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Gender Differences in the Use of Drug Resistance Strategies: An Analysis of Rural Asian/Pacific Islander Youth

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Abstract

This study examines gender differences in the use of drug resistance strategies for rural Asian/Pacific Islander youth. Multi-ethnic Asian/Pacific Islander youth ($N = 213$) from 6 middle/intermediate schools on the Island of Hawai'i participated in the study, and gender differences in their real-world use of specific strategies (e.g., refuse, explain, avoid, leave) were examined. Despite similar levels of exposure to situations where drugs and/or alcohol were offered, girls indicated significantly lower usage of most of the resistance strategies compared to boys, suggesting girls' increased risk in dealing with drug-related problem situations. Implications for gender- and culture-specific health promotion and drug prevention curricula are discussed.

Keywords

Child/Adolescent health; health disparities; Asian; Pacific Islander; rural health; substance abuse

Recent epidemiological data has indicated that substance misuse is an increasing health concern for girls. From 2007 to 2011, the percentage of girls aged 12–17 years who have currently used marijuana has risen from 5.8 to 6.7 percent, and the use of prescription drugs continues to remain higher for girls versus boys (Substance Abuse and Mental Health Services Administration, 2012). Compounding this issue is the lack of substance abuse interventions that are appropriate or effective for girls (Chesney-Lind, Morash, & Stephens, 2008; Kumpfer, Smith, & Summerhays, 2008; Pasko, Okamoto, & Chesney-Lind, in press). Kumpfer et al. described how evaluation findings based on gender are mixed, but also noted that several prevention efforts have actually resulted in increases in substance use (i.e., iatrogenic effects) for girls. These findings indicate that much more research is necessary to

elucidate effective, gender-specific intervention principles or practices, in order to develop the field of health promotion and substance abuse prevention for girls.

The present study examines the gender differences in the use of common or culturally relevant drug resistance strategies used by rural Asian/Pacific Islander youth. Social resistance skills or strategies have been found to be an effective approach toward youth drug prevention (Skiba, Monroe, & Wodarski, 2004), and is a common component in promising programs for girls (Kumpfer et al., 2008). This study evaluates the gender-specific use of these strategies within a multi-ethnic Asian/Pacific Islander sample in rural Hawai'i, providing information to inform future gender- and culture-specific youth drug prevention efforts.

Literature Review

Gender-Specific Differences in the Social Context of Youth Substance Use

Research has suggested that the social context influences substance use of boys and girls differently, with girls being influenced by relational aspects more strongly than boys. For example, unlike their male counterparts, girls' emotionally close relationships with their mothers have been related to less frequent alcohol use (Kelly et al., 2011), while poor relationships with teachers and peers were found to increase their likelihood of smoking and cannabis use (Perra, Fletcher, Bonell, Higgins, & McCrystal, 2012). Girls' relational influences are contrasted with those of boys, who typically are influenced more by the threat of negative personal consequences as the result of substance use, such as performing worse in school (Skenderian, Siegel, Crano, Alvaro, & Lac, 2008). Relational considerations pose unique challenges for girls in drug-related problem situations. For example, compared to indigenous boys, research has indicated that indigenous girls find it significantly more difficult to deal with situations where drugs and/or alcohol are offered (Dixon Rayle et al., 2006; Okamoto, Kulis, Helm, Edwards, & Giroux, 2010). Okamoto et al. (2013) suggest that this difficulty may stem from balancing personal goals of drug abstinence with the relational consequences of how abstinence is achieved. Saying "no", for example, might have negative relational consequences, such as the offerer feeling offended by the rejection of the offer, which may deter girls from using these types of abrupt resistance skills. The perceived difficulty in refusing drug offers is particularly an issue for girls of color and those living in rural communities, due to close, interconnected relational networks within rural communities of color that may compound the importance of maintaining relational harmony within drug offer situations (Okamoto, Helm, Po'a-Kekuawela, Nebre, & Chin, 2009). In rural indigenous settings, for example, drug offerers are often biological or ascribed family members (e.g., cousins, parents, aunts/uncles), which complicates how drug resistance is communicated (Hurdle, Okamoto, & Miles, 2003; Waller, Okamoto, Miles, & Hurdle, 2003; Okamoto Kulis, Helm, Edwards, & Giroux, in press; Okamoto, Helm, Giroux, Edwards, & Kulis, 2010). Responses in these settings need to be both effective and non-damaging to the relationship with the offerer

Relational-cultural theory has been used to describe the unique challenges that girls face when offered drugs and/or alcohol (Okamoto et al., 2013; Okamoto, Kulis, et al., 2010). Central to the theory is how significant relationships influence women's and girls' sense of

meaning and well-being (Jordan, 2001, 2008). As a result, problems may occur when culture-based relational “disconnections” arise in the social environment (West, 2005; Comstock et al., 2008). For example, when drugs are offered to girls, a disconnection between the goal of personal drug abstinence and maintaining relational harmony arises. Gender-specific drug resistance skills training implemented within prevention programs should therefore consider the relational consequences of drug resistance strategies, demonstrating how girls could achieve both goals of abstinence and relational harmony when they are offered drugs from peers and family members.

Relevance of the Study

While past research has identified the efficacy of social resistance skills training for girls (Kumpfer et al., 2008), few studies have examined whether girls and boys differ in their real-world use of these skills. If there are differences in the real-world use of these skills based on gender, then it suggests that the way in which these skills are taught should also be tailored to the unique worldviews of girls versus boys. Further, past research has indicated that indigenous girls in Arizona and Hawai'i are exposed significantly more to drug-related problem situations than their male counterparts (Dixon Rayle et al., 2006; Okamoto, Kulis, et al., 2010), emphasizing the need for gender-specific drug prevention curricula to promote the health and well-being of indigenous and Pacific Islander youth populations.

This study examines gender differences in the use of common drug resistance skills (refuse, explain, avoid, and leave) described in prior culturally grounded drug prevention research (Hecht et al., 2003). It also examines culturally specific strategies described by youth in rural Hawai'i in prior research, including using anger (Po'a-Kekuawela, Okamoto, Nebre, Helm, & Chin, 2008) and moving to another location or next to another person (Okamoto, Helm, Po'a-Kekuawela, Nebre, & Chin, 2010) in order to resist accepting a drug offer. This study examines gender differences in the use of these strategies for rural Asian/Pacific Islander youth in Hawai'i, which is an underresearched population with significant health-related needs (Affonso et al., 2010; Affonso, Shibuya, & Frueh, 2007). Boys' and girls' exposure to drug offer situations were also examined in the present study, in order to assess gender differences in opportunities to use drug resistance strategies. The findings from this study have implications for gender- and culture-specific drug prevention programming, particularly for rural populations.

Method

Participants and Procedures

Youth participants in this study were recruited as part of a school-based, pilot/feasibility drug prevention evaluation study. Participants were recruited from six middle, intermediate, or multi-level schools within two of the three public school complex areas on the Island of Hawai'i. These schools comprised 86% of the public middle or intermediate schools within the two complexes, and 43% of all public middle or intermediate schools on the island. Consistent with rural definitions from the U.S. Census Bureau and the Hawai'i Rural Health Association (U.S. Department of Agriculture, 2009; Withy, Andaya, Mikami, & Yamada, 2007), the schools were located in areas with populations of less than 50,000.

All research procedures were approved by the Institutional Review Boards at Hawai'i Pacific University, University of Hawai'i at Mānoa, and the State of Hawai'i Department of Education. Participants completed a survey that was administered within health classes in participating schools. All parts of the survey were read aloud to students to aid in the comprehension of the survey items. This may have also had the secondary outcome of mitigating respondent fatigue. Across all schools, there were 322 students eligible to participate in the study, based on enrollment lists in participating health classes. Active parental consent was required for all youth participating in the survey. Two hundred forty five signed consent forms (76%) approving students to participate in the survey were returned. This return rate is higher than the average reported for other school-based intervention or prevention studies (65.5%; Blom-Hoffman et al, 2009). Of the students returning signed consent forms, 213 students completed the survey, reflecting 66% of all students that were eligible to participate in the survey.

Fifty-five percent of the sample was female, and the average age was 11.7 years ($SD = 0.645$). The majority of the sample was multi-ethnic, with 70% of the sample identifying with more than one ethnic group. The most frequently identified groups were Filipino (59%), followed by Hawaiian/Part-Hawaiian (49%), and Chinese (31%). While all three of these ethnocultural groups cope with issues tied to socioeconomic status and rural lifestyles on the Island of Hawai'i, Native Hawaiians have a unique socio-historical context (e.g., resistance to Western cultural influences and forced colonization) that has not been experienced by the other groups (Silva, 2004). Seventy-two percent of all participating youth received free or reduced cost lunch through the federally-subsidized school lunch program for low income families. This was slightly lower than the mean percentage for all schools participating in the study ($M = 74%$, $SD = 11.8$; Accountability Resource Center Hawai'i, 2012).

Instrument and Analysis

The 50-item survey focused on various risk and protective activities, drug resistance strategies, and situational risk assessment. These items were drawn from the evaluation of an evidence-based, culturally grounded drug prevention intervention (*keepin' it REAL*; Hecht et al., 2003), and were modified based on prior research in rural Hawai'i (e.g., Po'a-Kekuawela et al., 2008). The focus of the present study was on the drug resistance strategy items (items 31–36), which are outlined in Table 1. These items assessed the frequency of using common or culturally specific drug resistance strategies on a Likert scale (0 = "Never", 1 = "Once", 2 = "2–3 times", 3 = "4 times", and 4 = "More than 4 times"). These strategies included avoidance (item 31), saying "no" (item 32), and using anger (item 35). Cronbach's alpha for the six items was 0.92, which is higher than that previously established in earlier research (0.71; Kulis & Marsiglia, 2008). Exposure to drug offer situations was measured by one item ("How often, in the past 4 weeks, have you been offered alcohol, cigarettes, marijuana, or other drugs?"), and was also assessed on a Likert scale (0 = "Never", 1 = "Only once", 2 = "A few times", 3 = "Once a week", and 4 = "Almost every day"). Descriptive statistics, t-tests, and chi-square analyses were conducted to examine gender differences in the use of drug resistance strategies and exposure to drug offer situations. Finally, the use of different

strategies was pooled across items 31–36 to examine the frequency of use of all of the strategies.

Results

There was a non-significant mean difference in exposure to drug offer situations between boys and girls, $t(210) = -.091, p > .05$. Descriptive statistics and statistical tests of differences between boys and girls in the use of drug resistance strategies are reported in Table 1. Overall and gender-specific mean scores, and the percentage of non-zero responses (i.e., those reporting any level of use of the strategy), are presented. The mean use of resistance strategies by the full sample was between 0 (“never”) and 1 (“once”). Compared to boys, girls had significantly lower mean scores for the use of saying “no” (item 32), $t(186) = 2.26, p < .05$, leaving the situation (item 34), $t(177) = 2.44, p < .05$, using anger (item 35), $t(171) = 2.88, p < .01$, and moving to another location or next to another person to discourage the drug offer from occurring (item 36), $t(180) = 2.51, p < .05$. Further, girls differed significantly from boys in reporting any recent use of avoidance (item 31, 26.7% versus 42.3%), $\chi^2(1, N = 213) = 5.70, p < .05$, saying “no” (item 32, 21.7% versus 37.1%), $\chi^2(1, N = 212) = 6.07, p < .05$, using anger (item 35, 11.3% versus 32.0%), $\chi^2(1, N = 212) = 13.65, p < .001$, and moving to another location or next to another person to discourage the drug offer from occurring (item 36, 16.5% versus 33.0%), $\chi^2(1, N = 212) = 7.81, p < .01$. Figure 1 illustrates the overall and gender-specific frequency of use of all of the resistance strategies. Each point of the Likert scale was pooled across items 31–36, and percentages for each of them were calculated for boys, girls, and the overall sample. Compared with boys and the overall sample, girls reported the highest level of never using any of the strategies, and the lowest levels of using them at the various degrees of usage (i.e., “once” to “4 or more times”).

Discussion

This study examined gender differences in the use of drug resistance strategies for a sample of rural Asian/Pacific Islander youth in Hawai‘i. Overall, the data indicate that these girls utilize these strategies significantly less than their male counterparts, despite their similar exposure to drug offer situations in the study. Several reasons may account for these findings. In and of themselves, these strategies may appear too severe or abrupt for girls, and therefore may be perceived as causing discord within significant relationships. In other words, girls in the present study may have avoided using these strategies in order to maintain relational connectedness with peers and family members in drug-related problem situations, which has been found to be an important consideration for rural Hawaiian girls in prior research (Okamoto, Kulis, et al., 2010; Okamoto et al., 2013). Further, some of the strategies may conflict with gendered norms for girls in rural Hawai‘i (e.g., using anger), which might also discourage their use. Nonetheless, coupled with recent research findings in the same geographic region which indicate that girls are exposed more frequently to drug-related problem situations than boys (Okamoto, Kulis, et al., 2010), the findings from the current study suggest that rural Asian/Pacific Islander girls may be at higher risk for drug offers, yet less equipped to deal with these types of offers, compared to boys. The findings from this study are also consistent with girls’ difficulties in dealing with drug-related

problem situations found in prior research (Dixon Rayle et al., 2006; Okamoto, Kulis, et al., 2010), and highlight the pressing need for gender-specific, culturally relevant drug prevention programs in rural Hawai'i.

Implications for Gender-Specific Practice and Health Promotion

This study points to the need for drug prevention curricula to be tailored to the worldviews of rural Asian/Pacific Islander girls. Specifically, these curricula should move beyond simplistic responses to offers to use alcohol and/or drugs by demonstrating how drug resistance skills could be used such that the dual goals of relational harmony and drug abstinence are met. For example, an emerging culturally grounded, school-based drug prevention curriculum in rural Hawai'i (Ho'ouna Pono) uses video vignettes to demonstrate the use of different strategies with different types of offerers (Okamoto, Helm, & Dustman, 2013). In one vignette, a 14 year old Native Hawaiian girl (Ku'u) is offered a beer by her drunk father. Various subtle strategies are demonstrated at the end of the vignette, which incorporate avoidance and/or involving others. In another vignette, a 15 year old Native Hawaiian girl (Cora) is offered marijuana by her brother (David). One strategy that is demonstrated at the end of the vignette reflects the use of empathy as both an intervention and a resistance strategy. After he offers her some marijuana, she states (in a concerned manner), "David, why are you messing with that stuff? What'chu think mom is going to think about you if she catches you?" These strategies were based on prior research (i.e., Okamoto, Helm, Giroux, Edwards, & Kulis, 2010; Okamoto, Helm, Giroux, Kaliades, et al., 2010), and consider both Ku'u's and Cora's relationships with their father and brother (respectively) as well as their personal goals of abstinence from drinking beer and smoking marijuana. Activities and facilitated discussion related to the videos further promote critical thinking related to both of these considerations. For example, students discuss the influence of gender socialization in rural Hawai'i, and how it affects their options for drug refusal. As a result, the curriculum becomes grounded in the cultural and gender-based realities of the youth, and promotes skill-building related to drug resistance that is relevant for rural Asian/Pacific Islander girls.

Limitations of the Study

There were several limitations to this study. First, this study grouped multiple Asian and Pacific Islander populations together for analysis. The wide heterogeneity of different ethnicities within our predominantly Asian and Pacific Islander sample required us to collapse these groups together for analysis. Future analyses may purposefully sample specific ethnic groups (e.g., Native Hawaiians), in order to examine gender-specific patterns in the use of drug resistance strategies of those groups. In terms of measurement, the majority of the resistance strategy items were constructed with the assumption that youth were exposed to drug offers within the past 30 days. When youth were not exposed to these offers, they were instructed to select "0" (i.e., never having used the strategy). Therefore, it was not possible to discern within the same question whether youth selected "0" because they were exposed to drug offers but did not use the strategy, or if they were never exposed to offers at all. Further, because active parental consent was required for participation in the study, the data may have been influenced by a selection bias. In past survey research in rural Hawai'i, youth who were not granted consent to complete surveys were described by school

staff as living within environments at higher-risk for substance use (Okamoto et al., in press). This may have influenced the overall exposure to drug offers and opportunities to use drug resistance strategies of the sample. Finally, because the study was geographically focused on one island, the findings may lack generalizability to Asian/Pacific Islander youth on other islands.

Conclusions

Despite its limitations, the present study highlights how rural Asian/Pacific Islander girls utilize common or culturally specific drug resistance strategies significantly less than their male counterparts, suggesting that these girls may be at greater risk than boys when confronted with offers to use drugs and/or alcohol. Building off of these findings, future drug prevention research might examine the use of drug resistance strategies within gender-specific contexts more closely, in order to inform drug prevention efforts for rural Asian and Pacific Islander girls. These studies might include an in-depth examination of the types and frequencies of drug resistance strategies used in offers to use drugs by boyfriends, while in dating situations, or by older males in general. This kind of contextual information may elucidate how girls are pressured into using drugs from a gendered perspective, and the ways in which girls uniquely cope with these situations. Subsequently, culture- and gender-specific curricula for rural Asian and Pacific Islander girls could translate these research findings into practice, by training girls in the use of strategies within situations that are specific to their realities and worldviews (e.g., dating situations, peer pressure situations, etc.).

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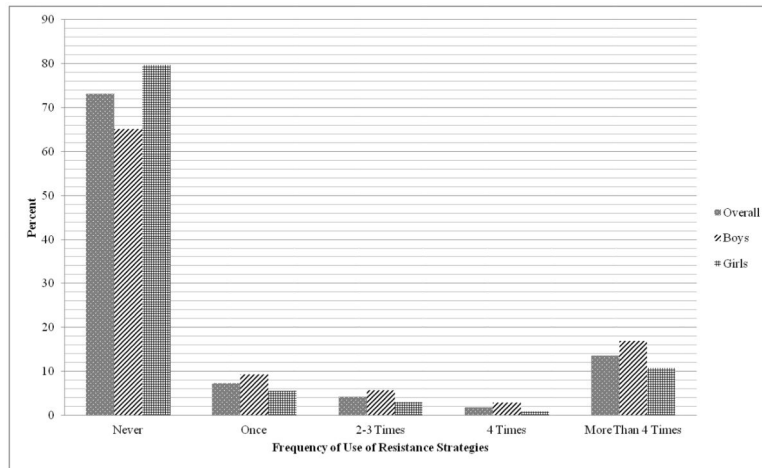


Figure 1.
Frequency of Use of Resistance Strategies by Gender

Table 1

Gender Differences in Use of Resistance Strategies

Item	N (Overall)	Mean (Overall)	Mean (Boys)	Mean (Girls)	% Non-zero (Boys) [^]	% Non-zero (Girls) [^]
31. In the last 30 days, how often have you avoided people or places because you might be offered alcohol, cigarettes, marijuana, or other drugs?	213	0.93	1.09	0.80	42.3	26.7*
32. When alcohol, cigarettes, marijuana, or other drugs were offered to you in the last 30 days, how often did you say "no" without giving a reason why?	212	0.87	1.13	0.65*	37.1	21.7*
33. When alcohol, cigarettes, marijuana, or other drugs were offered to you in the last 30 days, how often did you give an explanation or excuse to turn down the offer?	210	0.71	0.81	0.63	29.5	21.7
34. When alcohol, cigarettes, marijuana, or other drugs were offered to you in the last 30 days, how often did you decide to leave the situation without accepting the offer?	212	0.83	1.10	0.60*	35.1	23.5
35. When alcohol, cigarettes, marijuana, or other drugs were offered to you in the last 30 days, how often did you express extreme anger as a response to the person offering you drugs?	212	0.50	0.74	0.29**	32.0	11.3***
36. When alcohol, cigarettes, marijuana, or other drugs were offered to you in the last 30 days, how often did you move to another location or next to another person to discourage the drug offer from occurring?	212	0.68	0.94	0.46**	33.0	16.5**

[^] Percentages represent those reporting any level of the behavior in the last 4 weeks;

* p < .05,

** p < .01,

*** p < .001 from t-tests or chi-squared tests