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Voluntary After-School Alcohol and Drug Programs for Middle School Youth : If You Build It *Right*, They Will Come

Elizabeth J. D'Amico, Harold D. Green Jr, Jeremy N.V. Miles, Annie J. Zhou, Joan S. Tucker, and Regina A. Shih¹

RAND Corporation, 1776 Main St., Santa Monica CA

¹RAND Corporation, 1200 South Hayes St., Arlington, VA

Abstract

Few after-school programs target alcohol and other drug (AOD) use because it is difficult to encourage a diverse group of youth to voluntarily attend. The current study describes attendance at a voluntary after-school program called CHOICE, which targeted AOD use among middle school students. Over 4,000 students across eight schools completed surveys and 15% participated in CHOICE. Analyses indicated that there were some differences between CHOICE participants and non-participants. For example, African American and multiethnic students were more likely to attend. Past month alcohol users were more likely to initially attend, and marijuana users were more likely to continue attendance. Thus, CHOICE reached students of different racial/ethnic groups and attracted higher risk youth who may not typically obtain prevention services.

Keywords

adolescents; alcohol use; intervention; prevention; school

An unacceptably high proportion of middle school adolescents report lifetime use of marijuana and alcohol (e.g., 17.3% and 35.8% of 8thgraders, respectively)(Johnston, O'Malley, Bachman, & Schulenberg, 2011). In addition, about 1 in 5 eighth graders report monthly alcohol use and 8% report drinking 5 drinks in a row in the previous 2 weeks (Johnston, et al., 2011). Most youth are unlikely to obtain information or help concerning alcohol or other drug (AOD) use (D'Amico, 2005; Johnson, Stiffman, Hadley-Ives, & Elze, 2001; Wu, Hoven, & Fuller, 2003). Reasons include stigma (Corrigan, 2004; Timlin-Scalera, Ponterotto, Blumberg, & Jackson, 2003), fears about confidentiality (English & Ford, 2007; Lehrer, Pantell, Tebb, & Shafer, 2007) and not being able to relate to the service provider (D'Amico, 2005).

School-based programs are often used to reach adolescents because they are easily accessible and take place in an environment that is comfortable for youth (Wagner, Tubman, & Gil, 2004). Several model school-based programs are available for middle school youth (SAMHSA, 2005), such as *Project ALERT* (Ellickson, Bell, & McGuigan, 1993; Ellickson, McCaffrey, Ghosh-Dastidar, & Longshore, 2003), *Keepin'it R.E.A.L.* (Gosin, Marsiglia, & Hecht, 2003; Hecht, et al., 2003), and *Life Skills Training* (Botvin, Baker, Dusenbury, Tortu, & Botvin, 1990; Botvin & Griffin, 2004). Research on these programs shows significant positive effects on preventing AOD use. Most of these programs take at least 11 weeks to complete and are required as part of the classroom curriculum. The majority of youth in the school receive the program, which is part of what makes school-based programs

so attractive—prevention messages can reach many youth simultaneously and in a single setting.

In contrast to in-school programs, few programs exist in middle school settings that specifically target prevention of AOD use that are *after* school and are attended voluntarily (Little & Harris, 2003). Because of the lack of these types of programs, we developed Project CHOICE, a voluntary after-school program, which targets AOD use among middle school students. This program was initially designed and tested over a one year period with counselors, school administrators, parents, and over 500 students to ensure that CHOICE would be appealing to youth in 6th, 7th, and 8th grade, as well as to youth of different races and ethnicities. During this time, we obtained feedback on program content, materials and activities from all groups (D'Amico, Ellickson, Wagner, et al., 2005). The program was effective in decreasing alcohol and marijuana use in a pilot trial of the program with two schools (D'Amico & Edelen, 2007) and in decreasing alcohol use in a larger randomized controlled trial with 16 schools (D'Amico, et al., in press). Building upon the information gained from the pilot trial of CHOICE, CHOICE was then implemented in a larger randomized control trial across three different school districts. The goal was to reach a diverse group of youth with this voluntary after-school program because so many schools face barriers that limit their ability to provide prevention and intervention services (D'Amico, Chinman, Stern, & Wandersman, 2009). For example, it is often difficult to provide in-class programming as many schools are currently coping with extensive budget cuts and increased teacher workload, combined with pressures to complete more intensive mandated curricula and obtain high test scores. CHOICE was created with community input in an attempt to create an inexpensive (Kilmer, Burgdorf, D'Amico, Tucker, & Miles, 2011), easily implemented, and accessible program that schools could use. The current study describes the youth who chose to attend the CHOICE program across these eight schools over an academic year, and examines whether these youth differed from the general school population.

After-school programs can be a good way to provide programming for youth that does not require class time or class resources. However, part of the reason few after-school programs exist that target AOD use may be because it is difficult to get a demographically diverse group of youth to attend (as would be achieved by providing programming to an entire classroom). For example, youth from lower income families and from ethnic minority backgrounds tend to participate less in structured after-school activities compared to higher income and white youth (Harvard Family Research Project, 2007). In addition, at-risk youth, such as those who have already initiated AOD use, may also be less likely to access services (Sterling, Weisner, Hinman, & Parthasarathy, 2010; Wu, Hoven, Tiet, Kovalenko, & Wicks, 2002). It is important when developing after-school programs to focus on ways to decrease barriers so that youth from a variety of backgrounds feel comfortable attending the program and attendance at the program mirrors the school composition. For example, an after-school program to decrease AOD use at the school would not be beneficial to the general population if it only attracted the white 6th grade students who did not drink. It is important that the youth who come have the common interest of avoiding or reducing AOD use; however, having youth of different sociodemographic backgrounds and levels of experimentation with AOD is key.

One way to decrease attendance barriers so that a diverse sample of youth attend these programs is to build the programs with school staff, students and parents in the community, obtaining feedback on their needs and thoughts about program content (Brown, 2001; D'Amico, Ellickson, Wagner, et al., 2005). This collaborative effort increases the chances that programs will be feasible in community-based settings, easing dissemination and increasing uptake (Green, et al., 1995; Israel, Schulz, & van Olphen, 2001; Minkler &

Wallerstein, 2003). In addition, program content must capture the attention of youth (who have many other activities that compete for their out-of-school time) by being both culturally and developmentally relevant. Sessions also need to be brief to maintain interest. Perhaps because of these challenges, voluntary school-based AOD intervention programs are relatively rare.

The goal of this study is to describe the participants and attendance patterns for a voluntary after-school AOD prevention program for middle school students. We focus on CHOICE because it is one of the few such programs that have been rigorously evaluated and thus provides an important case study for better understanding the nature of voluntary after-school AOD prevention programs in terms of: 1) whether such programs can attract a diverse group of youth, 2) whether program participants differ from non-participants in the general school population on demographics, AOD beliefs and use, and other key characteristics (e.g., leadership, popularity, cultural values), and 3) whether differential attendance occurs since attendance is voluntary and youth can enter the program at any time.

Method

Participants and Procedure

This work is part of a larger study in which 6th, 7th, and 8th grade students in 16 middle schools across three school districts in southern California were recruited for a cluster randomized controlled trial to evaluate CHOICE. Eight schools were assigned to the control group, and eight were assigned to receive CHOICE. The current study focuses on the eight schools that received CHOICE, as the goal of this paper is to describe program attendance. Data come from one school survey and a short survey completed during CHOICE. Active parental permission was required for all surveys and for CHOICE participation. A total of 7,708 students across all eight schools received parental consent forms to participate in the study; 90.1% of parents returned this form ($n = 6,947$). Approximately 68.6% of parents who returned a form gave permission for their child to participate in the study ($n = 4,767$). Of those with parental permission, 4,243 students completed a survey in fall 2008. Peer friendship nominations were obtained in two of the eight intervention schools, making the sample size for models that include peer-nominated popularity $n = 1,228$.

Overall, rates of survey completion were higher than or comparable to other school-based survey completion rates with this population (Johnson & Hoffmann, 2000; Johnston, O'Malley, Bachman, & Schulenberg, 2009; Kandel, Kiros, Schaffran, & Hu, 2004). The sample was ethnically diverse (see Table 1) and broadly comparable to the ethnic composition of the relevant school populations based on published demographic information for the schools. In addition, rates of lifetime and past month substance use in our baseline sample of 7th and 8th graders were comparable to national samples (SAMHSA, 2008). For example, in the 2007 National Survey on Drug Use and Health (SAMHSA, 2008), 28.2% of eighth graders reported lifetime alcohol use, compared with 29.2% in our sample of eighth graders. Survey responses are protected by a Certificate of Confidentiality from the National Institutes of Health. All materials and procedures are approved by the school districts, individual schools, and the institution's Internal Review Board.

Project CHOICE—CHOICE was delivered during the 2008–2009 school year once per week after school on a set day at each school when students with permission could choose to attend. The CHOICE curriculum is based on community input and is theory-based. A thorough description is published elsewhere (D'Amico, Ellickson, Wagner, et al., 2005). Briefly, there were five sessions that rotated throughout the school year. There was rolling admission and the sessions did not build on one another; thus, youth could enter at session 1 or at session 5. Sessions focused on providing normative feedback on alcohol and marijuana

use among middle-school aged youth, challenging unrealistic beliefs about substances, resisting pressure to use substances through the use of role play, discussing potential benefits of both cutting down and stopping use and discussing risky situations and coping strategies (e.g., getting social support). To decrease some of the barriers described by school staff, administration and students during the pilot test (D'Amico & Edelen, 2007), CHOICE took place right after school, provided a small snack and drink (to provide an alternative explanation for their attendance), and the group leaders were not members of school staff. When youth completed all five sessions, they graduated and received a certificate and a \$5 gift card.

Study Measures

Socio-demographic characteristics and substance use—Socio-demographic measures included age, gender and race/ethnicity. Lifetime and past month frequency of alcohol, marijuana and cigarette use were assessed with well-established measures from the California Healthy Kids Survey (West Ed, 2008) and Project ALERT (Ellickson, et al., 2003) and have been used in numerous studies with youth (e.g., Brown, Anderson, Schulte, Sintov, & Frissell, 2005; D'Amico, Ellickson, Collins, Martino, & Klein, 2005; Martino, Collins, & Ellickson, 2005; Orlando, Ellickson, McCaffrey, & Longshore, 2005). Frequency of consumption was assessed with one question per substance by asking “During your life [past month], how many times [days] have you tried [substance]?” As we did for all scales, the mean value was calculated in cases where 50% of questions had been answered; otherwise, the value was imputed using the procedure described below.

Beliefs and offers—Positive and negative expectancies (PE and NE) and resistance self-efficacy (RSE) were assessed using scales developed in Project ALERT (Ellickson, et al., 2003) and have shown a strong association with AOD use (Collins, Schell, Ellickson, & McCaffrey, 2003; D'Amico, Ellickson, Collins, et al., 2005; Ellickson & Morton, 1999; Martino, Collins, Ellickson, Schell, & McCaffrey, 2006). PE and NE questions asked, for example, whether students think that using [substance] will relax them, let them have more fun or make them do poorly in school. Students used a four-point response scale (1 = strongly agree to 4 = strongly disagree). There were three positive and three negative items for each substance: alcohol, marijuana and cigarettes. Items for the three substances were averaged to create an overall positive ($\alpha = 0.89$) and negative ($\alpha = 0.92$) expectancy score (Orlando, Tucker, Ellickson, & Klein, 2005). RSE focused on whether students would use substances in different situations (e.g., all your friends at a party are [using substance]). Three items were rated on a 4-point scale (1 = I would definitely use to 4 = I would definitely not use) and scores were averaged such that higher scores indicated higher resistance self-efficacy ($\alpha = 0.93$). Offers of AOD were assessed with three items asking if the student had been offered [substance] in the past 30 days. A positive response to any item was coded as a 1, a negative response to all three items as a zero.

Peer and family substance use—Students were asked about their best friends'/older siblings' substance use with three questions: “Do you think your best friend/older sibling uses (alcohol, marijuana, cigarettes) sometimes?” (yes/no); and a significant adult's substance use with three questions: “How often does the adult that is most important to you use (alcohol, marijuana, cigarettes)?” (from 0 = never to 3 = 4–7 days/week). These values were summed to create a score for each: best friend ($\alpha = 0.82$), sibling ($\alpha = 0.69$), and adult ($\alpha = 0.44$, excluding marijuana because of very low endorsement). Studies over the last two decades have shown that perception of sibling, friend, and adult use are related to adolescents' AOD use (e.g., D'Amico & Fromme, 1997; Li, Barrera, Hops, & Fisher, 2002; Poelen, Engels, Scholte, Boomsma, & Willemsen, 2009; Windle, et al., 2009).

Cultural Values: Parental respect and familism—We used two scales from Unger's work (Unger, Ritt-Olson, Huang, Hoffman, & Palmer, 2002) that were recently adapted to refer to more concrete behaviors (Unger, personal communication) to measure familism (Cuellar, Markowitz, & Libby, 2004) and parental respect (Ho, 1994). Both scales were assessed with four items (familism: e.g., "If anyone in my family needed help, we would all be there to help them"; parental respect: e.g., "It is important to honor my parents") that were rated on a 4-point scale (1 = strongly agree to 4 = strongly disagree). Items were averaged such that higher scores indicated greater familism and parental respect (alphas = 0.81 for familism and 0.92 for parental respect). Research has shown that Hispanic adolescents with higher familism have decreased risk for cigarette initiation (Kaplan, Nápoles-Springer, Stewart, & Pérez-Stable, 2001) and heavy drinking (Wahl & Eitle, 2010). Lower AOD use in Asians is often associated with higher parental respect (Shih, Miles, Tucker, Zhou, & D'Amico, 2010; Unger, et al., 2002).

Self-rated leadership and popularity—These were assessed with a 10-item scale based on items from a measure of social goals developed by Jarvinen and Nicholls (1996). Students were asked to think about when they were with people their own age and rate how much they agreed or disagreed with each item (1 = strongly agree to 4 = strongly disagree). Five items measured leadership (e.g., "When I'm with people my own age: they look up to me; I organize what they do") and five items measured popularity (e.g., "When I'm with people my own age: everyone wants to be my friend; they like me better than anyone else"). Items for each scale were averaged, with higher scores indicating greater self-rated leadership (alpha = 0.88) and popularity (alpha = 0.89). Social standing is often related to AOD use in this age group (Pirkle & Richter, 2006; Tucker, et al., 2011).

Peer-nominated popularity—Peer-nominated popularity, which is also shown to be related to adolescent AOD use (Allen, Porter, McFarland, McElhaney, & Marsh, 2005; Mayeux & Cillessen, 2008), was assessed by asking students to write the first and last names of "the friends at this school who you hang out with." After matching students' nominations with their survey ID numbers, nominations were analyzed with the computer program UCINET (Borgatti, Everett, & Freeman, 2002). The number of friendship nominations students received ranged from 0 to 16. Peer-nominated popularity was calculated by summing the total number of friendship nominations received by each student. This indicator of popularity corresponds to "indegree centrality," a measure that assumes an individual's popularity is measured by direct nominations from others (Freeman, 1979). The number of friendship nominations students made ranged from 0 to 10. This measure corresponds to "outdegree centrality," a measure that assesses an individual's gregariousness (Freeman, 1979).

Analytic Strategy

We used fall 2008 baseline data for all group comparisons. We estimated a series of models to determine the extent to which predictor variables were associated with initial attendance at CHOICE, and for those who attended one or more times, which predictors were associated with the number of sessions attended. We used binary logistic regression for initial attendance, with an outcome of whether an individual attended one or more sessions. For continued attendance, we removed those students who did not attend any sessions and used ordinal logistic regression to model the number of sessions attended. We also controlled for the school attended by youth (using 7 dummy variables to represent the 8 schools).¹

Changes in peer-rated popularity were investigated using peer nomination data for the two schools in which those nominations were collected. All analyses were carried out using

Mplus v6.11 (Muthén, 2001). We used multiple imputations to estimate parameters in the presence of missing data. Imputation was carried out using Mplus v6.11, which uses a Bayesian Markov Chain Monte Carlo approach. We imputed 50 datasets, analyzed them individually and combined the results. Imputation was not possible for adult marijuana use, as the variance was too low and imputation models did not converge. This variable was not employed further for imputation and was not used in any analyses.

Model 1 included demographic variables – race/ethnicity(coded as Asian, Black, Hispanic, other race or white, with white used as the reference category), gender (male used as the reference category) and grade (grade 8 used as the reference category). In all subsequent models we controlled for the demographic characteristics of Model 1, as well as school. In Model 2, we examined lifetime AOD use. Model 3 examined past month AOD use. Model 4 examined AOD beliefs (i.e., expectancies, resistance self-efficacy) and AOD offers. Model 5, peer and family use; Model 6, leadership; Model 7, self-rated popularity; Model 8, cultural values: familism; Model 9, cultural values: respect; Model 10, peer-nominated popularity (i.e., indegree); and Model 11, peer nominations (outdegree).

Results

CHOICE attendance

During the academic year, 703 individuals attended CHOICE, which was approximately 15% of the consented school population. This attendance rate is comparable to other voluntary after-school programs (Gottfredson, Cross, Wilson, Rorie, & Connell, 2010). On average across schools, we obtained three new students each week and nine students attended each weekly session.

Of the 703 unique individuals that attended CHOICE, 244 attended only one time. In order to understand session attendance relative to the rolling admission approach, we first examined whether there were differences in the sessions attended by these one-time participants. Table 2 shows that there was good attendance at all sessions, indicating that the rolling admission worked and youth came when they were able to attend. We assessed whether the first session attended was associated with continued attendance. For example, were students who attended session 1 as their first session more likely to continue attendance? We found no association between which session students first attended and whether they continued their attendance ($p = 0.26$). We also examined the total number of sessions that students attended and found that approximately 35% of students attended only one session, 27% attended two to four sessions (14% attended two sessions, 8% three sessions, 5% four sessions), and 38% attended all five sessions. Finally, we examined overall attendance for the different sessions. This analysis includes students who attended more than one session and thus some students are represented in more than one percentage. Table 2 indicates that similar to the one-time attendees, attendance for multiple attenders was high across all sessions, with the highest attendance for sessions 1 and 2 ($p > 0.001$ for one time attenders; $p > 0.001$ for full sample).

Comparison of participants to non-participants

Initial attendance—The intra-class correlation within schools for initial attendance was 0.005. Results for logistic regression models of initial attendance are shown in the left hand side of Table 4 (note that descriptive statistics for attenders and non-attenders are presented

¹A multilevel model to account for correlations within school may have been more appropriate; however, the small number of schools (8) did not allow this. It was not possible to account for classroom clustering because students in the participating middle schools were not in the same classroom with the same group of classmates all day. Rather, different subjects were taught in different classrooms, by different teachers, and with a different composition of students

in Table 1). Students were more likely to attend if they were African American or 'other race' (mainly multi-ethnic) vs. white, and if they were in 6th or 7th grade vs. 8th grade. Past month alcohol users were more likely to attend at least one session, as were those with less negative expectancy beliefs and lower RSE. Best friend use was also associated with a higher probability of attendance, with those whose best friend used more substances more likely to attend at least once. Finally, both indegree and outdegree predicted attendance, indicating that those who received more friendship nominations (indegree) and those who nominated more students as their friend (outdegree) were more likely to attend CHOICE.

Continued attendance—The intra-class correlation within schools for the number of sessions attended was 0.003. The right hand side of Table 4 shows the results of the ordinal logistic regression analyses predicting continued attendance among those who attended any CHOICE session (descriptive statistics for students attending 1 session vs. multiple sessions are presented in Table 3). Students in 6th and 7th grades were more likely to continue attendance compared to students in 8th grade. Past month marijuana users were more likely to continue CHOICE attendance, but lifetime alcohol users were less likely to return for additional sessions. Students who scored higher on parental respect attended more CHOICE sessions compared to those scoring lower on this measure. Finally, students who received more friendship nominations were less likely to continue CHOICE attendance.

Discussion

Understanding how to attract and sustain participation in after-school programs can increase the potential benefits for those who may choose to participate, and can also increase the benefit of the program overall. The current study is the first to take an in-depth look at attendance at a voluntary after-school program for middle school youth that specifically targeted AOD use. Given the extensive development of the program with this age group and the school community, we wanted to examine whether it would attract a diverse group of students and whether these students would be comparable to the general school population on a number of characteristics, including demographics, alcohol and drug beliefs and use, social standing, leadership and cultural values.

Overall, across all eight schools, 15% of consented students chose to attend CHOICE indicating that youth are willing to come and voluntarily discuss issues related to alcohol and drug use. Of note, a recent report from the After school Alliance on a nationally representative sample of youth showed that 15% of youth attend after-school programs, which includes programs that focus on a variety of activities, such as academics, sports, mentoring, etc. (After school Alliance, 2009). In the only other study that provided a voluntary after-school program for middle school youth that targeted alcohol and drug use, *but* also provided additional, more comprehensive services, including tutoring, academics, and leisure activities, participation averaged 14.5% across five different schools (Gottfredson, et al., 2010). Thus, the participation rate for CHOICE is the same as other after-school programs, which tend to address a variety of behaviors. Furthermore, a 2006 review of the effects of after-school programs on student outcomes (Zief, Lauver, & Maynard, 2006) found that only 20% of after-school programs targeted middle school youth. Therefore, the current study addresses an important prevention and intervention gap by focusing on this population.

Students utilized the rolling admission process of CHOICE, with one-half of the attendees entering the program at sessions 3, 4 or 5. There appeared to be slightly more attendance at sessions 1 and 2, which may have been due to the timing of our advertising for the program. Overall, we found that approximately 35% of youth attended one session, 27% attended two to four sessions, and 38% attended all five sessions. This suggests that the voluntary nature

of the program met adolescents' needs. In other words, youth could choose what fit for them—it was not mandatory that they return for another session, but if they wanted to, they could come to all five sessions. Thus, having a rolling admission and voluntary attendance may encourage more youth to try a new program and to get prevention information. Results emphasize that by taking the time to build programs with the community, it is possible to obtain a representative sample of youth who will voluntarily attend an after-school program that discusses AOD use.

One effect we found was that younger students were more likely to initially attend CHOICE and continue attending after their first session. Additionally, we found three effects for AOD use: past month drinkers were more likely to initially attend CHOICE and past month marijuana users were more likely to continue attending, although lifetime drinkers were less likely to continue attending. In addition, youth who reported higher best friend substance use were also more likely to initially attend CHOICE. It may be that adolescents who are more regularly drinking or using marijuana and who have friends who use substances more regularly have more questions about the effects of these substances or concerns about how to avoid pressure to use than abstainers or those who have only tried it once or twice; therefore, they may be more inclined to seek out this information. These adolescents may also have experienced more consequences due to more regular use (e.g., blackouts, hangovers, got in trouble with their parents) and may be more interested in learning about how people may decide to make changes in their substance use compared to those youth who are not using substances regularly.

We also found some evidence that youth who initially attended CHOICE tended to be more popular than those who did not attend. Although participants and non-participants did not differ in terms of their self-rated popularity, participants tended to receive more friendship nominations from other students and nominate more students as their friends. However, it is interesting to note that participants who received more friendship nominations were less likely to continue to attend CHOICE. Popular students tend to be heavier substance users, even in middle school (Tucker, et al., 2011), which may initially attract them to an after-school program such as CHOICE. However, recent evidence suggests that popular students tend to be less conscientious (van der Linden, Scholte, Cillessen, Nijenhuis, & Segers, 2010), which may help explain why they were less likely to stick with the program over time.

CHOICE was developed as both a prevention and intervention program (D'Amico & Edelen, 2007) given that middle school is a time of both initiation and escalation of alcohol and marijuana use (Donovan, 2007; Johnston, et al., 2009). Because AOD use substantially increases as youth transition from 6th grade to 8th grade (D'Amico, Ellickson, Wagner, et al., 2005), it is crucial to provide services to those youth who use substances more regularly (e.g., in the past month) and may also tend to escalate their use during this developmental period. CHOICE was able to reach these higher risk youth who are typically less likely to access prevention or intervention services (e.g., Sterling, et al., 2010), and provide them with information and resistance skills to help them make healthier choices in the future. Another difference we found was that CHOICE participants were more likely to be African American and multiethnic compared to non-participants. This contrasts with previous after-school research, which has found less participation among youth from minority backgrounds (Harvard Family Research Project, 2007), and suggests that students of all races and ethnicities felt comfortable attending and continuing their attendance at CHOICE, demonstrating the cultural relevance of the program.

It is important to note some of the limitations of this study. First, the youth that participated in this study were from southern California schools and therefore these findings may not be

generalizable to youth in other geographic locations. In addition, we did not ask youth why they attended more or fewer sessions of CHOICE. It could have been due to interest, comfort level with the facilitator, or whether or not they had other activities scheduled when CHOICE was offered. We are currently working to address this question as CHOICE is now being implemented in the original eight control schools and we will be surveying youth on reasons they choose (or do not choose) to attend CHOICE. Finally, we had fewer 8th graders attend CHOICE compared to 6th and 7th graders. Given the increase in AOD use during 8th grade and subsequently in high school (Johnston, et al., 2011), it is important to try to reach these older middle school youth with these types of programs.

Our research has shown that this program is successful in decreasing alcohol use at both the individual and school level (D'Amico & Edelen, 2007; D'Amico, et al., in press). It is also cost-effective (Kilmer, et al., 2011), which is an important consideration in whether or not schools are able to provide these types of resources (D'Amico, et al., 2009). Given the pressure on schools for test performance, this often means less classroom time for prevention-related activities; thus, this type of after-school program could be an attractive alternative to providing programming to youth in the classroom setting.

In sum, our findings highlight the importance of building prevention programs with community and youth input. There is often a large gap between research and practice (Green, 2001; Wandersman & Florin, 2003), which is partly due to limited resources in real world settings. For example, many prevention and intervention programs are developed in resource-intensive research settings that cannot be replicated in real world settings (D'Amico, et al., 2009). Understanding the needs of the community and collaborating on program development is one way to decrease this gap and ensure that programs are created so that they can be easily implemented and accessed in the real world. CHOICE reached students of different ethnicities and races and was able to attract higher risk youth who may not typically obtain prevention or intervention services. Results emphasize that a collaborative approach leads to programs that fit well in the community setting for which they were designed and can help ensure that programs reach a diverse group of youth.

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Table 1

Project CHOICE participant and non-participant samples

Variable	Project CHOICE Participants Mean (sd) or %	Non- Participants Mean (sd) or %
Gender		
Female	48.80%	51.38%
Male	51.20%	48.62%
Race/Ethnicity		
White	15.72%	16.91%
African-American	7.78%	2.92%
Hispanic	48.35%	52.36%
Asian	14.37%	18.00%
American Indian	1.05%	0.63%
Native Hawaiian	0.60%	0.71%
Multi-ethnic	12.13%	8.48%
Grade		
6 th grade	37.37%	33.37%
7 th grade	36.92%	33.42%
8 th grade	25.71%	33.21%
Substance use		
Lifetime alcohol use	16.81%	14.82%
Lifetime marijuana use	3.85%	3.83%
Lifetime whole cigarette use	3.32%	2.13%
Lifetime any cigarette use	7.71%	6.41%
Past month alcohol use	6.49%	4.90%
Past month marijuana use	1.40%	1.64%
Past month cigarette use	2.28%	1.45%
Peer and family substance use		
Best friend use	0.11 (0.26)	0.08 (0.23)
Adult use	0.47 (0.60)	0.42 (0.57)
Sibling use	0.18 (0.32)	0.15 (0.29)
Beliefs and offers		
Negative beliefs	2.91 (1.03)	3.03 (1.01)
Positive beliefs	1.48 (0.72)	1.46 (0.70)
Offers	0.12 (0.26)	0.10 (0.25)
Resistance Self Efficacy	3.66 (0.65)	3.73 (0.56)
Respect	3.81 (0.50)	3.81 (0.52)
Familism	3.62 (0.57)	3.59 (0.60)
Leadership	2.15 (0.91)	2.06 (0.83)
Self-rated popularity	2.25 (0.89)	2.23 (0.83)

Variable	Project CHOICE Participants Mean (sd) or %	Non- Participants Mean (sd) or %
Indegree ⁺	2.81 (2.38)	2.49 (2.46)
Outdegree ⁺	2.89 (2.43)	2.56 (2.41)
Totals (N = 4,371)	703	3,668

Notes: Percentages and means and standard deviations (sd) reported.

⁺The “n” for indegree/outdegree measures is based on data from only two schools with n=183 CHOICE participants, and n=1,045 non-participants.

Table 2

Attendance for one-time Project CHOICE participants and the full sample

Session Number	One-timers	Full sample
Session 1	74 (30.33%)	408 (58.04%)
Session 2	52 (21.31%)	397 (56.47%)
Session 3	34 (13.93%)	347 (49.36%)
Session 4	34 (13.93%)	325 (46.23%)
Session 5	50 (20.08%)	364 (51.78%)
Totals (N = 947)	244	703 ^a

Note:

^aThis includes students who attended more than one session; thus, some students are represented in more than one percentage.

Table 3

Project CHOICE participants who attended only 1 session and Project CHOICE participants who attended more than 1 session

Variable	Students attended 1 session Mean (sd) or %	Students attended more than 1 session Mean (sd) or %
Gender		
Female	47.62%	49.43%
Male	52.38%	50.57%
Race/Ethnicity		
White	15.58%	15.79%
African-American	6.93%	8.24%
Hispanic	44.59%	50.34%
Asian	19.48%	11.67%
American Indian	0.87%	1.14%
Native Hawaiian	0.43%	0.69%
Multi-ethnic	12.12%	12.13%
Grade		
6 th grade	29.44%	41.55%
7 th grade	36.80%	36.99%
8 th grade	33.77%	21.46%
Substance use		
Lifetime alcohol use	23.65%	13.04%
Lifetime marijuana use	3.96%	3.78%
Lifetime whole cigarette use	3.96%	2.97%
Lifetime any cigarette use	10.89%	5.96%
Past month alcohol use	8.91%	5.16%
Past month marijuana use	0.99%	1.63%
Past month cigarette use	3.94%	1.36%
Peer and family substance use		
Best friend use	0.14 (0.29)	0.09 (0.24)
Adult use	0.50 (0.61)	0.44 (0.59)
Sibling use	0.17 (0.30)	0.19 (0.33)
Beliefs and offers		
Negative beliefs	2.84 (1.05)	2.95 (1.02)
Positive beliefs	1.53 (0.72)	1.46 (0.72)
Offers	0.16 (0.30)	0.10 (0.23)
RSE	3.61 (0.68)	3.69 (0.63)
Familism	3.65 (0.61)	3.61 (0.54)
Respect	3.72 (0.64)	3.87 (0.38)
Leadership	2.22 (0.88)	2.11 (0.93)
Self-rated popularity	2.32 (0.91)	2.21 (0.88)

Variable	Students attended 1 session Mean (sd) or %	Students attended more than 1 session Mean (sd) or %
Indegree ⁺	3.63 (2.60)	2.43 (2.18)
Outdegree ⁺	2.91 (2.40)	2.88 (2.46)
Totals (N = 703)	244	459

Note: Percentages or means and standard deviations (sd) reported. RSE = resistance self-efficacy.

⁺The “n” for indegree/outdegree measures is based on data from only two schools in which n=62 students attended only one Project CHOICE session, and n=121 attended more than one Project CHOICE session.

Table 4

Logistic regression estimates for predictors of initial attendance and further attendance

Variable	Initial Attendance				Continued Attendance			
	Estimate	SE	P	Exp(est)	Estimate	SE	P	Exp(est)
Model 1: Demographics								
Female	-0.11	0.09	0.245	0.90	-0.03	0.16	0.860	0.97
Asian	-0.29	0.16	0.081	0.75	-0.37	0.30	0.218	0.69
Black	1.08	0.22	<0.001	2.94	-0.07	0.34	0.843	0.94
Hispanic	0.04	0.14	0.770	1.04	-0.11	0.23	0.626	0.89
Other race	0.35	0.17	0.041	1.41	-0.16	0.28	0.575	0.85
Grade 6	0.38	0.12	0.001	1.47	0.97	0.21	<0.001	2.64
Grade 7	0.31	0.12	0.009	1.36	0.46	0.20	0.023	1.58
Model 2: Demographics, plus Lifetime Alcohol and Marijuana Use								
Cigarette (lifetime)	0.28	0.21	0.178	1.32	-0.37	0.43	0.384	0.69
Alcohol (lifetime)	0.23	0.14	0.104	1.26	-0.63	0.25	0.010	0.53
Marijuana (lifetime)	-0.07	0.28	0.802	0.93	0.95	0.54	0.078	2.59
Model 3: Demographics, plus Past Month Alcohol, Cigarette and Marijuana Use								
Cigarette (past month)	0.50	0.35	0.162	1.64	-1.03	0.70	0.140	0.36
Alcohol (past month)	0.47	0.21	0.025	1.60	-0.28	0.36	0.434	0.75
Marijuana (past month)	-0.28	0.42	0.504	0.76	1.69	0.79	0.033	5.39
Model 4: Demographics, Plus Beliefs and Offers								
Positive beliefs	-0.01	0.09	0.870	0.99	-0.02	0.16	0.925	0.99
Negative beliefs	-0.11	0.05	0.019	0.90	0.13	0.08	0.114	1.14
RSE	0.23	0.10	0.022	1.25	0.00	0.17	0.993	1.00
Offers	0.33	0.21	0.113	1.39	-0.20	0.37	0.596	0.82
Model 5: Peer and Family Substance Use								
Best friend use	0.48	0.21	0.020	1.62	-0.42	0.39	0.274	0.66
Sibling use	0.28	0.23	0.218	1.32	0.26	0.39	0.480	1.30
Adult use	0.04	0.07	0.546	1.04	-0.01	0.12	0.956	0.99
Model 6: Self-Rated Leadership								

Variable	Initial Attendance			Continued Attendance		
	Estimate	SE	P	Estimate	SE	P
Self rated leadership	0.11	0.06	0.090	1.11	0.10	0.289
	Model 7: Self-Rated Popularity					
Self rated popularity	0.01	0.07	0.847	1.01	0.39	0.835
	Model 8: Familism					
Familism	0.07	0.09	0.416	1.08	0.17	0.609
	Model 9: Respect					
Respect	0.07	0.11	0.250	1.07	0.20	0.019
	Model 10: Social network measures (Indegree)					
Indegree centrality	0.08	0.04	0.028	1.08	0.07	0.041
	Model 11: Social network measures (Outdegree)					
Outdegree centrality	0.11	0.04	0.003	1.12	0.06	0.950

Note: RSE = resistance self-efficacy.