

Using Drama to Prevent Teen Smoking: Development, Implementation, and Evaluation of Crossroads in Hawai`i

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The use of drama as a preventive education measure has demonstrated success in various health promotion venues and offers promise in promoting positive youth attitudes and behavior change related to tobacco use. Especially important is a need to implement culturally relevant methods to reach youth. This article describes the development and implementation of a tobacco prevention drama for Asian and Pacific Islander youth. The resulting play, Crossroads, features a soap opera-style drama interspersed with humorous vignettes and multimedia effects and incorporates cultural cues, mannerisms, dress, and values consistent with Asian and Pacific Islander youth culture. Evaluation data indicate that the drama has an effect on audience knowledge, attitudes, and intended behavior, including a change in future intent to smoke cigarettes and the ability of audience members to develop connections with the characters in the play and apply concepts that are presented in the play to their own lives.

Keywords: *adolescent; drama; primary prevention; tobacco*

Innovation in tobacco prevention interventions with middle school students has become essential to reaching today's preteens with messages to which they can relate and respond. Countless numbers of programs have been established with the goal of curbing the increasing numbers of youth who smoke cigarettes, and many have

had limited success. Creativity has become an important key to reaching a youth population bombarded by media and music that rivals traditional teaching modalities for youth attention and intrigue. Drama as a means of educating youth about tobacco and preventing youth tobacco use is an innovative tool that engages youth in a meaningful and interactive modality. This article describes the process of program development and implementation of a tobacco prevention play for middle school-aged Asian and Pacific Islander youth. Initial evaluation results are presented, and recommendations are provided for further efforts in health education drama.

► BACKGROUND

Health education through drama has become an increasingly popular method of eliciting knowledge and behavior change in populations throughout the world in recent years (Singhal, 2002). Drama has been used in a wide variety of health education interventions, from community-based HIV/AIDS awareness (Briggs, Chambers, Kornspan, Nelson, & Weisbrodt, 1989; Probart, 1989; Watts, 1998), to rural health initiatives (Barlow, Gaunt-Richardson, Amos, & McKie, 1999; Taylor, 2000), to school-based drug and alcohol prevention (Plesent, 1976; Starkey & Orme, 2001), among a number of other areas of intervention research. These interventions target a variety of audiences, varying according to the structure, content, and sustainability of the messages, messengers, and funding they imbibe; however, the use of drama as the core strategy for eliciting health behavior change remains constant. Health education interventions incorporating drama have demonstrated success in increasing knowledge of health issues, yet longitudinal evaluation results are necessary to determine the behavioral effect of drama interventions.

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The use of drama to promote changes in attitude and intended behavior is supported by the Theory of Planned Behavior (Ajzen & Driver, 1991). This model posits that an individual's attitude about a particular behavior, as influenced by subjective norms such as role models' and others' behavior, has a direct influence on the individual's behavior or intended behavior. In this case, the use of drama to influence youth attitudes about tobacco use through the emphasis of denormalization of smoking and characters who make decisions to abstain from smoking contributes to the perception of behavior control and negative attitudes toward tobacco use.

Several reasons for the surge in interest in entertainment-education, or "the intentional placement of educational content in entertainment messages" (p. 117), are identifiable (Singhal, 2002). Health education drama is by nature interactive and encourages audience participation. Audience members identify with characters in the play and relate the experiences and conflicts that characters face in the drama to their own lives. Kinkaid (2002) describes this identification process as "a multifaceted construct which includes how much a viewer likes the character, perceives that others think they are like that character, wants to be like the character, and cares about what happens to the character" (p. 138). Because individual audience members are able to identify with characters they watch before them, drama provides unique opportunities to reach large numbers of individuals, in this case, youth, in a meaningful way.

Another feature of entertainment-education that deserves attention is its nonconfrontational nature. Many of the issues addressed in health education dramas

address topics related to shame, embarrassment, or social pressure. Drama provides an avenue with which to discuss and portray youth-generated thoughts and situations in a larger, less confrontational social context. Moreover, Taylor notes, "embarrassment and fear of broken confidentiality are the biggest barriers young people face when seeking advice" (Taylor, 2000). In using drama to discuss controversial and uncomfortable issues such as youth smoking, the audience of young people is able to learn through experience, identification, and modeling without implying that they themselves are engaging in a particular risky or harmful behavior.

► STRATEGIES

Development

Understanding the beliefs, behaviors, and attitudes related to smoking and tobacco use was the first major step in creating the tobacco prevention drama, *Crossroads*. Whereas tobacco use rates among Hawai'i's middle school youth remain below the national average (16.4% vs. 23.0%), rates of smoking vary dramatically across ethnic groups (Campaign for Tobacco-Free Kids, 2007). For example, according to data from the 2003 Youth Tobacco Survey, whereas less than 2% of Japanese middle school students report using any form of tobacco, more than 7% of Native Hawaiian students and more than 8% of Pacific Islander students used tobacco. Thus, it was clear that a tobacco prevention drama would need to reach youth of multiple ethnicities and exposure to tobacco products.

Focus groups were held with 54 sixth-, seventh-, and eighth-grade youth from five schools in urban Honolulu to elicit ideas for the planned tobacco prevention drama. In addition, youth were asked about their exposure to tobacco at home, at school, and in their communities, as well as their attitudes and behaviors related to cigarette smoking. Key themes extracted from the focus groups included the importance of extended family members in influencing youths' decisions about smoking, a sense of being surrounded by smokers and smoking, and a desire to learn from peers and older youth about tobacco use rather than adults and authority figures. These themes and other informal feedback collected from middle school youth were incorporated into an initial original script, which was written by a young, local Pacific Islander actor and playwright.

Description of the Drama

Crossroads is the story of a middle school student named Brent, who is surrounded by various influences, including peer pressure, familial authority, and the media, concerning the issue of whether or not to smoke. The

conflicts within each character's personal struggles are seen through Brent's eyes, and they each affect his decision making to varying degrees and in different directions. It also explores the myths, images, and misconceptions of smoking as put forth by the media and offers accurate information about the true dangers of cigarette smoking.

The drama conveys a number of important messages to the audience, the most central of which is the concept of the choices that individuals make and the effect that these choices have in both the short and long term. The visual image of a crossroads is tangible for students, and they seem to relate to this concrete depiction of individual choice. Through its characters, the play addresses short-term consequences of tobacco use, such as monetary costs, bad breath, and shortness of breath, and long-term consequences such as disease complications and even eventual death through the character of the grandfather in the play. Another unique component of the play is the use of multimedia through PowerPoint slides, still images, and video. Tobacco prevention and cessation commercials produced by the Hawai'i State Department of Health are projected as students file into the auditorium and provide the foundation of the mindset for the play to begin. Throughout the play, images that relate to the characters' dialogue are flashed on the screen.

Implementation

Crossroads was created to be a traveling drama, with a core group of actors who perform at middle and elementary schools on the island of O'ahu. Although several community performances have also taken place, the primary audience for the drama is multiethnic middle school students. Following an initial pilot phase that included four performances followed by feedback sessions to elicit initial reactions and make alterations to the play's characters and content, the play has been performed for a total of more than 10,000 students in Hawai'i since its debut in 2003. Elementary and middle schools were contacted by the project director by mail and phone to solicit interest in having the play performed for fifth-, sixth-, seventh-, and eighth-grade audiences. A packet of materials that included copies of the pretest, passive parental consent forms, and a written description of the play was distributed to the contacts of schools who desired performances. Teachers made copies of the passive consent forms.

Evaluation

Students completed an anonymous written assessment prior to and immediately following their viewing of the play. The written evaluation was based on the Theory of Planned Behavior, thus items were created to measure the four central concepts within the model: (a) behavioral intention, or the "perceived likelihood of performing

behavior"; (b) attitude, or the "personal evaluation of behavior"; (c) subjective norm, or "beliefs about whether key people approve or disapprove of the behavior"; and (d) perceived behavioral control, or the "belief that one has . . . control over performing the behavior" (Glanz & Rimer, 2005, p. 17). The survey instrument was created by selecting relevant questions from two existing instruments designed to assess tobacco attitudes, behaviors, and knowledge in children: (a) the TARWARS survey, developed with guidance from the Hawai'i Outcomes Institute, and (b) the California Tobacco Control Program survey. The pretest, which is distributed to and completed by all students prior to viewing the drama, is made up of 16 quantitative questions. Of these questions, 8 measure attitude, 6 measure behavior, and 2 items measure knowledge. The posttest is made up of both quantitative and qualitative questions. Of the questions on the posttest, 7 measure attitude and intended behavior and 6 measure knowledge. All items were pretested to ensure that the youth understood each of the questions, and further clarifications and adjustments were made to the instrument prior to its full-scale implementation.

The evaluation of the drama was developed with the assumption, based on previously collected focus group data with members of the target population, that many of the students who view the show are familiar with tobacco-related facts and have been exposed to information about smoking through other school-based programs. The evaluation of the drama was therefore more heavily weighted to measure changes in attitudes, beliefs, and intended behavior concerning the use of tobacco, rather than simply an increase in tobacco-related knowledge. Similarly, the addition of several questions on the posttest that require students to provide open-ended responses allows for the evaluation to determine whether students are able to develop connections with the characters in the play and apply concepts that are presented in the play to their own lives.

► DISCUSSION

A total of 2,660 assessments was collected and analyzed using SPSS Version 13.0. This represents approximately one quarter of the total number of students who viewed the play. Data collection and entry was limited by several factors including lack of adequate funding for evaluation personnel, unwillingness on the part of some school administrators to participate in the evaluation of the project, and incomplete survey data. The mean age of respondents was 12.02 years, and students ranged in age from 9 to 16 years. The sample was evenly distributed by gender, with 51.4% male and 48.6% female. The sample was widely diversified ethnically, with representation from a range of ethnic groups. The ethnic distribution of

TABLE 1
Ethnic Distribution (n = 2,142)

<i>Ethnicity</i>	<i>Sample n</i>	<i>% of Total in Sample Population</i>	<i>% of Total Hawaii Population</i>
Japanese	533	24.9	18.9
Caucasian	315	14.7	24.3
Native Hawaiian	295	13.8	19.8
Chinese	252	11.8	7.4
Filipino	215	10.0	16.5
Pacific Islander (Samoan, Tongan, Marshallese, other)	150	6.9	2.1
Korean	115	5.4	2.4
Other	207	9.6	8.6

the sample as compared with the state population of Hawaii is depicted in Table 1.

As expected, the vast majority of fifth and sixth graders who completed assessments had never tried smoking. Nine percent of students responded that they had tried smoking, slightly less than the 11.6% of sixth graders across the state who tried smoking, according to the 2004 Youth Tobacco Survey. When asked about peer influence related to tobacco use, 11.4% ($n = 253$) of all respondents had at least one close friend who smoked cigarettes. When asked how their close friends would feel about smoking, 83.6% ($n = 1,835$) indicated that their friends would disapprove, whereas 12.9% ($n = 283$) said that their friends would not care if they smoked, and 3.6% ($n = 78$) said that their friends would think it was cool if they smoked. In terms of exposure to environmental tobacco smoke, 29.9% ($n = 668$) spent time on some or all of the past 7 days in the same room with someone who was smoking. Furthermore, 35.8% ($n = 793$) of respondents lived in the same home with someone who smokes cigarettes.

Findings from the pre- and postassessments indicate that the drama is effective in reaching an at-risk population of youth and in increasing students' knowledge about tobacco use and its effects. McNemar tests demonstrated statistically significant difference on three items. After watching the play, students were more likely to understand the concept of addiction and the idea that "once you start smoking, it is hard to quit" ($\chi^2 = 5.290$, $p = .021$). Students also understood that symptoms of addiction can occur quickly and are not related to the quantity of cigarettes smoked ($\chi^2 = 11.515$, $p = .001$). Significant increases were demonstrated in defining secondhand smoke as the smoke that one breathes when in a room with someone who is smoking ($\chi^2 = 25.137$, $p = .000$). Marginal homogeneity tests indicated significant improvements from pre- to postassessment related to future intention to avoid cigarette smoking, as a significantly

lower number of respondents indicated that they thought they would be smoking 5 years from now (Std. MH Statistic = 2.048, $p = .041$).

Students indicated that they could relate to a variety of characters in the play. Seventy-one percent ($n = 1,660$) of respondents related most to one of the non-smoking characters, whereas 10.4% ($n = 243$) related most to a character who smoked. Only 18.6% ($n = 434$) of respondents indicated that none of the characters seemed similar to themselves. Results also indicated that students were able to relate to individual characters in the play by listing similarities and differences between their own lives and the lives of the characters in the play, and 58.60% of the students who watched the play were able to list at least one similarity between themselves and a character in the play. Of these, 76.97% ($n = 1,213$) listed three similarities between themselves and a character in the play. Typical responses included assertions such as, "Brent knows the consequences of smoking; Katie plays on a soccer team; Melissa makes friends easily; Brent had a family member who died from smoking." Students who watched the play were also able to answer specific questions about the play's content and plot. For example, 97.3% ($n = 2,202$) of the students who watched *Crossroads* were able to list at least one reason that Sonya, a main character in the play, started smoking cigarettes. Similarly, 93.6% ($n = 2,064$) of respondents were able to list at least one reason that Brent, another main character, gave for not wanting to smoke cigarettes. Finally, drama and convergence theories suggest that ensuring that an audience experiences a range of emotions is key to audience engagement and the successful implementation of entertainment-education (Kincaid, 2002). Students expressed feeling a range of emotions while watching *Crossroads*; the mean number of emotions experienced was 3.39 ($SD = 2.56$, range = 0–14).

It is clear that the evaluation results of the drama indicate that the youth who watch the play benefit in each of the four concept areas of the Theory of Planned Behavior. Youth were able to not only relate to the characters in the play but also identify the decision-making characteristics displayed in the drama to the choices they made in their own lives. That the drama embodied key concepts within the theory allowed a clear synopsis of the attitudes, subjective norms, and intended behaviors that students brought to and took away from the drama intervention.

► CONCLUSION

Crossroads is a unique dramatic intervention designed to engage young people in thinking about the choices they face concerning tobacco use. There are several key features of the intervention that contribute to its success in reaching young people with an anti-tobacco message. First, the inclusion of multimedia components such as music and screen images throughout the drama assist in capturing the attention of a youth audience that thrives on the use of technology in daily encounters with media. In addition, talented, paid Asian and Pacific Islander actors committed to the project are essential to invigorating an anti-tobacco message with humor, variety, and innovative communication techniques. Although most, if not all, 12-year-olds have heard anti-tobacco messages prior to watching the play, presenting the information through an innovative and creative medium allows youth the opportunity to relate to characters and identify with the choices they make about tobacco use.

Also key to the successful implementation of *Crossroads* over the past 4 years has been the unique collaborative partnership between a federal cancer agency and a community health center. This collaboration has contributed to the sustainability of the drama through repeated funding applications, ensuring the accuracy of smoking and tobacco information distributed to youth, connecting with communities and schools, and ensuring adequate evaluation of the project. Related to this are future plans to seek and acquire long-term funding to expand the drama's reach and ensure the drama's continuance. Expanding the current evaluation of the drama to include outcome measures that would assess behavior change related to cigarette smoking at regular intervals following the viewing of the play will also be crucial to understanding the long-term benefits of this innovative intervention. Also, validating and testing the evaluation instruments in a more rigorous manner will contribute to the broader use and generalization of this study's findings. In addition, the play has demonstrated a need for the expansion of resources dedicated to youth tobacco cessation. Further efforts should join prevention and cessation efforts for youth in creating

and evaluating a cadre of effective resources for youth who smoke cigarettes and those who want to help them quit.

It is clear that the implementation of *Crossroads*, an entertainment-education intervention in Hawai'i, has provided an innovative strategy for reaching diverse, multi-ethnic youth with messages about tobacco use that are both well-received and effective in increasing the knowledge of audience members. Drama provides an effective venue for sharing tobacco control messages with a population of youth who are at an age at which they are faced with choices and decisions about tobacco use. Although careful consideration must be taken to ensure that characters, storyline, and presentation style are relevant for at-risk youths' culture and community, it is clear that drama has significant potential in reaching and engaging youth to prevent tobacco use. Drama has a unique and important role to play in shifting attitudes and behaviors about tobacco use among young teens, and further efforts should build on this intervention's success at reaching and relating to this population group.

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