that the mental health of Latina women is impacted by their immigration status, levels of education, and earned levels of income (8). Some stressors associated with the level of depression among Latina immigrant women include worrying about not having a permit to work legally in the U.S., worry about not having medical care, migratory lifestyle, difficulty in understanding English, difficulty finding a job, and difficulty in being away from family members (8). Other stressors experienced by Latina immigrants include job and health care insecurity, immigration, and language barriers (9).

Mindfulness-based programs (MBPs) have gained increasing recognition as a treatment option for various conditions, including anxiety, depression, chronic pain, and eating and weight-related concerns (5). Despite the growing popularity of MBPs, the literature on the cultural relevance and acceptability of MBPs for Latinx communities remains sparse (5). Recently, more research has noted the effectiveness of mind-body interventions in addressing stress and mental

health. Although the results indicate that mindfulness interventions are practical, not many have been implemented or evaluated among racial/ethnic minority and immigrant communities (5). The Amigas Latinas Motivando el Alma (ALMA) intervention was developed to improve mental health among Latina immigrants and incorporates aspects of mindfulness. Results showed that women had lower levels of anxiety and depression after completing the intervention (11). A recent review of similar interventions showed the acceptability of a wide range of mindfulness interventions implemented among Latinx populations.

Furthermore, group therapy has been recommended to treat depression among Latina women (14). However, Latinas have demonstrated that they are generally reluctant to seek treatment for psychological problems in the past. When physicians mention nonphysical issues, they tend to look for spiritual alternatives (14). In a literature review of group therapy as a treatment for depressed Latina women, several studies highlighted the importance of incorporating Latino cultural values into the therapeutic process (14). There is a need for more mindfulness interventions to be implemented among Latina immigrant women.

Very few mental health interventions have been delivered online. A recent review estimated the overall effects of online mindfulness-based interventions (MBIs) on depression, anxiety, stress, mindfulness, and wellbeing (13). The analysis results show that online mindfulness-based interventions have a small but beneficial impact on depression, anxiety, wellbeing, and mindfulness (13). The most pronounced effects were found for stress and had moderate effect sizes. An online synchronous Mindfulness-Based stress reduction (MBSR) program was implemented during the first wave of the COVID-19 pandemic, a time in which there was an increased risk for the development of mental health conditions due to increased levels of uncertainty, unemployment, and loss of social support due to the social distancing

regulations (12). The online MBSR program improved the mindfulness abilities of the participants and led to decreased anxiety, stress, and emotion regulation difficulties, and the effects of the program persisted one month after the program ended (12). Another study that assesses the impact of an online mindfulness session on psychological stress during the COVID-19 pandemic found that a single online mindfulness session is helpful and provides an immediate decrease in momentary stress, anxiety, and COVID-19 related concern was seen in healthcare workers, and the public (6). Participants demonstrated increased interest in mindfulness and the value of online access and found it effective for practicing mindfulness (6). Overall, the positive results of these studies provide evidence for the feasibility of online programs to support the mental health of people from the general population that plan to seek online mental wellbeing treatment (12).

In this exploratory study, the aims were to evaluate: 1) which aspects of the ALMA intervention were most effective in promoting the mental health of Latina immigrant women; 2) were there differences in the perceived impact of the intervention between those receiving it in-person vs. online. Few studies have implemented and evaluated interventions to improve the mental health disparities among Latina immigrants. This study aims to help researchers better understand which intervention components are most helpful and if there is a difference in perceived impact depending on the intervention modality. The study can help address the gap in the literature about implementing a mindfulness intervention among Latina immigrants.

METHODS:

Study Participants

The ALMA intervention aims to address both intrapersonal and interpersonal determinants of mental health among Latina immigrant women. The intervention helps women

develop and utilize coping strategies for reducing depression and anxiety while bolstering the effects of these strategies through increased social ties and social support that extends in the group (15). As part of the intervention trial, women were recruited and enrolled in four waves of participants from two local Latino immigrant organizations (N=225). One site served as the delayed intervention comparison group in each wave and the other as the intervention group (15). The intervention was delivered in-person from 2018 to 2020, and from 2020 to 2021, it was delivered online. For the interviews, we randomly selected a sample of 30 participants from each of the four waves of the study to invite them to complete qualitative interviews. Both intervention and control group participants were interviewed to assess participant satisfaction and acceptability with the ALMA interventions. The sample included only participants that had attended at least 75% of the ALMA sessions (6 sessions or more of the 8-week in-person program and 5 sessions or more of the 6-week online program).

Qualitative Interviews

Prior to the interview, a research assistant read aloud a statement of informed consent, which participants considered and provided their verbal agreement to participate. The interviews were conducted by a trained bilingual research team member that was not involved with the intervention activities. The semi-structured interview guide asked clarifying questions and delved deeper into participants' thoughts, feelings, and experiences with the ALMA intervention. The interview was conducted over Zoom and lasted between 30-45 minutes. Each interview was recorded using Zoom and transcribed in Spanish by a professional transcription service. All transcripts were reviewed for transcription quality and to ensure all participant identifiers were removed. Each participant received a \$50 gift card upon completing one interview.

Data Analysis

Transcribed interviews were uploaded to Dedoose, a qualitative data analysis web application widely used for qualitative research. A codebook was created inductively based on previous literature and the interview guide. After reading each transcript several times, additional codes were added deductively based on content derived from participant responses. The study team reviewed and synthesized the codebook to reduce redundancy and eliminate confusion on code definitions and their applicability. Then each transcript was coded by a primary coder. After each transcript was coded, a second coder reviewed the coded transcript for consistency, adding additional codes if needed. Some of the codes included intervention activities, ALMA impact, participant dynamics, facilitator dynamics, technology/online logistics, and barriers to participation. Several research team members then reviewed coded quotations to identify, extract, and synthesize important themes. Thematic analysis was used to guide our coding method, it is a form of pattern recognition within the data, where themes become the categories for analysis, and themes are identified through careful reading and revising of the data (7). With each theme, the study team identified quotes that represented each theme. Data were also analyzed to identify differences between online and in-person participants by organizing and structuring transcript excerpts into tables, themes, and subthemes were organized to identify differences between online versus in-person delivery.

RESULTS:

Table 1 (Participant Characteristics) presents the characteristics of the participants (N=32). The sample was primarily Mexican (69%), had a mean age of 42 years old, and more than half were monolingual Spanish speakers (66%). Most women had been living in the United States for ten years or more (56%), and more than half reported that they were undocumented (56%), although (18%) preferred not to answer this question. The majority of women had at least

a high school education (59%) and were currently living with a partner (62%). For the qualitative interviews' half of the women took the intervention online (N=16) and half took the intervention in-person (N=16).

Table 1. Participant Characteristics

Characteristics	n=32	
	N/ mean	% / SD
Age	42	1.3
Under 40	9	28.1
Years in the US		
Less than 10	4	12.5
10-20	18	56.3
More than 20	10	31.3
Country of birth		
Mexico	22	68.8
El Salvador	3	9.4
Colombia	2	6.3
Other	5	15.6
Language		
Monolingual Spanish	21	65.6
More Spanish than English	7	21.9
Bilingual Spanish/English	4	12.5
Education		
High school degree or higher	19	59.4
Less than high school	13	40.6
Partner living in home		
Currently living with partner	20	62.5
Not living with partner	12	37.5
Number of children	3	0.2
Immigration status		
Citizen/current visa/permission	8	25.0
Entry and/or stay without permission	18	56.3
Preferred not to or did not answer	6	18.8
Intervention modality		
In-person	16	50.0
Online	16	50.0

Themes:

Several themes were identified from the qualitative interviews, and these were organized to answer both components of the research question: 1) which aspects of the ALMA intervention were most effective in promoting the mental health of Latina immigrant women; 2) were there differences in the perceived impact of the intervention between those receiving it in-person vs. online. This section describes themes related to the research questions and includes examples of participant quotes that illustrate these themes. All quotes have been translated from Spanish to English.

Participants were able to incorporate practices they learned in ALMA into their daily lives.

When women were asked to reflect on how ALMA impacted them, they noted positive impacts of the practices on their mental health and described how they continued to practice the skills they learned after completing the intervention. Many participants specifically mentioned breathing, relaxation, and stress reduction techniques. Women noted that when they are having a stressful moment, they remind themselves to calm down and remember why it is vital to remain calm. By utilizing the practices, they learned in the ALMA program, they feel like they have more control over stressful situations. Participants who were mothers of young children mentioned that they try to incorporate breathing techniques when having stressful moments with their children. A few participants stated that this ability to control their reactions to stressful situations helped improve their mental and physical health. Some women also mentioned that when they see the materials they received in ALMA (e.g., blanket, booklet), it serves as a reminder to do exercises they learned during the program. As one woman said:

"The fact that I know that I am in control of how to manage my emotions because I will continue to feel frustration, sadness, and depression. There are situations that stress you

out, but I can remember to stop and breathe, and if I feel sad, I can sing a song, remembering those moments when we were in ALMA." [In-person participant]

Another woman shared how learning about the breathing exercises in ALMA has helped her with her current cancer treatment:

"I am currently receiving radiation treatment for cancer, and the breathing exercises have helped me learn how to breathe, especially since I have to hold my breath for 30 seconds during my treatment. Learning how to breathe has helped me overcome this."

[Online participant]

Although both online and in-person participants commented on the continuation of using techniques they learned during ALMA in their daily lives, women from the in-person groups mentioned this more than women receiving the intervention online. Some women noted that external distractions at home (kids, family, not having a quiet space at home, multi-tasking) kept them from fully engaging during the sessions because of external distractions. An online participant shared how it was difficult for her to concentrate during the online ALMA session at home because her children were distracting her constantly:

"It was challenging because children talk to you, look for you. They do not understand why you're online. They do not allow you to fully relax as one would in person fully."

[Online participant]

Women learned how stress shows up in their bodies and prioritize taking care of themselves.

Women reflected on how they recognized they did not prioritize taking care of themselves before the intervention and did not understand how stress affected their bodies and lives. Many women also noted how the program activities helped them be more conscious of what was happening to their bodies. One woman explained she never knew she suffered from anxiety attacks, even though she has had them her whole life. By participating in ALMA, she learned how to identify these symptoms and their impact on her mental health. The program helped them become more self-aware about how strong emotions impact themselves and others. Before ALMA, they would have simply worked through the stress and anxiety rather than give themselves a break. Some participants mentioned that ALMA helped them increase their awareness of relaxation and vigilance to specific scenarios that would likely prompt an emotional reaction before the intervention. After the intervention, women learned to prioritize themselves, their health, and their bodies and permit themselves to take breaks when needed. Overall, no differences were found between women receiving intervention online vs. in-person. As one woman said:

"We have to love ourselves. We are worth a lot." [In-person participant]

Another woman shared how after participating in ALMA, she is more mindful about how she feels and takes time to rest, and she listens to her body:

"I am more aware of what my body feels. Before, I didn't pay as much attention to it, if I felt tired or felt ill, I went on and on. Now, I pay more attention to the things that happen to my body." [Online participant]

ALMA helped women connect with themselves and nature and be more present in the moment.

Many women brought up the mindful eating activity, in which facilitators taught them to mindfully eat a piece of fruit (e.g., mandarin, apple), thinking about where the food comes from and what they feed their bodies. Women shared that they thought about the process of growing an apple, what it took to be cultivated, and for them to be able to eat it. This activity was an example of how ALMA taught to be more mindful and connect with themselves. They also learned to be more appreciative of their surroundings and nature, live more in the moment, be more present, and enjoy each moment. No differences were found in the impact of this theme, and both in-person and online participants shared very similar comments about how they are more aware of their surroundings, connect more with themselves and be more present and appreciative. As one woman said:

"I had no idea that you have to enjoy, look, or think about how the fruit was grown. When I eat fruit now, I think more about the effort made by the people who made it possible for that fruit to reach my table." [Online participant]

Another woman shared how she is more mindful about being present in the moment and learned to connect with herself:

"Before, I did not take my time when I would take a walk, breathe, or enjoy food. To be present, to be more mindful, that practice stayed with me, and I practice that a lot., I learned to connect with nature and enjoy what is happening around me, noticing the trees, the wind, the birds singing." [In-person participant]

Women found empathy and understanding in hearing other participants' stories.

Many women shared that they felt heard and understood by the other participants in the ALMA group. They could relate to one another as women, mothers, and immigrants. Many noted that they found similarities in their stories in small and large group discussions, allowing them to empathize with one another. Realizing other women have lived through similar situations allowed them to see that other people are also going through more challenging situations. Some women shared that they perceived ALMA as a 'support group,' a liberating space where you can share how you feel and your emotions and talk about how tired or frustrated you feel. ALMA was a space for someone to listen to them. One woman noted how she could connect with other participants because she recognized similarities, especially as a mom. Usually, mothers must be the strength of their families and take care of themselves last:

"I did feel a connection because we were women, we spoke Spanish, we were moms, and we have all experienced difficult things putting ourselves last since we have work, have to be a wife, and take care of our children. ALMA felt like a safe space, where each of us could share (talk) if we wanted to." [In-person participant]

Another woman shared how she noticed she was not the only one going through a difficult situation, other women are also going through difficult moments, and she felt identified with them:

"I often felt like we were all in the same boat. As immigrants, we have all experienced frustration, sadness (sorrow) in different ways " [Online participant]

Most in-person participants shared that they were able to interact and connect during the sessions. Compared to online participants, some noted that they did not feel a *strong* connection/interaction with other participants because the sessions were conducted virtually. Many of those receiving it online said they preferred to take the session in person because they would have interacted with other participants more. As one woman said:

"Even though we could still see each other online, I feel that being in person would have been better because it would allow for more communication, and it would be easier to get to know each other." [Online participant]

An online participant noted how due to her shy personality, she did not feel comfortable interacting with others virtually:

"I think it is not the same to connect with others on Zoom. I am a shy person and I did not like to turn on my camera, making it hard to interact with others. When I did turn on my camera, it was difficult for me to be in front of so many people, sometimes you do not know what to say, or you forget what you are going to say" [Online participant]

Another online difference is that smaller groups (breakout groups) helped women feel more comfortable sharing personal experiences, and if they didn't get a chance to share in the bigger group, they could share more and communicate better during the breakout sessions. At first, some women felt hesitant to share their personal stories (during the first 2 to 3 sessions) with strangers because they thought they might be judged, but eventually, they found this space where they felt comfortable and found empathy. Trust grew each session among the group. As this participant noted, they were able to interact more with each other

"It was great because we got to know each other better. It was 4 of us or so, and we got to interact more and tell each other where we are from and who we are" [Online participant]

Another online participant noted that she felt she was able to participate more in the smaller group:

"It was a good thing because it gave those who did not want to participate in front of a larger group a chance to share in a smaller group. They felt more comfortable (more trust). I felt that I could talk a little more in a smaller group." [Online participant]

A difference in the in-person impact is that some participants had already met each other before at church, the store, or participated together in previous programs, which helped them have a good group dynamic and feel more comfortable around each other. As one woman said:

"Since all of us already knew each other, we felt very comfortable among each other." [In-person participant]

Another in-person participant noted that although they did not know each other on a personal level, they were familiar with each other:

"I felt comfortable because most of us knew each other from participating in other groups in the community." [In-person participant]

Most women felt supported by the facilitators in ALMA.

Women described the facilitators making the ALMA sessions feel like a place where they were heard and understood and like their stories mattered. Both online and in-person participants

felt that the facilitators listened attentively to what was said during the sessions and appeared very empathetic. Some women shared that the facilitators created a safe and comfortable environment to share personal experiences. They thought the facilitators could read or feel internal emotions, making them feel comfortable sharing more. Other women said it felt like a 'family' or 'support group.' They described the group as close, comfortable, and personal. Although some women felt hesitant to share personal experiences with strangers during the first sessions, the facilitators helped create a space of openness that allowed personal information to be shared. The participants who were not comfortable sharing admired the group's openness, and over time, they felt open to sharing. Facilitators demonstrated commitment and dedication during each session by being supportive and empathetic, and many participants valued and admired their work. Participants appreciated how everyone was allowed to share and try never to miss a person, which made participants feel that their contributions were valued. No differences were found in the impact of this theme, and both in-person and online participants shared very similar points of view and perspectives in terms of the facilitators. One woman noted how she appreciated the patience with which they taught:

"We were part of a group where all the women had a chance to participate. The facilitators gave each one of us a chance to share, one by one, verbally or using the chat. They never forgot that we were all there. They always took us all into account." [In-person participant]

Another participant noted how the facilitators made her feel like 'family' and valued:

"They made us feel like they were our sister or a friend, allowing us to open up our hearts. I loved the way they treated us during the group. I participated in other programs, but none like this, and I enjoyed it very much." [Online participant]

DISCUSSION:

Our study examined participants' perspectives on which aspects of the ALMA intervention were most beneficial to their mental health. We also described differences in the perceived impact between those receiving the intervention in-person vs. online. Findings suggest that Latina immigrant women from both in-person and online interventions found the program supportive and helpful in maintaining their mental health. Participants learned techniques and exercises to help them manage stress, depression, and anxiety and incorporate these into their daily lives. They also learned to connect with themselves and prioritize their mental health needs. Some differences noted by women receiving the intervention online were their ability to connect with other women in the program, and external distractions at home caused them not fully to engage during the online sessions. Not engaging during the sessions and not being fully present might cause women not to learn and retain the techniques taught at ALMA. To our knowledge, this is one of the few mindfulness-based interventions for mental health that has been implemented and evaluated among Latina immigrant women.

ALMA has been previously evaluated to assess the feasibility and potential benefits of a mindfulness intervention among Latina immigrants, and the results indicate that the program is feasible and acceptable to this population (11). Overall, many women reported high satisfaction with the curriculum content and activities, research team, and group dynamics and shared that they use the techniques learned during the intervention in their daily lives for relaxation and stress relief (11). Although mindfulness and yoga were new concepts to many of them, these activities received the most positive feedback (11). The findings suggest that the mindfulness content was well-received and engaging for Latina immigrants in this sample (11). These findings are consistent with previous studies; one of the few community-based mental health

programs developed for this population is the *Latinas Saludables (Healthy Latinas)* intervention, consisting of individual and group sessions (9). It was implemented in primary care clinics for monolingual Spanish-speaking trauma-exposed Latinas with depression and/or PTSD. Overall, participants reported positive perceptions of the intervention. Most women valued the opportunity to unburden themselves and have a caring, supportive, and professional person to provide advice and listen without judgment (9). Some women felt that talking about personal issues and past experiences was helpful, and many women praised the individual sessions' trust, intimacy, and confidentiality (9). *Latinas Saludables* participants also noted they liked to share experiences and found it helpful to realize that others lived with similar problems. They enjoyed learning from others, feeling part of a group, and the possibility of continued relationships beyond the intervention (9). Women reported learning relaxation and self-care as the most valuable strategies. However, most women noted that all the Cognitive-Behavioral Therapy (CBT) activities were valuable and some of the women described putting into practice the strategies they learned at home (9). Interventions such as ALMA and Latina Saludables highlight the benefit of developing mindfulness strategies tailored for Latina immigrants.

Although previous studies have found that mindfulness interventions have been effective, many have not been evaluated or implemented among racial/ethnic minority and immigrant communities (1). Findings from ALMA are similar in other populations, a pilot study was conducted among multiethnic low-income women with abnormal Pap smears to examine the feasibility and acceptability of the mindfulness-based stress reduction (MBSR) program (1). This program was developed to help women cope with illness's physical and psychological manifestations and to train mindfulness (1). Women shared how they integrated mindfulness into many aspects of their lives, used it in stressful life situations such as during an argument, and

relieved the pain of a headache, and they highlighted the social support they received from other women in the group (1). Another study assessed a mindfulness-based yoga program's feasibility, acceptability, and preliminary impact among Hispanic/Latinx public high school students (4). Participants reported satisfaction with the program activities and enjoyed meditation and exercise, learning about mindset, how mindful and calming the sessions were, the focus on being present, helping to overcome everyday stress at school, and the kindness and enthusiasm of the instructors (4). Additionally, participants reported an increase in the number of days they practiced mindfulness/meditation after completing the intervention (4). These findings support the effectiveness of a mindfulness-based yoga program for Hispanic/Latinx adolescents, an underserved group experiencing mental health disparities (4). It has been found that mindfulness-based interventions provide participants skills that they can practice independently without the help of a therapist, which is essential for racial/ethnic minorities and socioeconomically disadvantaged groups that experience barriers to mental health care access (16).

Despite the increasing popularity of mindfulness-based programs (MBPs), the literature on the cultural relevance and acceptability of MBPs for Latinx communities remains sparse (5). A systemic literature search was conducted to investigate the potential effectiveness and feasibility of mindfulness-based programs in peer-reviewed studies where a large portion of participants identified as Latinx (5). The review suggests that there is evidence that cultural adaptations can improve evidence-based treatment implementation among Latina women, but more precision studies are needed (Cotter). A study that investigated the effects of an online synchronous Mindfulness-Based stress reduction (MBSR) program during the COVID-19 pandemic on aspects of mental health had positive effects in reducing psychological distress and anxiety symptoms (12). The positive effects of this study on mental wellbeing are consistent with

previous research conducted before the pandemic with face-to-face programs (12). Online mindfulness-based interventions have proven feasible and effective, and more need to be implemented for Latina immigrants.

Limitations:

Although our study contributes to the limited research on Latina immigrants' mental health, our study had some limitations. Selected participants had a high attendance rate (attending at least 75% of the sessions). This might create bias because we are not interviewing participants with lower attendance rates, limiting generalizability. We also did not interview participants who dropped out of the intervention early on. Therefore, the sample may not reflect all participants' experiences with the program. Another possible limitation in our study is that in-person participants participated in the ALMA program two to three years prior to the qualitative interviews. Since it was a long time since they had participated in the program during their interviews, they seemed not to remember specific program components or activities. This might cause them not to have answered with complete accuracy some of the questions asked by the interviewer. Although we asked participants to answer truthfully based on their own opinions and experience in the intervention, there might be some social desirability bias. Some questions might have been sensitive to some participants, and they answered in a manner that the interviewer would view as favorable.

Conclusions:

Latina immigrant women suffer from higher rates of anxiety and depressive symptoms than their male counterparts and are often found to have worse mental health outcomes than women in other racial/ethnic groups (11). This study illustrates the potential usefulness and feasibility of a mindfulness intervention to improve mental wellbeing among Latina immigrants

and other vulnerable populations that experience barriers to accessing mental health care. The study highlights the importance of mindfulness interventions to reduce or prevent anxiety and depression among Latina immigrant women. Similar mental health programs and interventions may help reduce and prevent the high rates of depression and anxiety experienced by Latina immigrant women. There is evidence that cultural adaptations can improve evidence-based mindfulness interventions among Latinx immigrant women, but more rigorous studies are needed (9). Future studies should assess the impact of mindfulness-based interventions on Latina immigrants during the COVID-19 pandemic. During the pandemic, there were high levels of uncertainty, unemployment, loss of social support due to the social distancing regulations, and loss and grief of family or friends (12). These conditions increased the risk for the development of mental health conditions among Latina immigrants and created challenges for accessing mental health support (Sanilevici). As more practitioners implement community-based mental health interventions like ALMA, it will be essential to incorporate the cultural and social factors Latina immigrants can relate to and possibly extend the online intervention to eight sessions instead of six sessions.

Appendix:**Table 1: Quotes**

Theme	Quotes
<p>Participants were able to incorporate practices they learned in ALMA into their daily lives. They saw the positive impacts of the practices on their mental health and continue to practice the skills they learned.</p>	<p><i>“After the program ended, I continue to use some of the practices when I feel stressed or depressed and it works for me”.</i> [In-person Participant]</p> <p><i>“I refer back to the handout on my wall that lists ideas on how reduce stress. It helps to have this handout in a visible place, where I can remind myself what to do in stressful situations, such as “listen to music or take a hot bath.”</i> [In-person participant]</p> <p><i>“I start breathing when I feel very tense. Before I did not know the importance of taking your time to breathe and how this can reduce stress.”</i> [Online Participant]</p>
<p>Women learned to honor oneself, understand how stress shows up in their bodies, and prioritize to take care of themselves. They learned to accept and value themselves.</p>	<p><i>“What impacted me the most after taking the program is being aware of my body. If I feel something in my body or something strange is happening, I am able to identify it and use relaxation, breathing, and self-compassion.”</i> [In-person Participant]</p> <p><i>“It was a beautiful experience because we learned how to listen to our body, our feelings, and every reaction one has.”</i> [Online Participant]</p>
<p>ALMA helped women connect with themselves and nature, to be more present in the moment.</p>	<p><i>“I learned how to connect with each part of my body and feel my body's sensations, in order to heal”.</i> [In-person Participant]</p> <p><i>“I have learned to know my body, to feel my pulse, or know if I feel tired... I really fell in love with Alma and would like to have the opportunity to do it again.”</i> [In-person Participant]</p> <p><i>When I have the opportunity to be with my daughter, it is because I am with my daughter, I am present. They helped us a lot to live, to be in the present. There are several things that one doesn't pay attention to”.</i> [Online Participant]</p> <p><i>“To be aware of what I was eating, the whole process for the fruit to reach me, from the tree where it grew, to the hands that took care of it. That impacted me a lot. [Online Participant]</i></p>

<p>Women found empathy and understanding in hearing other women's stories. They were able to connect/relate as women, mothers, and immigrants, and learned from one another.</p>	<p><i>“It felt like family. We talked about our things, what happened to us, everything, it was beautiful.”</i> [In-person Participant]</p> <p><i>“I identified with them [other ALMA participants] because they were all going through difficult times, but they were there. It did not matter how difficult things were, they showed up to class and strived to be there.”</i> [Online Participant]</p> <p><i>I felt comfortable because I think we all were going through something that was stressing us out and by sharing our experiences, we helped each other and felt we were united and understood.</i> [Online Participant]</p>
<p>Most women felt supported by the facilitators in ALMA. They felt that they were heard and understood, it was a space where they felt protected.</p>	<p><i>“They [ALMA facilitators] did everything very well because you feel their charisma and motivation. They gave it their all, every part of them I think everything was spectacular with them”</i> [In-person Participant]</p> <p><i>“Those teaching the class were experts, very affectionate, charismatic, and made me feel good.”</i> [Online Participant]</p>

Table 2: Codebook

	Codes	Definition
1	Intervention Activities	Impact of activities had on participants, comments about specific sessions that they liked or disliked, suggestions about how to make it better or improve an activity.
2	ALMA Impact	Lessons learned during the sessions, impact that the program had on participants (mindful eating, body image, relationship to body, mental health, techniques for reducing stress, coping with COVID), both positive and negative
3	Participant Dynamics	Interactions between participants (shared experiences, histories, support), both positive and negative
4	Facilitator/Participant Dynamics	Their impressions of the facilitators, both positive and negative. Opinions about how facilitators led the program, interaction during sessions, what facilitators did well during the sessions and/or what they could have done better or differently.
5	Location/Site Logistics/Materials	Opinions about the location, time selection, food, equipment, and materials provided during the program (in-person & online).

6	Technology/Online Logistics	Connecting to zoom, internet quality, finding a space in house ALMA.
7	Barriers to participation	Things that made it difficult to participate in person or online (transportation, family obligations, work obligations, lack of privacy, COVID)
8	Childcare	Anything pertaining to childcare provided at the in-person sessions, pros and cons of utilizing the childcare service provided
9	Future recommendations	Suggestions about improving the program, things that could have been done differently or better.
10	Non-ALMA support	Suggestions about programs, activities, resources that Latina immigrant need after coming to the United States (other than ALMA).
11	Surveys	Experiences with taking the surveys, suggestions about surveys and how they can be improved.
12	Dissemination	Suggestions about best ways to share the findings with participants and opinions about whom else can benefit from the findings of this intervention.
13	Great Quotes	Quotes that we might want to use in presentations or publications

Table 3: Interview Guide**Qualitative interviews**

Semi-structured individual interviews (min=20, 50% online/in-person)

Thank you for taking the time to speak to me. I am here to ask you about the experience you had when participating in the ALMA study. There are no right or wrong answers; I am just asking you questions based on your opinion. Any information that you share with me will be private and confidential.

Opinions about ALMA sessions**1. Let's focus on the ALMA program. What was the most impactful to you about the program?**

PROBE:

Which session or activity felt the most nourishing, why?

What stuck with you after the program ended?

Was there anything difficult about ALMA?

2. How comfortable did you feel sharing your experiences with the group?

PROBE:

What made you feel supported?

How did you feel hearing others' experiences?

3. How did ALMA impact your mental health and wellbeing?

PROBE:

How did ALMA impact the way you are with yourself?

How did ALMA impact the way you are with your body?

What other events in your life or in the news impacted how you were doing while you were in ALMA? (probe: COVID (including vaccine availability), difficult family dynamics, political changes)

4. What do you remember about the women that led the program?

PROBE:

What were some of their strengths?

Do you have any suggestions for things they could have done differently or better?

5. What was your experience interacting with the other participants?

PROBE:

How comfortable did you feel as part of the group?

How much connection did you feel with the other participants during the sessions?

Did you stay in touch with any of the women you met during ALMA?

As part of this study, some participants took part in-person and others took part online. Did you take part in-person or online?

Questions for participants who received in-person ALMA:

6. The ALMA program you attended was held at [El Centro/Casa Latina. What did you think of this space?

PROBE:

Probe for location, convenience, comfort

What might you change about the choice of location?)

Is there something that would make you more physically comfortable during the ALMA sessions?)

What did you think about the materials provided, such as the blanket and cushions?

7. What was your experience finding time for the ALMA sessions in your day?

PROBE:

Did you have any difficulties with transportation or getting to the sessions?

Did the time of day that the program was offered work well for you?

Did the day of the week that the program was offered work well for you?

Do you have any suggestions related to this for future programs?

Duration/time questions should go here

8. Do you have children at home? [if not, skip to next question]

PROBE:

How easy was it to attend the program with children?

Did you use the childcare provided? [if not, skip to “All participants: looking forward”]

PROBE:

How was your experience?)

Is there anything that could have made this better for you or your child?

Questions for participants who received online ALMA:

9. How was your experience fitting the ALMA zoom sessions into your day?

PROBE:

Did you experience any difficulties finding a comfortable place to connect in your home?

Did the time of day that the program was offered work well for you?

Did the day of the week that the program was offered work well for you?

Do you have any suggestions related to this for future programs?

10. How was your experience with the online sessions?

PROBE:

How do you think your experience was compared to if it had been offered in-person?

How was your experience using zoom, for example, hearing others, participating, and connecting?

How about the breakout rooms?

11. Do you have children at home? [if not, skip to next question]

PROBE:

How easy was it to attend online sessions with children?
 What were some of the ways you managed your children or other family members while participating?

All participants: looking forward

12. Each time we do ALMA we learn more about how to do it better the next time. How could we improve ALMA for future participants?

PROBE:

Are there any changes you would suggest for the topics we talked about?
 Are there any changes you would suggest for the use of time during the sessions?
 Was there anything you wanted more of?

13. In your opinion, what are other ways we can support Latina immigrants after they arrive in the United States?

PROBE:

Activities, programs or resources

Participant engagement in research

14. During the study you did several surveys. What do you remember about those surveys?

PROBE:

Do you understand the purpose of the surveys and why so many were done?
 Were there parts of the survey that were difficult to understand?
 Is there anything that would have made it easier to understand?
 What do you think about the length of the survey?

15. What do you think would be a good way to share the findings from this study?

PROBE:

Who else do you think we should share the findings from this study with?

References

1. Abercrombie, Zamora, A., & Korn, A. P. (2007). Lessons Learned: Providing a Mindfulness-based Stress Reduction Program for Low-income Multiethnic Women With Abnormal Pap Smears. *Holistic Nursing Practice*, 21(1), 26–34. <https://doi.org/10.1097/00004650-200701000-00006>
2. BellWether Education Partners. (2020, June 24). *Approaches for diverse, equitable, and Inclusive Evaluation*. Bellwether Education Partners. Retrieved November 25, 2021, from <https://bellwethereducation.org/publication/approaches-diverse-equitable-and-inclusive-evaluation>.
3. Castellanos, R., Yildiz Spinel, M., Phan, V., Orengo-Aguayo, R., Humphreys, K., & Flory, K. (2019). A Systematic Review and Meta-Analysis of Cultural Adaptations of Mindfulness-Based Interventions for Hispanic Populations. *Mindfulness*, 11(2), 317-332.
4. Clarke, R., Morris, S., Wagner, E., Spadola, C., Bursac, Z., Fava, N., & Hospital, M. (2022). Feasibility, acceptability and preliminary impact of mindfulness-based yoga among Hispanic/Latinx adolescents. *Explore (New York, N.Y.)*, 18(3), 299-305.
5. Cotter, & Jones, N. (2019). A Review of Latino/Latinx Participants in Mindfulness-Based Intervention Research. *Mindfulness*, 11(3), 529–553. <https://doi.org/10.1007/s12671-019-01266-9>
6. Stacciarini, J., O'Keeffe, M., & Mathews, M. (2007). GROUP THERAPY AS TREATMENT FOR DEPRESSED LATINO WOMEN: A REVIEW OF THE LITERATURE. *Issues in Mental Health Nursing*, 28(5), 473-488.
7. Farris, S. R., Grazzi, L., Holley, M., Dorsett, A., Xing, K., Pierce, C. R., Estave, P. M., O'Connell, N., & Wells, R. E. (2021). Online Mindfulness May Target Psychological Distress and Mental Health during COVID-19. *Global advances in health and medicine*, 10, 21649561211002461. <https://doi.org/10.1177/21649561211002461>
8. Fereday, & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, 5(1), 80–92. <https://doi.org/10.1177/160940690600500107>
9. Fox, J., & Kim-Godwin, Y. (2011). Stress and Depression Among Latina Women in Rural Southeastern North Carolina. *Journal of Community Health Nursing*, 28(4), 223-232.
10. Kaltman, S., Hurtado de Mendoza, A., Serrano, A., & Gonzales, F. A. (2016). A mental health intervention strategy for low-income, trauma-exposed Latina immigrants in primary care: A preliminary study. *The American journal of orthopsychiatry*, 86(3), 345–354. <https://doi.org/10.1037/ort0000157>
11. Rios Casas, F., Ryan, D., Perez, G., Maurer, S., Tran, A. N., Rao, D., & Ornelas, I. J. (2020). "Se vale llorar y se vale reír": Latina Immigrants' Coping Strategies for Maintaining Mental Health in the Face of Immigration-Related Stressors. *Journal of racial and ethnic health disparities*, 7(5), 937–948. <https://doi.org/10.1007/s40615-020-00717-7>
12. Ryan, D., Maurer, S., Lengua, L. *et al.* Amigas Latinas Motivando el Alma (ALMA): an Evaluation of a Mindfulness Intervention to Promote Mental Health among Latina Immigrant Mothers. *J Behav Health Serv Res* 45, 280–291 (2018). <https://doi-org.offcampus.lib.washington.edu/10.1007/s11414-017-9582-7>

12. Sanilevici, Reuveni, O., Lev-Ari, S., Golland, Y., & Levit-Binnun, N. (2021). Mindfulness-Based Stress Reduction Increases Mental Wellbeing and Emotion Regulation During the First Wave of the COVID-19 Pandemic: A Synchronous Online Intervention Study. *Frontiers in Psychology*, 12, 720965–720965. <https://doi.org/10.3389/fpsyg.2021.720965>
13. Spijkerman, M. P., Pots, W. T., & Bohlmeijer, E. T. (2016). Effectiveness of online mindfulness-based interventions in improving mental health: A review and meta-analysis of randomised controlled trials. *Clinical psychology review*, 45, 102–114. <https://doi.org/10.1016/j.cpr.2016.03.009>
14. Stacciarini, J., O'Keeffe, M., & Mathews, M. (2007). GROUP THERAPY AS TREATMENT FOR DEPRESSED LATINO WOMEN: A REVIEW OF THE LITERATURE. *Issues in Mental Health Nursing*, 28(5), 473-488.
15. Ornelas, I, Perez, G, Maurer, S, Gonzalez, S, Childs, V, Price, C, **Nelson, A**, Perez Solorio, S, Tran, Anh. Amigas Latinas Motivando el Alma (ALMA): In-person and online delivery of an intervention to promote mental health among Latina immigrant women. Accepted at the *Journal of Integrative and Complementary Medicine*. May 13, 2022.
16. Waldron, & Burnett-Zeigler, I. (2022). The impact of participation in a mindfulness-based intervention on posttraumatic stress symptomatology among Black women: A pilot study. *Psychological Trauma*, 14(1), 29–37. <https://doi.org/10.1037/tra0001107>