



It Takes a Hui: Evaluating Outcomes of Family Hui, a Peer-led Parenting Program

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Abstract

Adverse Childhood Experiences (ACEs), potentially traumatic life events that may occur during childhood (i.e., abuse, neglect, and household challenges), affect as many as 58% of children in the United States. Evidence suggests that interventions focused on strengthening individual, family, and community level protective factors could help mitigate the negative effects of ACEs on children's development and potentially reduce overall exposure to ACEs. While parent education programs often target ACEs prevention at the individual level (i.e., only the parents or the child), peer-to-peer support groups can go a step further to help build protective factors at the individual, family, and community levels. The current study evaluated Lead4Tomorrow's Family Hui 12-week program, a peer-led parenting program, before and after the addition of ACEs and resilience materials. In post-participation ratings of program participants, parents who completed the Family Hui program that included ACEs and resilience materials (the Bloom curriculum; $n = 235$) reported overall better learning outcomes and program ratings than those who completed the program before these materials were added (the original curriculum; $n = 235$). Importantly, non-English speaking parents (those who were administered the Farsi or Spanish versions of the curriculum) benefited as much as, if not more, than English-speaking parents. Future research should investigate the long-term effects of the Family Hui program and the Bloom curriculum on family and community ACEs related outcomes and compare the effects of peer-led parenting programs and other ACEs prevention approaches.

Keywords Peer-led parenting programs · Adverse childhood experiences · ACEs prevention · Protective factor · Resilience · Immigrant families

Highlights

- Family Hui's peer-led parenting program improved learning outcomes and program ratings using the Bloom curriculum.
- The Bloom curriculum includes materials on Adverse Childhood Experiences (ACEs) and resilience.
- Parents in the Farsi or Spanish versions of the program benefited as much as, if not more than English-speaking parents.
- Peer-led parenting programs provide relatively self-sufficient ways to support parents across cultural backgrounds.

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Adverse Childhood Experiences (ACEs), potentially traumatic life events that may occur during childhood like abuse or neglect, are a pervasive problem in the United States. As many as 58% of children experience at least one ACE and 21.5% experience three or more ACEs before the age of 18 (Giano, 2020). ACEs include three categories of experiences: abuse (e.g., emotional, physical, or sexual abuse, such as having parents who insulted or physically harmed their child), neglect (e.g., emotional or physical neglect, such as not being taken to a doctor or not having enough to eat), and household challenges (e.g., a parent was treated violently, substance abuse, mental illness or divorce) (Felitti et al., 1998). Extended exposure to stress from ACEs is

associated with alterations in children's brain and executive function development, leading to problems with attention, impulse control, decision making, learning, emotions, and stress responses (Center for Disease Control and Prevention, 2019; Shonkoff et al., 2012). Additionally, ACEs exposure in childhood has life-long negative associations in areas of physical and mental health (e.g., adult chronic disease, cancer, mental illness, and suicidality: Afifi et al., 2008; Brown, 2013; Chapman et al., 2004; Dube et al., 2009; Edwards et al., 2003; Gilbert et al., 2015; Ports et al., 2019; Remigio-Baker et al., 2014; Thompson et al., 2019), risky behaviors (e.g., drug and alcohol abuse, unintended pregnancy: Anda et al., 2002; Strine et al., 2012; Swedo et al., 2020), and academic and professional achievement (e.g., high school non-completion, job potential, unemployment: Anda et al., 2002; D. W. Brown et al., 2009; Merrick et al., 2019; Metzler et al., 2017).

Marginalized communities are disproportionately affected by ACEs, with higher prevalence rates for racial and gender minorities as well as those in low socioeconomic statuses (Crouch et al., 2019; Giano, 2020; Halfon et al., 2017; Merrick et al., 2018). Further, the prevalence of ACEs may be additionally compounded by the unique challenges faced by immigrant families (e.g., Ulysses Syndrome; Lanzara et al., 2019) who have higher odds of experiencing ACEs than non-immigrant families (Caballero et al., 2017; Loria & Caughy, 2018; Lucassen et al., 2015; Rosado et al., 2021; M. G. Vaughn et al., 2017). The prevalence of ACEs among children in the United States have made ACEs prevention a high-priority issue for improving child development and societal outcomes, especially in marginalized groups (Centers for Disease Control and Prevention, 2021).

Immigrant families face a set of challenges different from those of non-immigrant populations, including legal and economic disadvantages (Coutin 2011; Patler 2018), acculturative stress (Dillon et al. 2013), maintenance of transnational relationships (Solheim & Ballard, 2016), and sometimes the risk of separation (Van Hook & Glick 2020). Unfortunately, these unique challenges are commonly left unaddressed by mainstream family support resources (Shields & Behrman 2004). Often, immigrant parents may not be aware of or hesitate to access public resources due to fears of legal ramifications (Bernstein et al. (2019); Berger Cardoso, Faulkner, & Barros Lane, 2018).

Despite these challenges, resilience can be built. Community support serves as a key factor to building resilience and success in immigrant populations (Cardoso & Thompson 2010), perhaps via the wealth of resources that a community can provide. For example, because immigrant families place more trust in the community over external government-provided resources, within-community liaisons can effectively connect these marginalized families with

needed resources (Malika, Granillo, & Belliard, 2021). Thus, leveraging existing community structures may be key to provide accessible, culturally-sensitive resources to immigrant families.

ACEs Prevention and Protective Factors

Research suggests that the effects of ACEs can be mitigated through individual, family, and community level protective factors (Merrick et al., 2018). The Center for the Study of Social Policy (2013) has identified five key factors to protect against ACEs: parental reliance, social connections, knowledge about parenting and child development, concrete support in times of need, and social and emotional competence in children. Everyday actions at home and in the community can help build these protective factors. At individual and family levels, these actions can include providing education about child development, ACEs, and resilience, demonstrating respect for the unique factors that contribute to each family's approach to parenting (e.g., race, language, culture, history), building safe, stable, and nurturing family relationships (SSNRs), and providing access to concrete resources in times of need (Bethell et al., 2017; Panisch et al., 2020; Schofield et al., 2013; Sciaraffa et al., 2018; The Center for the Study of Social Policy, 2013). At a community level, protective factors can be built by developing strong social connections, promoting norms that protect against violence and encourage positive parenting practices, promoting family engagement in community activities, and facilitating mutual support for discussing and dealing with parenting issues (Fortson et al., 2016; Merrick et al., 2018; The Center for the Study of Social Policy, 2013). ACEs interventions that seek to build protective factors across individual, family, and community levels have the potential to impact health, improve life outcomes, and help children and families achieve their full health, social, and economic potential (Fortson et al., 2016; Metzler et al., 2017).

While screening for ACEs is common in research and healthcare settings, few have examined the impact of directly educating parents about ACEs. In healthcare settings, conversations about ACEs between healthcare providers and parents have shown promise in pointing families towards necessary resources (Bodendorfer et al. 2020). Building on this work, we hypothesize that educating parents about ACEs can lead to further improvements in parenting behaviors. Educational programs can provide parents with knowledge about the intergenerational, long-term associations of ACEs, allowing parents to identify the potential presence of ACEs in their current and past environments, as well as to better understand how these factors may have shaped their and their children's

development. Next, by providing training and parenting tools to mitigate the impacts of ACEs, educational programs can empower families to break the potentially negative cycle of intergenerational effects.

Most state-level abuse interventions, provided through one-on-one training by professional social service workers, tend to focus solely on individual and family level risk factors and do not address social and community network needs for supporting ACEs prevention (Urosevich, 2013). According to Merrick et al. (2018), “*breaking the intergenerational link of child maltreatment requires moving beyond parenting [focused] programs alone to incorporate the broader community and societal contexts to ensure the conditions for good health and well-being.*” Towards this end, we consider one parenting program, Family Hui’s Bloom program, which seeks to build these five protective factors by integrating parent, family, and community level support and education to ameliorate ACEs, especially in marginalized communities.

Family Hui Parenting Program

Family Hui is a resilience-focused, peer-led parenting program of Lead4Tomorrow, a 501(c)3 nonprofit organization based in Davis, CA. The program is built on the very successful Hawai’i-based Baby Hui program, which served Hawai’i’s families for 30 years. Lead4Tomorrow acquired the Baby Hui materials in 2011, and in 2012 expanded the program to serve families with children ages 0–5, re-imagining the program to focus more on parenting and family life as children grow to school age. In 2014, Lead4Tomorrow launched Family Hui in California, and in 2015, the program was again expanded to address issues of trauma and resilience. In 2016, the new Family Hui curriculum, *Bloom*, was launched as the first in the Family Hui series to include ACEs education and resilience-focused components to increase awareness and ameliorate ACEs in the communities it serves. The Bloom revision served to both introduce ACEs education to build resiliency and condense the previous 400-page manual into a shortened, more accessible form. In California, Family Hui has focused extensively on working with low-income, Spanish-speaking, and Afghan/Syrian/Iraqi immigrant and refugee communities, with more than 250 families having participated since 2015.

The Family Hui program offers a unique approach to addressing and ameliorating ACEs in high-risk communities by sharing skills that address the challenges of raising young children and connecting families to social support and community resources. Peer leaders for each *Hui*—the Hawaiian term for community groups organized around a shared purpose—are recruited directly from the community

and trained on the program framework, curriculum, and group facilitation techniques. Upon recruitment via community-based partner agencies, peer-leaders received three training sessions on the Hui curriculum. The first training covered the program philosophy, guidelines, and content. The second training answered leadership questions and covered the remaining curriculum. A third training was sometimes offered to cover remaining materials based on leader circumstances and needs. Repeat leaders did not receive repeat training and instead received refresher training and conversations. Hui leaders are taught to focus on creating a welcoming and safe space for conversation.

Next, families from the Hui leaders’ community are recruited to form Hui of approximately 5–10 families with children of similar ages. Over the course of 12 weeks, families learn, discuss, and engage in activities on key aspects of parenting: Expectations vs. reality of parenting, adversity and resilience, nutrition, crying and sleeping, child development, mindful/positive discipline, play and language, health and safety, family life, media, and school readiness. The program included a total of 12 weekly sessions and participants were encouraged to attend as many sessions as possible.

The use of peer leaders to facilitate discussion and learning and a focus on building peer/community support systems for parents are key elements of the Family Hui program. According to the National Center for Injury Prevention and Control, Division of Violence Prevention (Center for Disease Control and Prevention (2021)), communities are better protected against ACEs when residents feel connected to each other, have high community involvement, provide families with strong social support networks and foster positive relationships within the community. The Family Hui program addresses each of these protective factors in addition to decreasing social isolation, building accountability and community support for positive parenting, and providing safe spaces for families to share their parenting challenges and seek out support and strategies for addressing them from trusted peers. In these ways, Family Hui addresses ACEs prevention at the individual, family, and community level and works towards creating and sustaining healthy families, building community, and educating caregivers about ACEs and resilience (Fortson et al., 2016).

The Current Study

The current study evaluates the effectiveness of the Bloom curriculum, which included ACEs and resilience materials, in comparison to the original Hui curriculum without these materials. We assessed differences between these two curricula using a post-test survey measure where participating

parents reported on their learning outcomes and changes in parenting approach as a result of the program. We predicted that participants' reported learning outcomes (e.g., ability to manage stress, understanding how children learn, confidence as a parent; see Table 2 for a complete list) and program ratings (e.g., trusting the group leaders, feeling welcomed in the program; see Table 3 for a complete list) would be higher for participants who completed the program after the addition of ACEs and resilience materials. Additionally, we explored how individual differences (language spoken at home, education level) related to participants' learning outcomes.

Methods

Participants

Parents ($N = 368$) of children ages 0 to 5 self-selected to participate in the Family Hui programs. Participants were from California counties Colusa, Imperial, Sacramento, San Diego, Alameda, and Yolo, as well as Alexandria, Virginia, and participated from 2015 to 2019. The program contents were consistent across Huis in each program version (described below); we did not expect regional differences and did not design the study to test for them (e.g., only 3 out of 60 Huis were held on the east coast). Participant demographics are detailed in Table 1.

Procedures

Recruitment

A variety of recruitment methods were used to enroll participants, including the use of partner school districts and direct recruitment from the Hui leader's communities and social networks. Recruitment took place in two phases. First, Hui leaders were recruited directly from the community via local partner agencies (e.g., family resource centers and school districts) and through social media networks. Peer-leaders were volunteers who received a stipend of \$150 per leader. Usually 2 leaders were assigned per Hui. If there was only one leader, that person received \$300 (both stipends). The stipend was provided to help leaders support the program as needed. Hui leaders were provided with leadership manuals and training. The leaders were instructed that their focus is on welcoming others and creating a safe space for conversation. Importantly, the leaders' role was that of a facilitator, as opposed to being a subject matter expert/teacher.

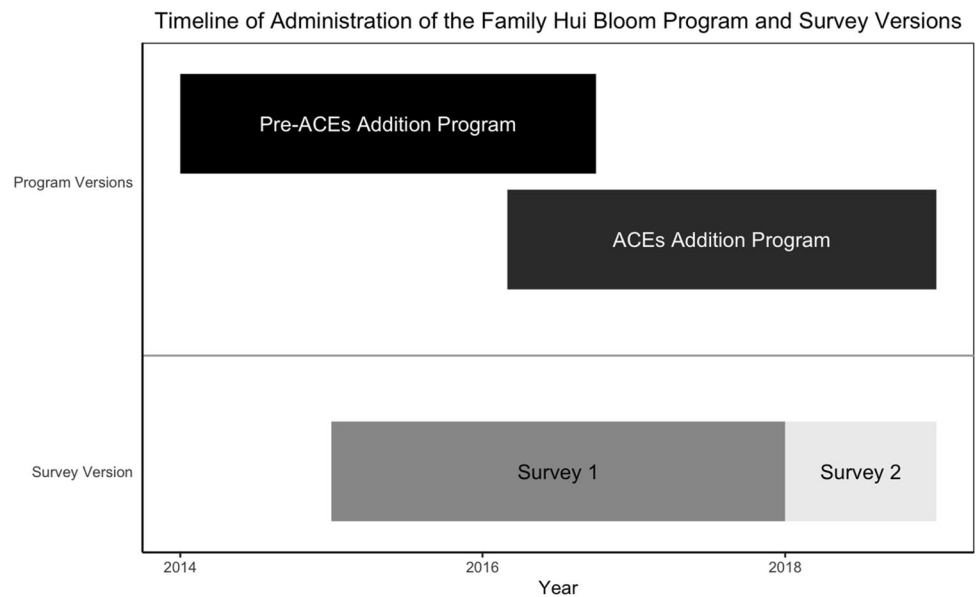
Next, participants were recruited for each hui for the program. Each parenting group (Hui) consisted of 5–10 parents (group size ranged from 3–12) and one or two

Table 1 Participant Demographics by Group

Variable	Original curriculum (Pre-ACEs Version, $n = 133$)	Bloom curriculum (ACEs Version, $n = 235$)	Total ($N = 368$)
1) Average Number of Children			
	1.99	2.50	2.32
2) Race			
Afghan	0	34	34
Asian	25	91	116
Latino	82	42	124
Mixed	0	5	5
White	22	30	52
Did not specify	4	33	37
3) Primary language spoken at home			
Dari/Farsi	23	122	145
Eng	28	31	59
Spanish	69	33	102
Other	7	32	39
Did not specify	6	17	23
4) Education (college)			
Currently Enrolled	1	0	1
Graduate School	2	53	55
BA/BS degree	11	20	31
AA/AS degree of vocational school	6	7	13
Some college	14	27	41
High school diploma or GED	35	28	63
Grade 12 or less, no high school diploma	51	59	110
Elementary School	0	6	6
No schooling	0	12	12
Did not specify	13	23	36
5) Attendance			
1-2 times	14	15	29
3-6 times	12	9	21
7-10 times	26	17	43
11-12 times	71	165	236
Did not specify	10	29	39

trained Hui leader(s). Before beginning the program at the first session, participants completed a pre-program survey. Each week participants reviewed topics related to parenting and engage in reflection activities and discussions. In the final week, participants completed a post-participation survey.

Fig. 1 Timeline of the Family Hui Bloom curriculum versions and survey administration dates



Program evaluation design

Parents participated in one of two versions of Family Hui programming. The pre-ACEs version of the program, the original curriculum ($n = 133$), was administered from 2014 to 2017, and the ACEs version of the program, the Bloom curriculum ($n = 235$), was administered from March 2016 to 2019. Additionally, the surveys underwent wording revisions in 2018, resulting in two versions of the survey. Questions on the two survey versions were matched by their content for analyses (See Table 1). A timeline of the surveys and Family Hui program versions are depicted in Fig. 1.

Both versions of the programming include information and discussion sessions on topics of child development, positive discipline, play and language, health and safety, family, media, and school readiness. The ACEs version of the curriculum (Bloom) was identical except for the addition of materials on ACEs and resilience (Art of Parenting activities) and a condensed program manual. The program's sustainability was supported by ensuring that content is simplified and accessible, allowing for ease of use by peer leaders and program participants. Further, program materials consisted of an instructional booklet that can be distributed without ongoing external resources. These materials were added in spring of 2016.

Surveys were administered in paper form to all participants at the first session and at the final group meeting upon completion of the program - in English, Farsi, or Spanish, depending on preference. Upon participants' request, Hui leaders were available to verbally administer and/or manually note participants' responses on the survey forms (see the full surveys in the Appendices A and B). Both versions of the pre- and post-participation surveys included questions about demographics (e.g., ethnicity, education level,

children's ages), experiences as parents, and expectations of the program. Following the program update, a second version of the surveys was created to capture changes, and the survey was updated in 2018 to include questions about ACEs (see Appendices A and B). Hui materials and meetings were available in English, Spanish, Farsi with Hui groups being led in English, Spanish, Farsi, as well as Arabic (which is not included in the current study).

All evaluation materials were designed by program coordinators to compare the two versions of the Family Hui program. During survey administration, participants were informed by Hui leaders that the purpose of the survey was to improve the quality of the program, and that their responses were voluntary and would not impact their participation in the program. Researchers joined the project after data had been collected. Because the researchers had no role in designing nor administering the feedback surveys, no direct contact with program participants, and no identifying information was attached to any survey data, this evaluation was granted Not Human Subjects Research status by the Institutional Review Board at the University of California Davis (Protocol #1634586-2).

Measures

Pre-participation survey

The pre-participation survey was administered in paper form to all participants prior to their participation in the program. Participants completed one of two versions of this survey: in survey version 1, participants indicated their agreement on a 5-point Likert scale about their feelings of connection, confidence, and skills as a parent (Appendix A), and in survey version 2, participants indicated how often

Table 2 Comparisons of Learning Outcomes Between Groups

Learning Outcomes	Survey Version 1	Survey Version 2	Original Curriculum mean (SD)	Bloom Curriculum mean (SD)	Mann Whitney U stat (Bonferroni adjusted <i>p</i> -value)
1. Learning through play	I have a better understanding of how children learn through play and hands-on experience.	I have a better understanding of how children learn through play and hands-on activities.	3.84 (0.42)	3.97 (0.18)	13809 (<i>p</i> < 0.0001)
2. Skills and behaviors	I learned what skills/behaviors are appropriate for my child's age.	I have a better understanding of what skills or behaviors are appropriate for my child's age.	3.88 (0.33)	3.97 (0.2)	13568 (<i>p</i> = 0.002)
3. Feelings of connection	I became more connected with other families.	I feel more connected with other families.	3.91 (0.38)	3.94 (0.25)	14744 (<i>p</i> = 1.0)
4. Available resources	I learned about available resources in my community.	I learned about available programs and services.	3.77 (0.5)	3.94 (0.34)	12783 (<i>p</i> < 0.0001)
5. Confidence as a parent	I feel more confident in myself as a parent.	I am more confident as a parent.	3.84 (0.42)	3.93 (0.35)	13837 (<i>p</i> = 0.077)
6. Stress management	It is easier to manage the daily stresses of raising a child.	I can better manage the stresses of raising a child.	3.8 (0.45)	3.91 (0.3)	13391 (<i>p</i> = 0.038)
7. Resolving problem behaviors	I have learned ways to improve my child's behaviors that are appropriate to his/her age.	When my child is upset, I can better identify the problem and potential solutions.	3.85 (0.38)	3.94 (0.24)	13839 (<i>p</i> = 0.085)

they engaged in specific parenting activities with their child or community using a 5-point Likert scale (Appendix B). Due to substantial differences in the two versions of the pre-participation surveys, we do not compare them in subsequent analyses.

Fidelity of delivery

Fidelity of program delivery was monitored qualitatively through on-site visitations, weekly check-in phone calls with the leaders, and quantitatively through attendance records. Fidelity to the survey's administration was supported by an administration guide provided to Hui leaders.

As we worked mainly with immigrant populations with varied rates of literacy, we encouraged our leaders to be flexible and responsive to the needs of the participants. The key to the program's success was ensuring the information and delivery were effective in building the Five Protective Factors and that the delivery was flexible enough to meet the learning and cultural needs of each group. Fidelity was always to the needs of the group and the curriculum, not to a method of delivery. Though we have an administration guide, fidelity to the needs of the group superseded fidelity to any process or procedure.

Post-participation surveys

In the post-participation survey, participants were asked to indicate on a 4-point Likert scale their level of agreement with learning outcomes (e.g. "I have a better understanding of how children learn through play and hands-on experience") and with statements about the Family Hui program (e.g. "The Family Hui was respectful of my culture."). As previously noted, there were slight differences between the surveys administered to the two groups. For the present investigation, only items that matched sufficiently in wording and meaning between the two survey versions were examined. The number of sessions attended was also self-reported at post-test. See the Appendices A and B for versions of the two surveys and Table 2 for the matched items that were evaluated.

Paper forms were inputted into an electronic form by two separate data entry personnel in order to preserve quality and veridicality of responses. Any item-level discrepancies between double-entered forms were nullified and removed from analyses, which equated to approximately 8.15% of responses relevant to the current investigation.

Data Analysis

To examine differences between the program versions, matched post-test items were compared between the program groups. Pre-participation surveys were not compared between groups due to differences in their wording and

content, and pre- and post-participation surveys were not directly compared because the questions differed in phrasing between the two administrations. Further, the post-participation survey items were already phrased in a way to directly assess change. For example, the pre-participation question “I am confident as a parent” had as its equivalent post-participation question, “I am more confident as a parent”. Examining responses to post-participation questions allowed us to directly assess positive change without comparing pre and post responses.

Initial examination of the data revealed violations of normality, as all outcome variables showed a negative skew indicative of ceiling effects. This suggests that a majority of respondents reported favorably on program outcomes. Therefore, we opted to conduct non-parametric tests across statistical analyses. The *npmv* package in R was used to conduct nonparametric tests. We first conducted a multivariate Kruskal-Wallis test to examine the omnibus difference in responses between the two groups (Munzel & Brunner, 2000), and Mann Whitney tests (aka Wilcoxon test, a non-parametric alternative to the 2 sample t-test; Nachar, 2008) were used to examine differences for individual items (with Bonferroni adjustments for multiple comparisons when appropriate). We applied an overall alpha value of 0.05 for all omnibus tests, and all multiple comparisons maintained the overall type I error rate at $\alpha = 0.05$. In other words, all comparisons were conducted and significance reported while maintaining the overall type I error rate at $\alpha = 0.05$.

For analyses on languages spoken at home, participants were divided into 4 language groups: English, Spanish, Dari/Farsi, and Other. This was done because English, Spanish, and Dari had the highest numbers of speakers while all other languages (with between 1 to 19 speakers) had numbers too low for stand-alone comparisons.

Results

Fidelity of Delivery

Because fidelity of program delivery was assessed qualitatively, we were unable to provide precise quantitative measures of fidelity. However, at weekly check-ins with Hui leaders, program coordinators ensured that program content was covered across sessions. All Hui leaders reported successfully completing each week’s materials before continuing to the next week’s materials. No Hui reported failing to cover the full range of materials in the 12-week session.

Group Differences

First, we examined differences in learning outcomes between the two groups. Results from a multivariate non-

parametric Kruskal-Wallis test comparing the seven learning outcomes between the two groups revealed a significant group effect, $W^2 = 7.46$, $p < 0.001$. Inspecting each of the seven learning outcomes individually, Mann Whitney tests showed that ACEs group demonstrated significantly higher ratings than pre-ACEs group on four learning outcomes (*Learning through play*, *Skills and behaviors*, *Available resources*, *Stress management*, p 's < 0.05) and marginally higher ratings on two learning outcomes (*Confidence as a parent*, *Resolving problem behaviors*, p 's < 0.09). One item, *Feelings of connection*, did not differ between the two groups ($p = 1.0$; see Table 2 for full results).

Next, we examined differences between the two groups in program ratings. A multivariate Kruskal-Wallis test comparing the seven program ratings between the two groups revealed a significant group effect, $W^2 = 3.172$, $p = 0.037$. Individual inspections of each item showed that the ACEs group rated *Respect for culture* and *Communication and language* significantly higher than the pre-ACEs group, $p = 0.034$ and $p = 0.004$, respectively. Ratings of all other program characteristics—*Trust of leader*, *Location*, *Feelings of welcome*, and *Convenience*—did not differ between the two groups (p 's > 0.1). See Table 3 for full results.

Given the numerically small differences between the groups, we probed further to examine the sources of the significant difference. Inspecting the distributions of responses across learning outcomes, we saw notable differences in the proportion of respondents who reported “Agree” to learning outcomes in the Bloom curriculum compared to the original curriculum (Table 4). These differences in response distributions explain the significantly higher ratings in the Bloom group.

Individual Differences

Language spoken at home

Across respondents, the majority reported primarily speaking Dari ($n = 145$, 32.9%) or Spanish ($n = 102$, 32.3%) at home. Only 16.03% ($n = 59$) reported speaking any English at home, and 18.2% ($n = 67$) reported speaking another language or languages. To examine differences in learning outcomes by language spoken at home, we conducted a multivariate Kruskal-Wallis test. Results showed that learning outcomes differed across the four language groups, $W^2 = 3.488$, $p < 0.001$. Setting the global type I error rate at $\alpha = 0.05$, we examined pairwise differences between each language grouping in their overall responses. We found that Dari-speaking respondents reported significantly higher learning outcomes than the other three language groups (p 's < 0.0045). The other three language groups did not differ significantly from one another in their reported learning outcomes (p 's > 0.0045).

Table 3 Comparisons of Program Ratings Between Groups

Program Component	Items	Original Curriculum mean (SD)	Bloom Curriculum mean (SD)	Mann Whitney U statistic (Bonferroni adjusted <i>p</i> -value)
a. Respect for culture	The Family Hui was respectful of my culture.	3.92 (0.47)	4 (0.07)	14386 (<i>p</i> = 0.04)
b. Communication and language	The Family Hui group leader communicated with me in a language I feel comfortable with.	3.92 (0.35)	4 (0.07)	13926 (<i>p</i> = 0.005)
c. Trust of leader	I trusted the Family Hui group leader.	3.94 (0.32)	3.99 (0.15)	14219 (<i>p</i> = 0.320)
d. Location	The Family Hui's location made it easy for me to participate.	3.96 (0.29)	3.98 (0.16)	14566 (<i>p</i> = 1.0)
e. Feelings of welcome	My ideas as a parent were welcomed and included in the Family Hui.	3.94 (0.32)	3.99 (0.09)	14396 (<i>p</i> = 0.134)
f. Convenience	The Family Hui's hours made it easy for me to participate.	3.91 (0.36)	3.97 (0.23)	14015 (<i>p</i> = 0.312)
g. Recommend	I would recommend the Family Hui to a family member or friend.	3.95 (0.3)	4 (0.07)	14564 (<i>p</i> = 0.265)

Table 4 Response counts in learning outcomes between groups

Learning Outcomes	Agree %		Somewhat agree %		Somewhat disagree %		Disagree %		Don't know %	
	Bloom	Original	Bloom	Original	Bloom	Original	Bloom	Original	Bloom	Original
Learning through play	96.6	86.2	3.4	13	0	0	0	0.7	0	0
Skills and behaviors	97.4	88.3	2.2	11.7	0.4	0	0	0	0	0
Feelings of connection	94.7	93.5	4.8	5.1	0.4	0.7	0	0.7	0	0
Available resources	96.1	81	3	16.8	0.4	1.5	0	0.7	0.4	0
Confidence as a parent	94	86.7	5.6	12.6	0	0	0	0.7	0.4	0
Stress management	91.7	82.5	7.9	16.8	0.4	0	0	0.7	0	0
Resolving problem behaviors	93.9	86.8	6.1	12.5	0	0.7	0	0	0	0

Education levels

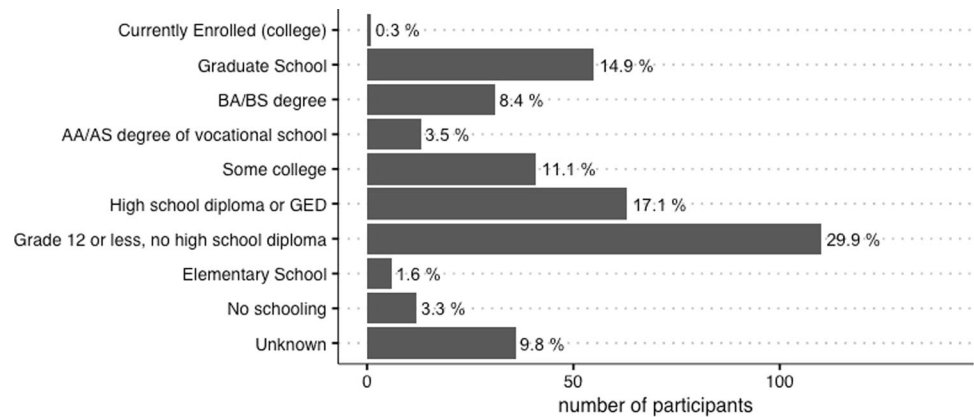
Participants were diverse in their education levels, ranging from no schooling to graduate school (see Fig. 2). To examine differences in learning outcomes across education levels, we conducted a multivariate Kruskal-Wallis test using education level as a linear predictor of the set of seven learning outcomes. Results showed no significant differences in learning outcomes across education levels, $W^2 = 1.316$, $p = 0.201$. Thus, regardless of parental education, all participants rated similar learning outcomes from the program. No significant interaction was found between language spoken at home and education level ($p = 0.061$).

Attendance

Most participants reported attending 11–12 sessions (out of 12 total sessions, 64.1%; Table 1). We conducted a multivariate nonparametric test examining the effect of attendance on learning outcomes. Overall, the number of sessions

attended did not significantly affect program outcomes (Wilks lambda = 1.453, $p = 0.086$). In both groups, the majority of participants reported attending 11–12 sessions (Original group = 53.4%, Bloom group = 70.2%). A Mann-Whitney test examining the effect of Group on linearly coded Attendance Rates (1 = 1–2 times, 2 = 3–6 times, 3 = 7–10 times, 4 = 11–12 times) revealed a significant effect of Group on program attendance, $W = 9952.4$, $p < 0.001$. When both Group (Original group and Bloom group) and Attendance were accounted for in non-parametric multivariate Kruskal-Wallis tests predicting Learning Outcomes and Program Ratings, neither factor uniquely accounted for variance in the outcomes (p 's > 0.20), but when examined separately, Group predicted both sets of outcomes significantly (as reported above) while Attendance did not (Learning Outcomes: $W^2 = 0.628$, $p = 0.703$; Program Ratings: $W^2 = 0.75$, $p = 0.64$). This suggests that while attendance rates were significantly higher in the Bloom group, attendance rates by themselves did not significantly account for program outcomes.

Fig. 2 Distribution of education levels of participants in the sample



Other individual differences

We explored additional individual differences in outcomes due to the total number of children in the family, the age of the oldest child (a proxy for parenting experience), and number of sessions attended. We found that none of the above variables were related to learning outcomes (all p 's > 0.05).

Discussion

Exposure to ACEs in childhood can predict long-term well-being (Crouch et al., 2019; Felitti et al., 1998) and intergenerational transmission (Letourneau et al. 2019). While many programs exist to ameliorate the potential impacts of ACEs through programs such as mindfulness-based approaches for families (Bethell et al. 2016), few have attempted to directly educate parents about ACEs and the protective factors that mitigate their impacts (Harper Browne, 2016). Peer-led parenting programs are community-based, relatively self-sufficient ways to support and educate parents in need. We measured benefits to families participating in one such program, Family Hui. Parents participated in one of two program versions: Original group and Bloom group. Both versions focused on teaching parents about child development, positive discipline, play and language, health and safety, family, media, and school readiness; the Blooms version included additional materials addressing adverse childhood experiences and resilience. In comparing post-participation ratings from the two program versions, we found that those administered the ACEs version of Family Hui programming reported overall better learning outcomes and higher program ratings. These findings suggest that the ACEs version of the curriculum provided greater benefits to its participants compared to the Original version.

The addition of educational materials on ACEs and resilience (Art of Parenting activities) may have increased

learning outcomes and program ratings. Specifically, the Art of Parenting activities aimed to increase participant engagement by having parents reflect on how the material directly relates to their own experiences. For example, the Art of Parenting activities “Seeds” (see Appendix C) asks parents to reflect on their own positive and adverse childhood experiences and how these may shape their own parenting styles—recognizing that they are not defined by these experiences but can use them to guide their own parenting practices and cultivate positive experiences. This increased personal relevance, along with ACEs and resilience curricula that highlight the importance of early childhood experiences in long-term health and success, may have increased participants’ engagement and retention of program materials, leading to improved outcomes in the ACEs version of the program.

The differences in benefits between the two program versions may also reflect additional factors. For example, participants attended more sessions in the Bloom version of the program than in the Original version. This may be due to the success of materials on ACEs and resilience and increasing parent interest and engagement, which in turn may have increased learning and ratings, as suggested above. Future work with larger samples could test such possibilities via mediation models. Differences in benefits between the two program versions may also reflect other developments across time, within the program or in the broader world, given that one version preceded the other. Future work comparing programs running synchronously will help to address this possibility. Based on our findings, we believe that the Bloom version of the Family Hui curriculum will be the most promising one to focus on moving forward.

The revised Family Hui curriculum is also unique in its adaptation of materials for Spanish- and Farsi-speaking immigrant populations. While the program’s origins were based on mostly a Western perspective, the Bloom version sought to customize those materials in a culturally-sensitive manner for non-Western populations. The current

evaluation revealed that non-English speaking parents, who participated with the Farsi or Spanish versions of the curriculum, benefited as much as, if not more than English-speaking parents. Further, parents across education levels benefited equally from the program. These comparable benefits across language and education levels suggest that the translated versions of the Family Hui curriculum successfully supported parents from diverse backgrounds.

The high ratings reported by both groups speaks to the benefits of both versions of the program. While improvements seen in the Bloom curriculum are numerically small, the improvements were nonetheless significant. In particular, a larger percentage of participants in the Bloom program reported more agreement with learning outcomes compared to those in the Original program. Coupled with the pragmatic benefits of the Bloom curriculum (shorter length, focus on key learning objectives about the ACEs), we believe that these benefits are worth considering when choosing between the two versions of the Family Hui programs.

While evaluated outcomes from the Family Hui program show promise, certain limitations in the current evaluation should be taken into account. First, due to limits in resources and design, we did not have a direct comparison group for each of the two Hui programs. As a result, we cannot directly draw conclusions about the effectiveness of each program individually, but only in comparison to one another. Second, because the post-test survey was created to directly assess positive change, we were unable to directly compare participants' pre and post-participant scores. This required us to rely on participants' own assessments about their own change after the program, which may be subject to biases in self-report (Lindsey & Nagel, 2015). Third, because the two programs were delivered non-concurrently, differences between the two could have been due to history effects or more training of program leaders. Further, survey tools and items administered to participants showed low sensitivity, as most participants marked "Agree" in their responses, which reflected well on the program but also limited response variance necessary to explore relationships between variables. While validated measures exist, such as the Protective Factors Survey to assess parents' understanding of the 5 protective factors (Sprague-Jones et al., 2019), limitations in time and funding constraints precluded their use for the current evaluation. To address these limitations, future work should incorporate control groups to more directly assess the effectiveness of the Bloom curriculum, administer consistent measures at pre- and post-test to directly assess change, deliver comparison programs concurrently to rule out potential confounds, and consider expanding existing response scales to have more graded response options, or using a slider scale, to encourage more variation in responses. Further, if pragmatically feasible,

shortened versions of validated measures should also be considered to assess constructs of interest.

While multi-linguistic and multi-cultural applicability is a strength of the Family Hui program, we also note that differences between languages or cultures may affect some of our results. The survey instruments were translated from English into Farsi and Spanish versions by expert translators and care was taken to conduct these translations as accurately as possible; however, certain constructs and meanings may nonetheless be mistranslated or interpreted differently by respondents. Further, certain language groups may have a tendency to answer positively or negatively in general. To account for such possibilities, future evaluations should control for differences in social desirability or administer "control" questions that can capture general response biases. Additionally, future work should consider the implementation of community engaged research practices to increase the cultural sensitivity and improve understanding of social phenomena (Luger et al., 2020; Secor-Turner et al., 2010; Vaughn et al., 2018).

Because fidelity of program delivery was qualitatively ensured, we were unable to provide quantitative measures of fidelity. While it is possible that undetected differences in fidelity led to group differences, we do not believe that this is likely because several measures were implemented to ensure that all participants received the equivalent program materials and content. Further, a key ingredient in the program's success was its responsiveness to the unique needs of each Hui. The program curriculum provided a framework within which flexibility was encouraged to meet each group's needs. For example, while all groups covered one chapter each week, one group might focus on one part of the chapter more than another based on its interests and needs; similarly, one group may have required extra attention by the leader than another group. This flexibility was instrumental to accommodating the cultural differences and unique needs of each group. Future work may consider examining how the balance between fidelity and flexibility impact outcomes. For example, traditional measures of fidelity, such as observer ratings or Hui leader reports on weekly content covered, can be administered alongside measures of flexibility in how content was delivered. This will enable us to better understand how the balance between fidelity and flexibility impact program outcomes.

The Bloom version of the Family Hui curriculum shows general positive effects on participating parents. Future evaluations should aim to expand understanding of the program's effectiveness in ameliorating specific challenges faced by immigrant parents. For example, the Ulysses Syndrome is a set of psychosomatic symptoms experienced by immigrants escaping from hardship (Bianucci et al., 2017). It would be of interest to examine the effects of Family Hui's programming and similar peer-to-peer

programs on this and other specific conditions, thus broadening our understanding of this program's effectiveness on unique challenges faced by immigrant populations. Future work should evaluate the long-term impact of the Family Hui program on family and community ACEs outcomes across communities and compare the benefits of peer-led programs to other approaches to ACEs prevention.

Data availability

Participation surveys, de-identified participant data and codebook can be found on the project's OSF page [https://osf.io/xys67/?view_only=e405da29067945cba4c5f10056d7c27].

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Compliance with ethical standards

Conflict of interest The authors declare no competing interests.

Ethics approval This study was conducted on a pre-existing and de-identified data set. Thus, the University of California, Davis Office of Research IRB Administration determined the project would receive a non-human subjects exception for review.

Informed consent Analyses were conducted on a pre-existing and de-identified data set, thus formal study consent was not required.

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