

# Promoting Enrollment in Parenting Programs Among a Filipino Population: A Randomized Trial

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abstract

**BACKGROUND AND OBJECTIVES:** Evidence-based parenting programs prevent the onset and escalation of youth conduct problems. However, participation rates in such programs are low among hard-to-reach populations, including Filipino individuals. Compared with other ethnic groups, Filipino adolescents have significant mental health disparities. We evaluated the effectiveness of a theory-based, culturally tailored video versus a usual-care mainstream video on enrollment in an evidence-based parenting program among Filipino caregivers of children ages 6 to 12 years and tested theoretical mediators of intervention effect.

**METHODS:** We randomly assigned 215 Filipino participants to view either a theory-based, culturally tailored video based on the Health Belief Model and Theory of Planned Behavior or a control video. The primary outcome was actual enrollment in an evidence-based parenting intervention. Mediators (knowledge and perceived susceptibility) were modeled as latent variables in a structural equation model.

**RESULTS:** After the intervention, participants in the intervention group had significantly higher knowledge of Filipino adolescent behavioral health disparities and higher perceived susceptibility to adolescent risky sexual activity and illegal drug use. Controlling for child sex, parents in the intervention group had significantly greater odds of actual enrollment in the Incredible Years program (odds ratio = 2.667; 95% confidence interval: 1.328–5.354;  $P = .006$ ). The intervention effects were mediated by increased knowledge and perceived susceptibility.

**CONCLUSIONS:** Results demonstrated the effectiveness of a theory-based, culturally tailored intervention aimed at increasing participation of a hard-to-engage population in parenting interventions. Videos that include parents and health professionals with whom audiences can identify can be used to produce shifts in knowledge and behavior.



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**WHAT'S KNOWN ON THIS SUBJECT:** Evidence-based parenting programs prevent the onset of youth conduct problems. However, participation rates in such programs are low, limiting their public health impact. The most effective way to increase participation in parenting interventions remains unclear.

**WHAT THIS STUDY ADDS:** Theory-based and culturally tailored videos are more effective than traditional methods in promoting enrollment in parenting interventions. This study is used to enhance understanding of how to engage hard-to-reach populations in parenting programs, many of whom are reluctant to seek behavioral health services.

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The Asian population grew faster than any other racial group in the United States during the first decade of the 21st century.<sup>1</sup> The Filipino population is the second largest US Asian subgroup<sup>2</sup> and the largest Asian population in California. Despite its size, the Filipino population is among the least studied groups. This is primarily due to the lack of disaggregation of Filipino individuals from other Asian subgroups in the research literature, a problem that makes it difficult to describe health disparities in Asian populations in general.<sup>3,4</sup>

The scant literature documenting health disparities among Filipino individuals offers stark comparisons with other racial and ethnic groups. Compared with white populations and other Asian subgroups, Filipino youth have higher rates of depression, conduct disorder, suicidal ideation, substance use, adolescent pregnancy, school dropout, gang membership, and cases of HIV/AIDS infection.<sup>3,5-10</sup> Filipino individuals are exposed to multiple adversities, including immigration stress, family separation due to parents seeking economic opportunities abroad, exposure to intrapersonal and domestic violence, job stress, and discrimination.<sup>11-15</sup> Even with these challenges, Filipino families have low rates of mental health care and preventive care use.<sup>5,16-18</sup>

The Surgeon General's Conference on Children's Mental Health identified the prevention of behavioral health problems in youth as a national priority.<sup>19</sup> The link between child behavior problems and parenting practices is well established in the prevention literature.<sup>20</sup> Children's challenging behaviors often elicit coercive and/or detached parenting with low nurturance and affection.<sup>21,22</sup> Parent training programs give parents proactive relationship-building techniques that disrupt the coercive cycle and alter the parent response to challenging

behaviors, resulting in improvement in the child's behavior as well as the parent-child relationship.<sup>23-28</sup> Although efficacious parent training programs exist, participation is low, especially among low-income urban minority populations.<sup>29,30</sup>

Exacerbating low participation rates is the reality that highly resource-intensive strategies implemented within the context of grant-supported trials are not feasible in resource-limited settings. In a previous grant-supported randomized study in which we used a wait-listed control group, we demonstrated the efficacy and cultural acceptability of implementing the Incredible Years (IY) School Age Basic program with Filipino parents and grandparents of children ages 6 to 12 years in a community-based setting.<sup>31</sup> IY was offered as a community-defined solution to prevent high-risk adolescent behaviors in the Filipino community; a community advisory board (CAB) of Filipino health providers and church, school, and community leaders led this effort.<sup>32</sup> Although we found significant improvements in child behavior symptoms and positive parenting practices, only 20% of parents we outreached to participated. Results of focus groups with parents who completed IY pointed to the need for an additional parent engagement intervention (PEI) to address barriers to participation in parenting groups among Filipino parents.<sup>31,33</sup> The parents suggested making a video of Filipino parents and leaders offering testimonials to encourage other Filipino parents to participate. Thus, we invited parents who completed IY to join our CAB and develop the small-media PEI video. The goal was to use this video to recruit parents and grandparents in real-world settings outside the context of grant-supported trials.

A growing body of research has been used to support the use of small media as efficient and affordable formats that convey educational or

motivational information to promote a variety of behaviors related to preventing physical illness among diverse populations.<sup>34-36</sup> Our overall objective of this study was to address the challenges of engaging hard-to-reach populations in an evidence-based parenting intervention with cultural sensitivity. Our primary outcome was to determine if actual enrollment of Filipino parents in an evidence-based preventive parenting program could be increased by using a theory-based and culturally tailored video intervention. We hypothesized that compared with a usual care video, a culturally tailored video based on the Health Belief Model<sup>37</sup> (HBM) and Theory of Planned Behavior<sup>38</sup> (TPB) would result in higher rates of actual enrollment in an evidence-based parenting intervention.

## METHODS

### Trial Design

The Filipino Family Health Initiative randomized controlled trial was conducted from August 2014 to December 2016 in communities of Los Angeles County (LAC), which accounts for >374 000 Filipino individuals and has the largest number of Filipino individuals in the nation.<sup>39</sup> We obtained written informed consent from primary caregivers using protocols approved by the Children's Hospital Los Angeles Institutional Review Board. The trial's identifier is NCT01264718 ([www.clinicaltrials.gov](http://www.clinicaltrials.gov)). We used a 2-group parallel, randomized trial design, with participants having an equal chance of being assigned into an intervention group or a control group. Those in the intervention group viewed a video based on the HBM and TPB, whereas participants in the control group viewed a usual-care mainstream video, publicly available on the IY Web site ([www.incredibleyears.com](http://www.incredibleyears.com)).<sup>33</sup> This 14-minute video included a description of the program as well as provider and parent testimonials.

On the basis of an a priori power analysis, the initial goal was to recruit 180 participants. This number of participants would allow us to detect a moderate effect size of  $d = 0.53$ , corresponding to an intervention arm enrollment rate of 39%. The sample size was calculated by using a power of 80% to detect an intergroup difference of 10% points in parent enrollment rates. Accounting for up to 10% attrition, at least 200 participants (100 in each group) were needed to be enrolled.

### Recruitment

To be eligible for the study, participants had to self-identify as a Filipino parent or grandparent of a child ages 6 to 12 years, live in LAC, speak and read English fluently, and not have participated in IY previously. Participants were recruited by bilingual and English-speaking research staff in various settings, including primary care clinics, community-based organizations, churches, schools, grocery stores, and at cultural fairs and events. Participants received \$20 stipends for participation. The study's recruitment methods are described in detail elsewhere.<sup>40</sup>

### Data Collection

Both groups took a pretest and posttest during a single 30- to 45-minute in-person interview that also included viewing either the control or intervention video. Participants watched either the intervention or control video in various settings such as primary care clinics, schools, churches, grocery stores, and libraries. The pretest was used to assess demographics, health beliefs, and knowledge of Filipino adolescent mental health disparities, and the posttest was used to assess health beliefs, knowledge, and intention to enroll in a parenting intervention. After completing the posttest, participants in both groups received a flyer inviting them to enroll in the IY parenting intervention. The primary

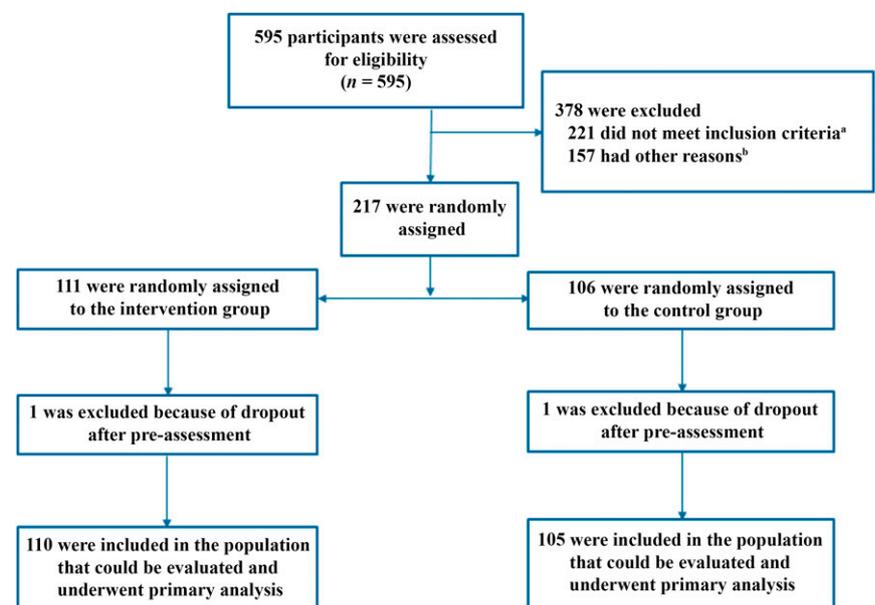
outcome was assessed by using attendance logs. To track actual enrollment, group leaders reported enrollment in IY immediately after each session. Data were collected from August 2014 to February 2016. IY groups were offered from October 2014 to December 2016. Up to 15 call, e-mail, and letter attempts were made by research staff who had a standard script to offer the next available IY workshop and enroll participants.

### Intervention

The intervention video was developed by using a community-partnered participatory research approach, a methodology emphasized by the National Institutes of Health as critical to developing interventions that eradicate health disparities.<sup>41</sup> Specifically, a CAB of pediatricians, mental health providers, parents, grandparents, and members of faith-based and community-based organizations participated in the research process. This approach offered the potential for the development of an increasingly relevant intervention. The content of

this video was also informed by previous studies by using constructs from HBM and TPB as well as formative research with parents who both have and have not enrolled in IY.<sup>33</sup> The conceptual model for the video is described elsewhere.<sup>42</sup> In brief, our model provided a framework that was used to describe the relationship between the video, intention to enroll in IY, and actual enrollment. Given the video aimed to increase the knowledge of Filipino-specific high-risk adolescent behaviors, parent determinants included perceived susceptibility (HBM), intention (TPB), and knowledge.

The 14-minute intervention video, which is publicly available for viewing,<sup>43</sup> featured J.R.J. and D.M.C., Filipino parents and grandparents, mental health providers, clergy, and community-based agency leaders. J.R.J. and D.M.C. provided a description of Filipino mental health disparities and the IY program itself. Parents and grandparents offered testimonials highlighting the benefits of participation in the program. Scenes of Filipino parents and grandparents



**FIGURE 1**

Enrollment, randomization, and follow-up. <sup>a</sup> Including had no child, child <6 or >12 years old, not Filipino, or had developmental disability. <sup>b</sup> Including not interested and took information without further follow-up.

were included to promote cultural identification and social acceptance of participating in a parenting group. One parent also partially described her experiences in Tagalog to make the video more culturally relevant.

To target parents' knowledge, information regarding child behavior problems and how parent training prevents these problems was presented. Perceived susceptibility to future behavioral health problems and risky behaviors among Filipino youth were also discussed in parent testimonials.<sup>33</sup> Social norms and cultural strengths were highlighted by emphasizing that other Filipino parents who had participated were able to incorporate their Filipino cultural values when practicing the parenting techniques emphasized in IY. In addition, our CAB recommended highlighting resources in the Filipino community such as the role grandparents play in raising children, community leaders involved in the initiative, and the emphasis placed on education. Given the history of colonialism and fatalistic views, a strategy of resistance to colonizers are common.<sup>32,44</sup> To address this, Filipino parents discussed how they enrolled in IY and overcame accepting things as they are.

### Randomization

Computer-generated randomization was performed after consent to allocate eligible participants in a 1:1 ratio to the intervention or control group. This ensured concealment of the allocated intervention at the time of enrollment. The interviewer generated the allocation sequence, enrolled participants, and assigned them to trial groups. Participants and research assistants administering the video intervention were not blinded.

### Measures

Potential mediators were evaluated by using validated questions derived from previously published literature and included intention to enroll in

IY,<sup>45</sup> perceived susceptibility to risky adolescent behavior,<sup>45-47</sup> knowledge of Filipino behavioral health disparities,<sup>33</sup> perceived benefits,<sup>45,47</sup> and perceived barriers.<sup>48,49</sup> Susceptibility was defined by 3 indicators, including anticipated likelihood of a child participating in high-risk sexual behavior, occasionally using illegal drugs, and having thoughts about suicide during adolescence. Knowledge was defined by the following 2 indicators: knowledge of suicidal behavior and of drug use among Filipino youth. Knowledge was measured by using a 5-point Likert scale, and perceived susceptibility was measured by using a scale from 0 to 100.<sup>45</sup>

### Outcome

The primary outcome was actual enrollment in IY. Because there are many factors that can interrupt the translation of even strongly held intentions into behavior, and self-reported intentions may be subject to social desirability, it was imperative to implement an evidence-based parenting program and measure actual enrollment. Thus, after completing their surveys, parents were invited to participate in IY. Actual enrollment was defined as attending at least 1 IY workshop. IY parent group leaders who reported the primary outcome were blinded.

### Analysis

Actual enrollment (yes or no) was examined with logistic regression analysis. In our initial model for this outcome, we considered the intervention group as the primary predictor variable. Subsequent models included other covariates identified in preliminary analyses (see below), such as parent background information (age, education, marital status, health insurance, immigration status) and a brief measure of preintervention parent determinants (eg, knowledge, perceived susceptibility, perceived benefits, and perceived practical

**TABLE 1** Baseline Characteristics of Participants

Variable	Control	Intervention
Parent sex, <i>n</i> (%)		
Male	19 (18.1)	32 (29.1)
Female	86 (81.9)	78 (70.9)
Relationship to child, <i>n</i> (%)		
Biological mother	70 (66.7)	59 (53.6)
Biological father	13 (12.4)	26 (23.6)
Adoptive father	0	1 (0.9)
Stepparent	1 (1.0)	1 (0.9)
Parent's partner	3 (2.9)	5 (4.5)
Other adult relative	4 (3.8)	2 (1.8)
Other	14 (13.3)	16 (14.5)
Marital status, <i>n</i> (%)		
Never married	6 (5.7)	11 (10.0)
Living together	1 (1.0)	2 (1.8)
Married	86 (81.9)	79 (71.8)
Separated	0	6 (5.5)
Divorced	8 (7.6)	7 (6.4)
Widowed	4 (3.8)	5 (4.5)
Child's sex, <i>n</i> (%)		
Male	50 (47.6)	51 (46.4)
Female	55 (52.4)	59 (53.6)
Income, <i>n</i> (%)		
<20 000	20 (19.4)	29 (26.4)
20 000–49 999	31 (30.1)	42 (38.2)
50 000–99 999	36 (35.0)	28 (25.5)
>100 000	16 (15.5)	11 (10.0)
Child's birthplace, <i>n</i> (%)		
United States	85 (81.0)	85 (77.3)
Philippines	20 (19.0)	22 (20.0)
Other	0	3 (2.7)
Education, <i>n</i> (%)		
Grades 0–8	0	1 (0.9)
Grades 9–11	1 (1.0)	0
High school or GED	8 (7.6)	6 (5.5)
Some college	19 (18.1)	22 (20.0)
College graduate	59 (56.2)	74 (67.3)
Postcollege degree	18 (17.1)	7 (6.4)
Work status, <i>n</i> (%)		
Full-time	61 (58.1)	65 (59.1)
Part-time	13 (12.4)	21 (19.1)
Working at home	5 (4.8)	2 (1.8)
Looking for a job	14 (13.3)	6 (5.5)
Not working by choice	12 (11.4)	16 (14.5)
Parent's birthplace, <i>n</i> (%)		
United States	14 (13.3)	10 (9.1)
Philippines	90 (85.7)	99 (90.0)
Other	1 (1.0)	1 (0.9)
Primary home language, <i>n</i> (%)		
English	47 (44.8)	44 (40.0)
Tagalog	35 (33.3)	40 (36.4)

**TABLE 1** Continued

Variable	Control	Intervention
Ilocano	5 (4.8)	2 (1.8)
Bisaya	1 (1.0)	6 (5.5)
Other	17 (16.2)	18 (16.4)
Variable	<i>N</i>	Mean ± SD
Parent age control	104	44.42 ± 17.97
Intervention	109	44.61 ± 18.48
Child age control	105	8.92 ± 2.19
Intervention	109	7.75 ± 10.45
Variable	<i>N</i>	Median (IQR)
Participating in risky sexual activity		
Control	102	0 (0–9.3)
Intervention	109	0 (0–9.5)
Occasionally using illegal drugs		
Control	102	0 (0–1.8)
Intervention	110	0 (0–3.3)
Having thoughts about suicide		
Control	102	0 (0–3.5)
Intervention	110	0 (0–1.3)
Filipino teenagers in the United States are at higher risk of having suicidal thoughts compared with other ethnic groups in the United States		
Control	105	2.0 (1.0–4.0)
Intervention	110	2.0 (1.0–4.0)
Filipino teenagers in the United States have higher rates of alcohol and drug use compared with other Asian subgroups		
Control	105	2.0 (2.0–4.0)
Intervention	110	2.0 (1.0–4.0)

Sample sizes vary because of missing values. GED, general education diploma; IQR, interquartile range.

barriers) and intent. With further analysis, we used path analysis within a structural equation modeling framework.<sup>50–53</sup> Path analysis was used to estimate the direct and indirect effects of all hypothesized predictors to evaluate the relative importance of proposed causal relationships. Mediation was assessed by the significance of indirect effects by using the Sobel test. The analytic

model predicting enrollment outcomes included measures of postintervention perceived susceptibility, knowledge, and study arm. SPSS 17.0 (SPSS Inc, Chicago, IL) and Mplus 7 were used to conduct analyses.

## RESULTS

### Participants

A total of 217 participants were randomly assigned to the intervention (*n* = 111) or control group (*n* = 106; Fig 1). After exclusions for withdrawals, 110 intervention participants and 105 participants in the control group comprised the final evaluable populations. These groups had similar characteristics (Table 1), and there were no significant differences between them. Also, no significant differences were found by using nonparametric tests because of heavy skew in the susceptibility and knowledge variables. Most participants were women, married, born outside the United States with children or grandchildren born in the United States, and were well educated and insured. These groups had a broad representation of income levels, and a third of participants had children who had Medicaid insurance.

### Primary Outcome

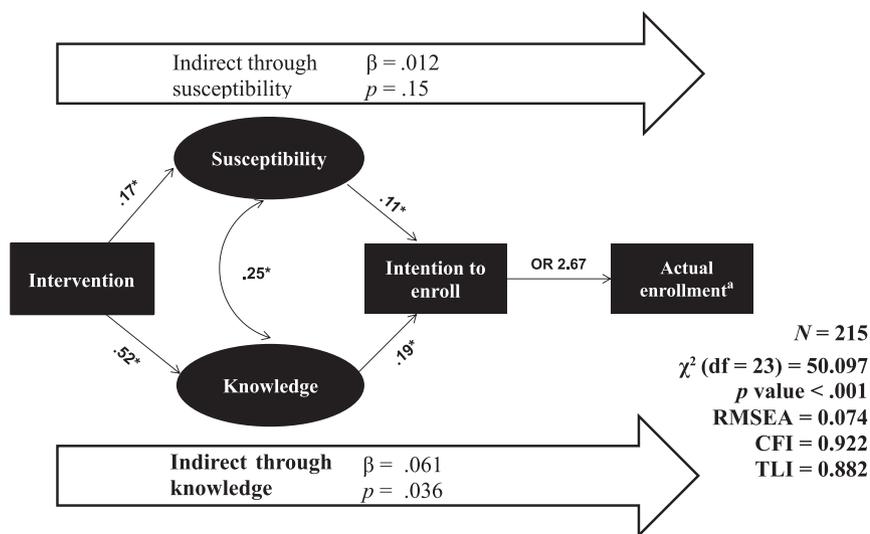
At follow-up, the intervention group was more likely to enroll in IY, at 25% vs 11% (*P* < .001). After adjustment for child sex, the intervention group had 2.67 times the odds of enrolling in IY (95% confidence interval: 1.33–5.35; *P* < .01) than participants in the control group. On the basis of preliminary analyses, we modeled susceptibility and knowledge as latent variables. The factor loadings supported the assumption of underlying latent constructs for susceptibility (participation in risky sexual behavior: 1.00; occasionally using illegal drugs: 0.86; having thoughts about suicide: 0.77) to adolescent risky behaviors and for

knowledge of Filipino-specific behavioral health problems (suicidal behavior: 1.00; drug use: 0.98). Of note, there were no baseline differences in the intervention versus control group in the latent variables, knowledge, and perceived susceptibility. The remaining parent determinants (perceived need, benefits, and barriers) were not associated with intention to enroll and actual enrollment and thus were removed from the final model.

Figure 2 presents our structural equation model fitting health belief factors on intention to enroll and actual enrollment in IY. We hypothesized that the intervention video would affect perceived susceptibility to high-risk adolescent behavior and knowledge of Filipino-specific behavioral health disparities and that these 2 factors would be correlated with each other. In turn, susceptibility and knowledge would affect intention to enroll. On the basis of the theory of planned action, there is strong evidence that intention to enroll would be related to actual enrollment. We found that the intervention video was significantly associated with perceived susceptibility ( $\beta = .163$ ; *P* < .05) and knowledge ( $\beta = .519$ ; *P* < .05). Perceived susceptibility and knowledge were positively associated with intention to enroll, and intention to enroll was in turn positively associated with actual enrollment. When examining for evidence of statistical mediation, we found that the effect of the intervention on enrollment in IY was partially mediated by increased knowledge of Filipino adolescent behavioral health disparities (indirect  $\beta = .068$ ; *P* < .05).

## DISCUSSION

In this study, the intervention video was more effective than the control video in promoting enrollment in an evidence-based parenting intervention, resulting in 25% of



**FIGURE 2**

Model fitting of parent determinants on intention and enrollment. \*  $P < .05$ ; <sup>a</sup> Adjusted for child sex. CFI, confirmatory fit index; df, degrees of freedom; OR, odds ratio; RMSEA, root mean square error of approximation; TLI, Tucker-Lewis Index.

parents enrolling in IY versus 11% of participants in the control group. The intervention also resulted in higher levels in knowledge of Filipino-specific behavioral health disparities, perceived susceptibility to risky adolescent behavior, and intention to enroll in IY. We also found that the intervention video worked primarily by increasing knowledge of ethnic-specific behavioral health disparities.

This study had several strengths. First, use of a randomized design allowed us to make causal inferences about the difference in knowledge and perceived susceptibility and the increase in enrollment intentions and actual enrollment among those who received the intervention compared with those who received the control. Second, this study was based on the HBM and TPB, which have been used in other studies as frameworks to increase enrollment in parenting interventions.<sup>29,45,46,48,54–56</sup> Another unique aspect of this study was its focus on Filipino individuals, a large, understudied, high-risk US population that has been described as an “invisible minority.”<sup>57</sup> We also adopted a culturally sensitive definition of the family by recruiting

grandparents who are often essential caretakers for immigrant communities, particularly if they live in poverty. Although the efficacy of engagement intervention strategies for increasing parent participation in mental health services has been demonstrated in several studies with other ethnic groups,<sup>58</sup> this study was the first, to our knowledge, that was used to develop and evaluate a theory-based PEI to increase parent participation in an evidence-based preventive parenting program among Filipino individuals. Another strength was the use of a community-partnered research approach when developing and evaluating the intervention video. Involving community partners enhanced our ability to create an increasingly relevant intervention that was scalable and could be easily disseminated for use in the Filipino community.

This work is timely because of increasing awareness regarding mental health issues among Filipino populations in the media, professional associations, and county mental health departments.<sup>59–63</sup> In LAC, Filipino people represent the

largest Asian subgroup in the foster care system, and the second largest county mental health provider is the county jail program. The LAC Department of Mental Health recently held a Filipino well-being summit that was focused on decreasing mental health stigma.<sup>62</sup>

This study had some limitations that should be noted. This trial was conducted with an urban population of Filipino individuals living in Southern California, and thus our findings may not generalize to nonurban populations, other regions, or other racial and ethnic groups. However, given the use of theory to develop the video, our findings may help us understand how a similarly developed video might work in other populations. Next, the relative effects of the intervention video compared with those of the control video were small.<sup>45</sup> However, in previous mass-media research with larger audiences, even small effects were found to have meaningful population-level impact.<sup>64</sup> Nonetheless, future studies should be focused on further addressing barriers to participation in parenting programs, such as the stigma associated with mental health conditions. In addition, we are currently addressing logistical barriers with enrollment in current studies by offering IY in parallel to other youth programming such as a Filipino cultural school. Finally, parent-reported knowledge, perceived susceptibility, and intention to enroll were self-reported and could be subject to social desirability bias. However, inclusion of an actual measurable behavior (ie, attending at least 1 parent group) allowed us to validate self-reported intention.

## CONCLUSIONS

With this study, we describe a low-cost, innovative approach to engaging Filipino parents in an evidence-based parenting program. Increasing enrollment in parenting interventions

may ultimately help to reduce mental health–related morbidity and mortality and the high costs of mental health care. When creating audiovisual interventions, researchers and practitioners should consider focusing on increasing knowledge of behavioral health disparities and perceived susceptibility to future adolescent risk-taking behaviors among Filipino individuals. With this study, we have shed light on the “black box” that currently exists regarding the delivery of community-based interventions that convey educational and motivational information and the

subsequent patient behavior (ie, enrollment in IY). Our conceptual model was used to elucidate not only mechanisms of how a video influences patient behavior but also how the video affected parental knowledge and beliefs. Comparable strategies can be used to reach other hard-to-reach populations, many of whom are reluctant to seek behavioral health services such as parenting interventions.

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#### ABBREVIATIONS

CAB: community advisory board  
HBM: Health Belief Model  
IY: Incredible Years  
LAC: Los Angeles County  
PEI: parent engagement intervention  
TPB: Theory of Planned Behavior

Drs Kipke, Miranda, and Palinkas conceptualized and designed the study and critically reviewed the manuscript for important intellectual content; and all authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

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