



A Pilot Evaluation of a School-Based Psychoeducational Program for Chinese and Latino/a Parents: Perceived Effectiveness and Acceptability

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Abstract

Immigrant parents and their adolescent children face unique stressors that have been linked to an increased prevalence of negative mental health outcomes. Limited research has evaluated the use of brief, culturally sensitive, school-based mental health programming for immigrant families. The current study sought to evaluate the effectiveness and acceptability of a mental health psychoeducational program for immigrant parents of adolescents. Additionally, the current study sought to explore the role of parental demographic characteristics on these outcomes. Sixty-seven immigrant parents of adolescents from urban communities participated in a pilot evaluation of a brief mental health program designed to educate parents regarding stressors their adolescents face and how to increase positive communication. Results suggest that immigrant participants perceived the training as both acceptable and effective in increasing their knowledge. Moreover, results indicated higher ratings of the training's acceptability and effectiveness among younger parents, as well as those who identified as Latino/a. Implications for school mental health professionals serving immigrant parent populations are discussed.

Keywords Immigrant · Adolescent · Parenting · Communication · Schools · Mental health

The number of individuals from China and Latin American countries has increased exponentially since the 1960s, representing close to 75% of the United States' (U.S.) immigrant population in 2018 (Budiman et al., 2020). Relatedly, the U.S. has seen a growth in the school-aged population of "immigrant-origin youth," a term that will collectively refer to first- and second-generation children and adolescents born to at least one first-generation immigrant parent (Child Trends, 2018; Migration Policy Institute, 2017). Certain states with large urban centers, such as New York or California, serve high percentages of the U.S.'s total immigrant population (Migration Policy Institute, 2020). Efforts to understand and address the mental health needs of these populations are crucial steps for professionals to undertake, particularly those working in areas with a high density of

migration (Grieco et al., 2012; Migration Policy Institute, 2017).

Risk and Protective Factors Related to Internalizing Symptoms Amongst Immigrant-Origin Youth¹

Broadly, the period of late childhood through adolescence is marked by several developmental stressors and is highlighted as a sensitive time during which internalizing concerns, such as depression and anxiety, can emerge (Cairns et al., 2015; Merikangas et al., 2010). Incidence rates of depression and anxiety amongst Latino/a-identified adolescents are greater than those of their non-Hispanic, White peers (Potochnick & Ferreira, 2010). Studies evaluating the rates of depression in Asian American adolescents compared to their non-Hispanic, White counterparts have been equivocal. While some studies have found lower or no significant difference

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¹ When possible, our literature review will focus on Chinese and Latino/a immigrant-origin youth given the locale and population we served in this study. However, broader population terms will be utilized when specificity in the source literature is unavailable.

in rates amongst Asian American and foreign-born Asian adolescents compared to their non-Hispanic, White counterparts (Saluja et al., 2004; Tummala-Narra, 2015), others have found evidence for higher rates of depressive symptomatology reported by female Asian adolescents compared to their White female counterparts (Bisaga et al., 2005).

An understanding of the unique risk and protective factors of internalizing problems amongst Chinese and Latino/a immigrant-origin youth is essential to prevent and address mental health concerns among this growing population. For example, higher socioeconomic status was found to be a protective factor against depressive symptomatology and poor self-esteem amongst Latino/a immigrant adolescents (Ríos-Salas & Larson, 2015); however, many foreign-born Latinos/as are more likely than White individuals to experience stressors associated with poverty (Grieco et al., 2012). While Asian immigrants are often thought to be the most affluent ethnic group (DeNavas-Walt & Proctor, 2015), rates of poverty are even higher amongst Asian immigrants residing in urban cities such as New York City (26.6%) than their Latino/a (24.0%) and White (14.4%) counterparts (D'Onofrio et al., 2016). Relatedly, Chinese immigrant-origin youth who are exposed to parental stress related to economic hardship reported greater rates of depressive symptomatology (Mistry et al., 2009).

Chinese and Latino/a immigrant-origin adolescents are also more likely to experience incidents of interpersonal discrimination (Córdova & Cervantes, 2010; Juang & Cookston, 2009), which have been correlated to greater reports of depressive symptoms and low self-esteem (Han, 2014). Additionally, the decision to speak in one's native tongue (Córdova & Cervantes, 2010) and their status as emergent bilinguals (Ling et al., 2014) have been associated with depressive symptomatology and lower self-esteem. Immigrant-origin youth also experience higher levels of acculturation stress, defined as stressors associated with navigating between two or more competing cultures (Berry et al., 1987), which has been linked to higher levels of internalizing symptoms (Li, 2014; Sirin et al., 2013). Moreover, a percentage of immigrant-origin families are refugees, a status accompanied by additional experiences (e.g., pre-migration trauma) that can contribute to poor mental health and other social outcomes (McBrien, 2005).

Parent-Adolescent Relationship

Parental relationships can have a significant impact on adolescents' mental health (Ahmadimehr & Yousefi, 2014). For immigrant-origin youth, relationships with their parents are complicated by unique factors. For example, immigrant-origin youth are more likely to have experienced a separation from one or both of their parents due to immigration, to have limited contact with their parent(s) during this separation,

and to experience conflict with their parent(s) during reunification (Suárez-Orozco et al., 2011). The confluence of these experiences coincides with higher reports of symptoms of anxiety and depression (Suárez-Orozco et al., 2011). Immigrant-origin youth also experience greater levels of acculturation dissonance within the immigrant parent-adolescent relationship (Sirin et al., 2013), the phenomenon in which a parent and adolescent experience stress and increased conflict due to differences in their levels of acculturation or assimilation (Juang et al., 2012). This can occur as immigrant-origin youth assimilate faster than their immigrant parents (Juang & Umaña-Taylor, 2012). Furthermore, the acculturation gap widens the longer the immigrant-origin youth and parent have lived in the country and as a function of the age at which migration occurred (Cheung et al., 2011). For example, while individuals who immigrate at an early age acculturate more as time progresses, those who immigrated later in life do not and identify more with their native culture as time progresses (Cheung et al., 2011). This experience can create even more potential for acculturation dissonance and parent-adolescent conflict as immigrant-origin youth approach adolescence.

Reducing the impact of intergenerational conflict may be accomplished by improving the quality of parent-adolescent interactions and parenting practices. Efforts to do so are crucial as the confluence of acculturation stress and less supportive parenting practices correlate with greater levels of internalizing symptomatology (Bámaca-Colbert & Gayles, 2010; Weaver & Kim, 2008), and immigrant-origin youth can experience a greater degree of emotional reactivity to less supportive forms of parenting (Chung et al., 2009).

Consistent within the literature, warmth within the parent-adolescent relationship has been noted to be a protective factor against the development of adverse mental health outcomes (Ahmadimehr & Yousefi, 2014), lasting long into young adulthood (Yap et al., 2014). On the other hand, the relationship between parental control or monitoring and internalizing symptomatology is more complex. Interventions to increase the development of autonomy have been shown to coincide with lower rates of depressive symptomatology (Joussem et al., 2014). However, immigrant-origin youth are at risk of perceiving greater degrees of parental over-involvement or control, which in turn has been correlated with higher incidences of depression (Sulaiman, 2014) and anxious distress when accompanied by low levels of warmth (Deater-Deckard et al., 2011). While it may be normative within the Western culture, simply encouraging more autonomy may not be the answer for immigrant-origin youth. For example, research has shown that parental monitoring that is accompanied by low levels of parental conflict is a protective factor against depressive symptomatology amongst Latino/a adolescents (Roche et al., 2019). For Asian adolescents, high levels of autonomy that were accompanied by high levels of cohesion in the

parent-adolescent relationship were associated with lower rates of depressive symptomatology (Kiang & Bhattacharjee, 2019). A complex balance between parental warmth, high levels of monitoring, and low levels of conflict emerges as a promising avenue through which serious mental health concerns can be prevented for Chinese and Latino/a immigrant-origin youth.

School-Based Mental Health Programming

The previous review of existing literature elucidates culturally-specific targets for intervention and prevention programs designed to improve the mental health of immigrant-origin youth. Evidence-based interventions such as individual and group formats of Cognitive Behavioral Therapy (CBT) and Interpersonal Psychotherapy (IPT) have both been found to be effective in treating depression in Latino/a adolescents (Rosselló et al., 2008). Fung and colleagues' (2019) mindfulness program was also effective in reducing internalizing symptom rates in Asian and Latino/a immigrant-origin youth upon completion of their 12-week program. Although these findings are notable, research regarding interventions targeting internalizing symptoms in Asian and Latino/a immigrant-origin youth is sparse.

These disparities in research may in part be due to the consistently lower mental health-seeking practices of Asian and Latino/a immigrant-origin youth as compared to their White counterparts (Cummings & Druss, 2011). Low rates of Asian and Latino/a youth seeking mental health treatment can create challenges when evaluating a program's efficacy with immigrant populations. Barriers to seeking mental health care include numerous structural factors such as time constraints, concerns about legal status, a lack of health insurance, and a lack of services that are offered in the individual's native language (Gudiño et al., 2008; Olcón & Gulbas, 2018). To circumvent these structural factors, a greater emphasis on providing culturally sensitive mental health programming supports within the school setting may better address the needs of immigrant populations (Wang et al., 2019). Schools have long been identified as integral providers of mental health services for ethnic minority youth — in some instances the first and only provider (Alegria et al., 2010; Leaf et al., 1996). Services received in schools are thought to be convenient, low-cost, and less stigmatizing for families and youth (Clayton et al., 2010; Vernberg et al., 2008). Models of tiered school-based mental health to serve the needs of immigrant-origin youth have been outlined, and include both universal and targeted approaches (Arora et al., 2021; Committee on School Health, 2004).

With respect to addressing parenting practices, preventative programs that focus on educating parents of middle school-aged children about positive parenting practices (e.g.,

how to foster developmentally appropriate autonomy and positive parent–child communication) have been successful in forestalling rates of depression in later adolescence (Fosco et al., 2016). Researchers have observed even greater effect sizes for preventative programs offered to parents of adolescent-aged youth (Yap et al., 2016). Nevertheless, this age group and these types of supports are less commonly evaluated (Cardamone-Breen et al., 2018).

Even more scarce are preventative programs that pay attention to the unique factors and needs of immigrant parents. A noteworthy example includes the *Entre Dos Mundos* program, in which immigrant-origin youth and their parents were provided with joint family sessions targeting parent–child conflict in a community health center. Lower depressive symptoms and behavioral problems were reported by Latino/a youth as a result of the program (Smokowski & Bacallao, 2009). A cultural adaptation of the *Incredible Years* program which focused on improving parenting practices amongst Chinese immigrant parents was also successful at reducing rates of children's internalizing and externalizing symptoms (Lau et al., 2011). Another example is *Parent–Child Connect*, a school-based mental health program shown to be effective at changing problematic parenting behaviors (Wang et al., 2021). These types of family-centered supports are especially important for Asian and Latino/a adolescents, whose cultures emphasize the importance of familism and interdependence (Tseng, 2004).

While the examples described demonstrate the potential of providing immigrant populations with effective services in school and community settings, their characteristics may limit their feasibility given previously identified structural constraints. Notably, the aforementioned programs were lengthy, lasting between seven to fourteen sessions. As previously stated, time constraints are consistently identified as a barrier to parental engagement in programming (Mytton et al., 2014). Additionally, many preventative programs serve families who are pre-identified and selectively referred for services which forgoes a more universal approach that can reach a larger proportion of parents (Cardamone-Breen et al., 2018). As a result, single-session interventions are put forth as not only a potential solution, but a necessity to address a surmounting "need-to-access gap" (Schleider et al., 2020). Promise has been seen in brief (i.e., single-session) mental health-promoting psychoeducational programs that aim to change parenting behaviors known to be linked with internalizing symptoms (Cardamone-Breen et al., 2018). Nevertheless, the research regarding the efficacy of these brief programs is limited.

The next steps in increasing access and utilization of interventions include increasing mental health literacy amongst immigrant parents and evaluating culturally-sensitive mental health promotion programs. Providing

immigrant parents with mental health literacy is useful, as literature has shown parental perceptions of mental health can have a significant impact on the utilization of services by their children (Arora & Khoo, 2020; Wang et al., 2019). For example, a qualitative study found that immigrant-origin youth believed that their parents viewed treatment as reserved for severe problems and that they would have difficulty seeking parental permission to access needed services (Arora & Khoo, 2020). While research evaluating the acceptability and feasibility of school-based psychoeducational mental health programming for immigrant parents is in its infancy, it is a crucial step in improving access to immigrant parents at the universal level (Rao et al., 2019).

The Development of the Psychoeducational Mental Health Promotion Program

Identification of Community Concerns

Prior to the development of the psychoeducational program, we developed partnerships with community stakeholders (a high school assistant principal and a community-based mental health provider) whose served populations included high percentages of Chinese and Latino/a immigrant-origin youth. This practice of fostering connections with community stakeholders is highlighted as one of the steps to improve the cultural sensitivity and effectiveness of practitioner efforts (Nastasi et al., 2004). Both community stakeholders regularly engaged with the immigrant parents who would receive our programming and their adolescent children. Their primary concern was the high incidence rates of internalizing symptoms, specifically depression, amongst immigrant-origin adolescents. Furthermore, our stakeholders described that immigrant parents struggled to communicate with their adolescent-aged children about a variety of topics such as academics, emotions, and motivation. However, consistent with the literature, our stakeholders described immigrant parents to be reticent in seeking out mental health services or support (Alegría et al., 2007; Wang et al., 2019). Reasons such as stigmatization and time constraints (to attend a training or even to interact with their adolescent children) were brought to our attention. The community stakeholders expressed a need for the training to be held in one contained session as most of the immigrant population served attended meetings without regularity. Additionally, to reduce stigma, our stakeholders noted that the session should be held during a pre-established meeting time and should be advertised without mention of terms such as “mental health.”

Psychoeducational Session Content

Reviewing the literature and incorporating our community stakeholders' initial suggestions, we utilized a cognitive behavioral framework in addition to a biopsychosocial model for mental health and dialectics to inform our inclusion of the following topics in our single-session training:

1. The period of adolescence and common physical (e.g., hormonal), cognitive (e.g., neuropsychological development of the prefrontal cortex), and social changes (e.g., strengthening of social relationships) that occur during this time were discussed. These changes were also contextualized for parents so they could identify how they might appear in their adolescents' behavior and in their relationships.
2. The common warning signs of poor mental health (i.e., internalizing symptoms), and the general and unique stressors immigrant-origin adolescents face (e.g., acculturation stress; Katsiaficas et al., 2013; Li, 2014) were also reviewed. Information regarding symptoms associated with diagnostic criteria for depressive and anxiety disorders within the Fifth Edition of the *Diagnostic and Statistical Manual of Mental Disorders* was shared with parents as well (American Psychiatric Association, 2013). Research has previously described parents' lack of awareness of these symptoms as a potential barrier to appropriate mental health care referrals (Logan & King, 2002; Wang et al., 2021).
3. Positive facets of healthy parent-adolescent communication were reviewed as there is considerable research highlighting healthy communication as a protective factor against the development of depressive symptoms (Yap et al., 2014). Specifically, validation, warmth, and the ability to promote developmentally appropriate autonomy were introduced. The training's primer on the facets of healthy parent-adolescent interactions and the impact these types of interactions could have on adolescent psychological functioning was informed by literature (Ahmadimehr & Yousefi, 2014; Vaughn-Coaxum et al., 2016; Yap et al., 2014). Moreover, a dialectical behavioral skills manual (an evidenced-based treatment modality) was consulted; mini lessons that emphasized skills of validation, warmth, and supporting authoritative parenting through the development of appropriate autonomy were created for this session (Linehan, 2015; Rathus & Miller, 2014). Role-plays were specifically designed to allow parents to practice skills that corresponded to each of the identified facets of healthy parent-adolescent communication.

Throughout the session, we paid special attention to culture. For example, when discussing the shift adolescents

might experience when their social relationships become more influential, we opened space for our immigrant parent participants to speak about the continued importance of family, as is common in collectivist cultures. Discussions regarding acculturative stress were also a unique topic included in our psychoeducational materials, as were discussions of finding culturally acceptable ways of promoting developmentally appropriate autonomy.

Modification of the Content

Once this initial framework had been developed, we met with our community stakeholders once more to receive feedback on the proposed psychoeducational session materials to ensure they were accessible to the proposed participants. For example, we modified the role-plays with the insight of our community stakeholders to resemble circumstances commonly faced by the proposed participants. We also made further modifications to the language included in the materials, replacing jargon with more colloquial language. Finally, native speakers on our research team translated all materials into Simplified Mandarin and Spanish.

Purpose of the Present Study

The current study sought to expand the existing limited literature and evaluated a pilot psychoeducational mental health program for Chinese and Latino/a immigrant parents. Research questions included:

1. Is the training effective? In other words, does participant attendance at a single-session psychoeducational training increase a parent's knowledge of stressors their adolescents face, warning signs of poor mental health, and the important aspects of positive parent-adolescent communication? Given our efforts to understand participants' needs through conversations with community stakeholders, we hypothesize the training will be rated as effective by participants.
2. Do parents rate the session's materials as acceptable? Due to the adaptations made to the psychoeducational training as a result of input from stakeholders, it is hypothesized that participants will rate the training as acceptable (Bernal et al., 2009).
3. Moreover, do parental demographic characteristics correlate with ratings of effectiveness and acceptability? Due to the exploratory nature of this question, formal hypotheses are not made. However, these findings may inform us about influential demographic characteristics that could impact the feasibility of future preventative programming.

Method

Participants

Sixty-seven ($M_{\text{age}} = 45.0$ years, $SD = 8.9$) immigrant parents who reported that they had at least one adolescent child were included in the study. The majority of parents identified as female ($n = 49$, 73.1%) and reported that English was not their first language ($n = 59$, 88.1%). While all parents identified as immigrants (i.e., born outside of the U.S.), there was variability in how much time they had resided in the U.S. ($M = 8.3$ years, $SD = 10.1$). Participants' ethnic identities were relatively evenly split between Chinese ($n = 35$, 52.2%) and Latino/a ($n = 32$, 47.8%). Individuals identifying as Latino/a came from various Latin American countries such as Ecuador, Dominican Republic, El Salvador, and Peru.²

Participants also provided information regarding their adolescent children. Similar to participant demographics, parents reported that the majority of their teenagers ($M_{\text{age}} = 16.7$, $SD = 2.5$) were not born in the United States ($n = 53$, 79.1%). Furthermore, the majority of parents reported that they mainly communicated with their adolescent children in a language other than English ($n = 60$, 89.5%). For a summary of demographic data, refer to Tables 1 and 2.

Measures

Acceptability

The acceptability of the training was assessed using a modified version of a pre-existing measure developed by Fabrizio et al. (2013) to assess the general construct of "satisfaction." Modifications to the measure were made to reframe open-ended item questions into statements. The resulting measure of parent training acceptability was a 5-item questionnaire. Participants answered questions using a 5-point Likert scale from *strongly disagree* to *strongly agree* (i.e., 1 = strongly disagree, 3 = neither agree nor disagree, 5 = strongly agree). An overall score of "acceptability" was calculated by deriving a mean score for each participant. No previous psychometrics for the scale have been reported (Fabrizio et al., 2013). The internal consistency of this measure within this sample was considered excellent ($\alpha = 0.95$). Translation of this measure into

² At the time of the study, demographic labels such as Asian/Pacific Islander and Latino/a were more commonly used and accepted. We identify our Asian/Pacific Islander participants as "Chinese" given the common country of origin they share. We maintained the use of Latino/a given the diversity in country of origin for these participants.

Table 1 Demographic characteristics of participants

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	%
Age	64	45.0	8.9	
Gender				
Female	49			73.1
Male	17			25.4
Missing	1			1.5
Ethnicity				
Chinese	35			53.2
Latino/a	32			46.8
Native Language				
English	3			4.5
Other	59			88.1
Missing	5			7.5
Years in United States	63	8.3	10.1	
Country of birth				
China	34			50.7
Ecuador	11			16.4
Dominican Republic	6			9.0
El Salvador	5			7.5
Peru	4			6.0
Colombia	2			3.0
Puerto Rico	1			1.5
Guatemala	1			1.5
Missing	3			4.5

Table 2 Demographic characteristics of participants' adolescent children

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	%
Age	62	16.7	2.5	
Place of birth				
United States	8			11.9
Outside of United States	53			79.1
Missing	6			9.0
Main language of communication				
English	1			1.5
Chinese	29			43.3
Spanish	22			32.8
Other	9			13.4
Missing	6			9.0

Simplified Mandarin and Spanish was completed by native speakers on the study team. Both the Simplified Mandarin ($\alpha = 0.93$) and Spanish ($\alpha = 0.95$) demonstrated excellent internal consistency within their respective samples.

Perceived Effectiveness

A perceived effectiveness measure was created to assess whether participants' knowledge of topics addressed in the psychoeducational training increased at the conclusion of the session. The questionnaire assessed the perception of growth in knowledge regarding the stressors that adolescents face, ways that this stress may be expressed, and how parents can enhance the quality of their communication. The perceived effectiveness measure is an 8-item questionnaire. Participants answered questions using a 5-point Likert scale from *strongly disagree* to *strongly agree* (i.e., 1 = strongly disagree, 3 = neither agree nor disagree, 5 = strongly agree). An overall score of "perceived effectiveness" was calculated by deriving a mean for each participant. The eight items measuring perceived effectiveness demonstrated excellent internal consistency ($\alpha = 0.95$) within this sample. Translation of this measure into Simplified Mandarin and Spanish was completed by native speakers on the study team. The Simplified Mandarin version demonstrated excellent internal consistency ($\alpha = 0.97$) while the Spanish version was considered good ($\alpha = 0.88$) within their respective samples.

Demographic Characteristics

Participants completed a demographic questionnaire. Information regarding participants' age, gender, birthplace, ethnicity, languages spoken, place of birth, and time spent living in the U.S. was collected. Additionally, participants reported on their adolescent's age and place of birth, and the language used to communicate with them. Translation of this measure into Simplified Mandarin and Spanish was completed by native speakers on the study team.

Procedure

Recruitment took place in two high schools with high enrollments of adolescents from immigrant families (e.g., Asian youth ranging from 56 to 65%; Latino/a youth ranging from 24 to 39%; New York State Education Department, 2017). The schools' population also identified that a range of 72 to 86% of their students were emerging bilinguals (New York State Education Department, 2017). Both schools selected held reoccurring monthly parent meetings and had expressed interest in having us provide psychoeducational sessions.

Participants were attendees at established parent meetings occurring at high schools under the purview of the New York City Department of Education. Each site conducted regular monthly parent-teacher meetings that provided information on a variety of topics. Parents were informed of the topics, dates, and times of the meetings in advance. Those who opted to attend the parent-teacher meetings were invited

Table 3 Parent ratings of acceptability

Question	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
I liked this program	64	4.5	0.7	17.39	63	<.001
I found the program useful	64	4.5	0.6	21.78	63	<.001
I am satisfied with the program	64	4.5	0.6	21.30	63	<.001
The program met my expectations	64	4.4	0.7	15.68	63	<.001
I would recommend this program to my friends and relatives	63	4.5	0.6	18.02	62	<.001

to participate in the current study at the beginning of the meeting.

The 90-min sessions were simultaneously interpreted into English, Mandarin, and Spanish including time for informed consent, and the completion of post-measures. Informed consent was obtained from all individual participants included in the study. Role plays embedded within the session were conducted in the language identified as the participant's native tongue. The psychoeducational session was held in separate rooms for Spanish and Mandarin; participants were asked to self-sort based on their language preference before the session began. Parents were provided with the psychoeducational session and were encouraged to share their experiences and participate in the embedded role plays. The experimenters provided feedback on the development of their skills in vivo. Immediately following the session, parents were administered the Demographics, Acceptability, and Perceived Effectiveness surveys. The assessment measures that were administered were either in Simplified Mandarin, Spanish or English, depending on the parent's preference. After post-session measures were collected, we engaged with participants to answer individual questions, address concerns, or provide additional resources.

Data Analyses

To achieve the first and second research goals, the means of participants' responses on the Acceptability and Perceived Effectiveness surveys were calculated. Using one sample *t*-tests, these average scores were compared to a "theoretical baseline," or a score that represented a neutral response (i.e., "neither agree nor disagree" or a score of 3). This was done as a pre-intervention measurement of acceptability and perceived effectiveness was not completed, as recommended by our community stakeholders. Spearman correlations, Mann–Whitney *U* Tests (utilized because the examination of the distributions of perceived effectiveness and acceptability showed substantial deviations from normal distributions), and ANCOVAs were conducted to explore the relationship between parent characteristics and scores on the acceptability and perceived effectiveness of the parent training.

Acceptability

Using one-sample *t*-tests, participants' responses on an aggregate of all five questions evaluating the acceptability of the training indicated that they significantly "agreed" that the program was acceptable ($M = 4.5$, $SD = 0.6$, $t(62) = 20.17$, $p < 0.001$). The item with the highest rating revealed that participants found the program to be "useful" ($M = 4.5$, $SD = 0.6$, $t(63) = 21.78$, $p < 0.001$). Although it was the lowest rated item on the scale, participants also significantly "agreed" that the "program met [their] expectations" ($M = 4.4$, $SD = 0.7$, $t(63) = 15.68$, $p < 0.001$). As a whole, our data were not normally distributed as the vast majority of our participants rated the training positively. For a full summary of the data, please refer to Table 3.

Perceived Effectiveness

Using one-sample *t*-tests, participants' responses on an aggregate of all eight questions regarding the perceived effectiveness of the training indicated that they significantly "agreed" that the program was effective ($M = 4.9$, $SD = 0.5$, $t(60) = 23.51$, $p < 0.001$). The highest rated item revealed that participants significantly "agreed" that the program "increased [their] knowledge of making time to talk with [their] teenagers" ($M = 4.6$, $SD = 0.5$, $t(66) = 23.51$, $p < 0.001$). Although it was the lowest rated item on the scale, participants also significantly "agreed" that the program "increased [their] knowledge of letting [their] teenager make some of their own decisions" ($M = 4.3$, $SD = 0.8$, $t(62) = 12.13$, $p < 0.001$). Similar to the ratings of acceptability, because many of our participants rated the training as effective, the data were not normally distributed. For a full summary of the data, please refer to Table 4.

Acceptability, Perceived Effectiveness, and Demographic Characteristics

Average acceptability and perceived effectiveness scores were calculated and used to understand associations between these outcomes and participants' demographic characteristics. Spearman correlations were used to

Table 4 Parent ratings of perceived effectiveness

Question	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
This program increased my knowledge of how to have a discussion with my teenager(s) without fighting	62	4.5	0.7	17.79	62	<.001
This program helped me to identify when my teenager(s) is/are experiencing stress	62	4.3	0.7	15.06	62	<.001
This program increased my knowledge of how to respond to my teenager(s) with warmth	62	4.5	0.6	21.37	62	<.001
This program increased my knowledge of the importance of letting my teenager(s) make some of their own decisions	62	4.3	0.8	12.13	62	<.001
This program increased my knowledge of how to talk to my teenager(s) questions in a non-judgmental manner	60	4.5	0.6	20.48	60	<.001
This program increased my knowledge of the importance of validating my teenager(s) feelings	62	4.4	0.7	15.65	62	<.001
This program increased my knowledge of the importance of making time to talk with my teenager(s)	62	4.6	0.5	23.51	62	<.001
This program increased my knowledge of the importance of apologizing when I speak to my teenager(s) in a way that hurts their feelings	62	4.6	0.5	22.86	62	<.001

Table 5 Mean ratings of acceptability and perceived effectiveness based on participant ethnicity

Variable	Chinese			Latino/a		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Acceptability	35	4.2	0.5	28	4.8	0.4
Perceived effectiveness	31	4.3	0.5	29	4.7	0.4

determine the relationship between participant age and time in the U.S. related to the ratings of acceptability and perceived effectiveness. The older the reported age of the participant, the lower the scores of acceptability ($\rho(60) = -0.33$, $p = 0.008$) and perceived effectiveness ($\rho(56) = -0.29$, $p = 0.027$). In contrast, correlations revealed no significant relationship in ratings of acceptability or perceived effectiveness based on participants' time spent residing in the U.S. ($\rho(57) = 0.12$, $p = 0.365$; $\rho(54) = -0.04$, $p = 0.791$, respectively).

Mean comparisons were completed using Mann–Whitney *U* tests and revealed no significant differences in ratings of acceptability ($U = 352.50$, $p = 0.791$) or perceived effectiveness ($U = 358.00$, $p = 0.804$) between male and female participants. Moreover, there were no significant differences between participants who reported that English was their first language as compared to those who reported English was not their first language on ratings of acceptability ($U = 35.50$, $p = 0.062$) or perceived effectiveness ($U = 36.50$, $p = 0.123$).

With respect to participant ethnicity, Mann–Whitney *U* tests were conducted to determine the effect of participants' ethnicity on their ratings of acceptability and perceived effectiveness. Participants of Latino/a descent rated the session as significantly more acceptable ($U = 198.50$, $p < 0.001$) and perceived the session as significantly more effective ($U = 235.50$, $p = 0.001$) than Chinese participants. See Table 5 for mean scores. Since age had been previously found to have a significant effect on acceptability and effectiveness, we also made these mean comparisons controlling for age, using a one-way analysis

of covariance (ANCOVA). Similar results regarding both acceptability ($F(1,62) = 28.35$, $p < 0.001$) and effectiveness ($F(1,58) = 12.07$, $p = 0.001$) were found.

Discussion

Finding culturally sensitive methods to improve the mental health programming options available to immigrant populations is a crucial step in increasing mental health utilization rates and preventing adverse mental health outcomes. The current study sought to evaluate the acceptability and perceived effectiveness of a brief psychoeducational session provided in a school setting. Furthermore, the study sought to explore whether participant demographic characteristics were correlated with participant ratings of acceptability and perceived effectiveness. Overall, our findings add to the limited research that seeks to understand the acceptability and effectiveness of brief psychoeducational sessions for immigrant parents, an underserved and expanding population in the U.S. Results from this study have implications for how to expand school-based services and how to design culturally-sensitive psychoeducational sessions for immigrant populations with their own unique needs.

Results indicated that both Chinese and Latino/a participants perceived the session to be effective in increasing their knowledge regarding the general and unique stressors their immigrant-origin adolescents face, signs related to mental health concerns, and the healthy facets of a positive parent-adolescent relationship. Moreover, the results

overall indicated that participants found the session to be culturally acceptable. These positive ratings were perhaps related to the modifications we made in response to community stakeholder input, as well as the format through which the psychoeducation was provided. When interventions have been developed or adapted using models such as the Participatory-Culture-Specific Intervention Model (PCSIM) wherein stakeholder involvement is emphasized, the resulting interventions are deemed effective in the short- and long-term (Nastasi, et al., 2004). Moreover, as previous literature has stated, culturally informed programming provided in group settings for individuals of the same cultural background and that is offered in participants' native tongue is deemed as more effective (Cardemil et al., 2010; Griner & Smith, 2006; Shin, 2004). When drawing conclusions regarding our findings, it is also important to acknowledge that participants may have acquiesced to be perceived favorably by us and school personnel present during data collection when responding to the questionnaires. This may have elevated participants' ratings of acceptability and perceived effectiveness. Moreover, self-selection bias may ultimately have resulted in the inclusion of participants who were more likely to be accepting of the psychoeducational information presented. Nevertheless, our findings show preliminary promise of brief mental health programming designed for immigrant parents.

Exploratory analyses were conducted to examine group similarities and differences between the Chinese and Latino/a participants within this study. We found that Latino/a participants reported higher levels of acceptability and perceived effectiveness after the session than their Chinese counterparts. These findings were maintained even when controlling for demographic characteristics (e.g., age) that also produced differences in ratings of acceptability and perceived effectiveness. In large-scale cross-cultural studies, Asian families have reported lower levels of parental warmth within their parent-child relationships than other racial or ethnic groups (Deater-Deckard et al., 2011; Lansford et al., 2018). Moreover, Chinese families may experience greater acculturative differences in autonomy (Juang et al., 2012). Given these general trends as per the literature, the content of the psychoeducational session for our Chinese participants may have been less acceptable or perceived to be less effective overall, resulting in these observed group differences. Nevertheless, our sample sizes were small for both groups, so strong conclusions were not drawn. Additionally, although differences were found, both groups still rated the training as acceptable and perceived the material to be effective in increasing their knowledge.

Correlations between demographic variables and outcomes (i.e., acceptability and perceived effectiveness) revealed findings with potential implications. Results

indicated that the older the participant, the lower the scores of perceived effectiveness and acceptability. Perhaps the lower scores of acceptability are the result of the relationship between age and acculturation status of the reporting individual. Regardless of when individuals are exposed to a "mainstream" culture, the older the individual, the lower the level of acculturation, especially if the individual has not attended school in the "mainstream" culture (Schwartz et al., 2006), with some researchers even suggesting the presence of a "sensitive period" for acculturation (Cheung et al., 2011). Therefore, the less acculturated an individual is, perhaps the less acceptable it is to discuss topics such as those covered in the psychoeducational session. This supposition is supported by a study evaluating the acceptability of parent behavioral management sessions, with fathers who reported greater acculturation perceiving parent sessions as more acceptable than their less acculturated counterparts (Borrego et al., 2007; Ho et al., 2012). Because an acculturation measure could not be administered for the current study, definitive conclusions regarding the potential impact of acculturation level on parents' evaluation of the training materials cannot be drawn. Nevertheless, it is suggested that further adaptation of prevention materials with the input of a variety of community stakeholders, as described by Nastasi et al. (2004), may help to improve ratings of acceptability of interventions by those who are less acculturated.

Limitations

There were several limitations of the aforementioned study such as the idiosyncratic nature of the session (i.e., materials were created specifically for the current study and had not been piloted prior) and limited opportunity for follow-up after real-world application. The decision to disseminate psychoeducation within a single session was made to meet the needs outlined by the community stakeholders. Specifically, stakeholders indicated that due to the stigma held against help-seeking by the population, time constraints, and limited regularity of attendance, a single session was preferred over a series of sessions. This decision of providing a single session could have limited the real-world effectiveness of the intervention. These factors may have also contributed to self-selection bias. Our participants were immigrant parents who opted into attending the program, potentially indicating that they may have held less stigmatizing views of the subject material and had fewer constraints on their time. As a result, this unique sample of the population may have been more primed to rate the training as acceptable and to perceive them as effective.

Moreover, we were unable to use a previously evidence-based psychoeducational session, as such supports are not yet commonly researched in the literature, and materials for this

study were reviewed, tailored, and shortened to meet the needs of the target population with the help of our stakeholders' input. The measure of perceived effectiveness was created specifically to assess the current psychoeducational session. Given this, psychometric data were not available prior to this study. Moreover, to meet key stakeholders' needs of reducing the demand on participants, we decided to eliminate the pre-intervention collection of effectiveness data. This decision limited our ability to calculate a change in knowledge. Furthermore, the measure of acceptability, while adopted from a published study, also lacked previously calculated psychometric data reducing the strength of reasoning for including these measures within the protocol.

Another limitation related to the in-person interpretation of the Spanish session. In-person interpretations were offered in separate sessions by Native-Spanish speakers and non-Native Spanish speakers; however, the ratings of interpretation quality were not gathered. Greater emphasis on providing live interpretation with the help of a Native-language speaker is an identifiable next step. A final limitation was within the methods of collecting data and feedback from participants regarding the effectiveness of the psychoeducation after real-world application. Upon consulting with the schools for which this psychoeducational session was designed, stakeholders emphasized that most of the immigrant population they served did not attend scheduled meetings with regularity which would limit post-training real-world data collection of effectiveness or acceptability. The ability to pilot and provide this psychoeducational session for a more regularly attending group of immigrant parents would be a valuable next step in understanding effectiveness.

Implications

Despite the limitations presented, this study may have important implications for the delivery of brief mental health-promoting psychoeducational sessions to immigrant parents. First and foremost, the results of the current study suggest that school meetings may be an effective avenue to provide psychoeducation regarding topics ultimately linked to the reduction of adverse mental health outcomes. This emphasizes the need for mental health professionals to utilize these non-stigmatizing locations. Moreover, the focus on cultural sensitivity is important in ensuring the effectiveness and acceptability of interventions. As evidenced here, this type of work is feasible and therefore should be undertaken with greater frequency.

Additionally, important information regarding participant characteristics was observed and can be utilized by practitioners in the field. For example, schools should be cognizant of potentially lower acceptability rates of mental health programming amongst older immigrant parents. Future research may wish to explore the impact of acculturation status as a mediating

factor between age and observed outcomes. Additionally, differences in acceptability and effectiveness may be observed based on the ethnic identity of participants. While the current study created materials by consulting stakeholders familiar with both populations, greater ratings of acceptability and perceived effectiveness might be achieved for Chinese immigrant parents if materials were designed with only their needs in mind. Focus groups with prospective participants, rather than only with community stakeholders, might provide valuable insights into the limitations of the training materials developed.

To further support more meaningful conclusions, future research should focus on improving pre-intervention and post-intervention data collection at multiple time points. This would allow researchers to define a change in knowledge. Additionally, stronger conclusions could be drawn by working with schools with higher rates of regularly attending immigrant parents, as these schools would be better equipped to measure longer-term effectiveness data and collect information about rates of adolescent internalizing symptomatology. Researchers can also partner with schools to increase regular parental attendance through family engagement protocols (e.g., welcome centers, parent advisory boards, etc.; Arora et al., 2021) that encourage parents who may not traditionally participate to engage. Nevertheless, it is hopeful that the findings from this article will inform school psychologists about the feasibility and the process of creating mental health promotion programming for immigrant populations.

Declarations

Conflict of Interest The authors declare no competing interests.

Disclaimer This article is based on the doctoral project completed by Rao (2018). The data that support the findings of this study are available from the corresponding author, AR, upon reasonable request. This study was approved by and complied with Pace University's Institutional Review Board. Informed consent was obtained from all individual participants included in the study.

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