

# Who is Offering and How Often? Gender Differences in Drug Offers Among American Indian Adolescents of the Southwest

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*This exploratory study examines gender differences in the patterns of drug offers among a sample of 71 American Indian middle school students. Participants respond to an inventory of drug-related problem situations specific to the cultural contexts of Southwestern American Indian youth. They are asked to consider the frequency of drug offers from specific groups in their social networks and the difficulty associated with refusing drugs from various offerers. The results indicate that female and male American Indian youth differ in the degree of exposure to drug offers and the degree of perceived difficulty in handling such offers. Even after controlling for differences in age, grade level, socioeconomic status, family structure, and residence on a reservation, girls report significantly more drug offers than boys from friends, cousins, and other peers. Compared to boys, girls also report a significantly higher sense of difficulty in dealing with drug offers from all sources.*

**Keywords:** *American Indian; youth; adolescents; drug offers; drugs; gender differences*

To date, much of the research on gender differences in adolescent drug use has focused on Caucasian youth, and of the few studies that have examined females of different ethnic groups, samples typically have been limited to comparisons between Caucasian, African American, and Hispanic girls (Wallace et al., 2003). As a result, there is a paucity of research that examines

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the drug use patterns of American Indian females, including the contextual factors that prevent or contribute to their drug use. Questions related to this gap in the research, and those that are addressed in this study, include, "How do the drug-related problem situations most common to American Indian adolescents vary based on gender?" "Who is offering drugs and how often are drugs offered?" and "What are the adolescents' perceived difficulties in refusing drugs in these situations?"

The purpose of this study was to examine the gender differences in the patterns of drug offers among a sample of 71 American Indian middle school students. First, this article presents an overview of past literature regarding the epidemiology and multiple ecodevelopmental social contexts that affect American Indian youths' substance use. In addition, literature pertaining to American Indian youths' gender differences regarding the usage patterns and consequences of drug use are discussed. Then, a recently developed survey focused on the ecosystemic contexts of drug and alcohol use of American Indian youth (The Problem Situations Inventory for American Indian Youth; Okamoto, LeCroy, Dustman, Hohmann-Marriott, & Kulis, 2004) is used to analyze the salient environmental characteristics in relation to substance using behaviors for females and males. Specifically, we present the results of our investigation of gender differences in the frequency of drug offers from parents, other adult family members, cousins, friends, and other peers, and the perceived difficulty of refusing drugs from each of these offerers. Finally, we discuss the way the findings from this study contribute to the understanding of gender-specific, ecological correlates related to drug offers for American Indian youth and their implications for gender-specific drug prevention and intervention practices for these youth.

## **LITERATURE REVIEW**

### **Epidemiology of Drug Use of American Indian Youth**

Drug use among American Indian adolescents is an ever increasing, serious concern. Epidemiological research has illustrated high frequency use of marijuana (Novins & Mitchell, 1998) and tobacco (Moncher, Holden, & Trimble, 1990) by these youth and higher rates of annual and lifetime drug and/or alcohol use compared with other ethnic populations (Bachman et al., 1991; Gfellner & Hundelby, 1995; Herring, 1994). Also, research has highlighted the increasing earlier onset of drug use for these youth (Mail, 1995; Schinke, Tepavac, & Cole, 2000). These trends have affected adolescent development by interfering with the learning of age-appropriate behaviors

and skills. In addition, substance abuse has been found to be comorbid with suicidality, depression, conduct disorder, and posttraumatic stress disorder with a sample of American Indian youth from the Southwest (Stiffman, Striley, Brown, Limb, & Ostmann, 2003). These results suggest that substance use may be related to a host of other adverse outcomes for these youth.

### **The Ecodevelopmental Perspective in Drug Use of American Indian Youth**

The high rates of drug use of American Indian youth can be understood by examining the ecodevelopmental factors supporting drug usage. Drawing from social ecological theory (Bronfenbrenner, 1989), ecodevelopmental theory provides a useful framework for understanding American Indian youths' drug use because it focuses on the multiple, interacting social contexts that influence development (Coatsworth et al., 2002; Perrino, Gonzalez-Soldevilla, Pantin, & Szapocznik, 2000; Szapocznik & Coatsworth, 1999). In the context of this study, drug use can be understood through the interaction of nested systems that influence American Indian youth. Microsystems are settings in which the youth participate directly (e.g., family, school, peers). Mesosystems represent the relationships between microsystems that influence the youth indirectly (e.g., parent–peer interactions or parent–school interactions). Exosystems also influence the child indirectly but through their effects on other family members (e.g., parental social support). Macrosystems reflect broad social forces and structures that influence the youth (e.g., culture). These include society's broad ideological, political, social, and cultural patterns, including cultural influences on behavior and political and economic influences on individuals and families (Perrino et al., 2000). Positive social support within and between these systems can facilitate positive social outcomes, whereas conflict within and between them can lead to behavior problems, such as drug use (Coatsworth et al., 2002). Finally, ecodevelopmental theory posits that the family plays a primary role in the socialization of youth and therefore has a strong impact on either the development or prevention of problem behaviors (Coatsworth et al., 2002).

Consistent with ecodevelopmental theory, some research has shown that the drug use of American Indian youth exists within the interdependent relationships of peers and family in schools, reservations, and communities. For example, several qualitative studies have examined the impact of peers, parents, and/or cousins on the drug use and resistance of American Indian youth (Hurdle, Okamoto, & Miles, 2003; Trotter, Rolf, & Baldwin, 1997; Waller, Okamoto, Miles, & Hurdle, 2003). Peers, siblings, and cousins (biological or personally ascribed) have been found to exert strong pressure to use or resist drugs. In a focus group study, Diné (Navajo) youth cited the drug use

of older relatives (particularly siblings) and “wanting to stay with friends” as primary reasons for using drugs (Trotter et al., 1997). Using a similar method, Waller et al. (2003) described the impact of biological or ascribed cousins on the risk and resiliency toward drug use of American Indian youth. They suggested that cousins were influential in American Indian youths’ decisions to use drugs, because they were exposed to them in multiple environments (e.g., school and their reservations). This may have served to compound risk because American Indian youth were never able to escape from the influences of their cousins’ drug offers; however, it also may have served to intensify protection, as cousins were looking out for them in multiple settings.

Hurdle et al. (2003), Trotter et al. (1997), and Waller et al. (2003) described qualitative research results regarding the relational contexts of American Indian youths’ drug use. Recently, these qualitative results have been further supported by quantitative research. Through examining the construct validity of an inventory focused on American Indian youth and drug use, Okamoto et al. (2004) found that peers and cousins were more influential than parents or other adult family members in American Indian adolescents’ decisions to use drugs or alcohol. However, Kulis, Okamoto, Dixon Rayle, and Nyakoe (in press) found that the influence of parents versus peers and cousins varied by drug; exposure to drug use opportunities from parents predicted more frequent use of alcohol and cigarettes; and exposure to drug use opportunities from cousins predicted more frequent use of marijuana for these youth.

Finally, researchers who have examined the training needs of school practitioners working with American Indian youth emphasized the importance of the sociocultural and relational context on the drug use of these adolescents. Nielsen (1994) surveyed 106 school counselors, psychologists, and students in northern Arizona regarding the training needs of school practitioners related to drug prevention for American Indian youth. The needs of these practitioners emphasized greater expertise in understanding and working with influential social actors within the youths’ environment. Specifically, school practitioners needed skills in helping adolescents to deal with parental substance abuse to break the intergenerational cycle of drug use. In addition, they needed training related to understanding substance abuse by friends and peers and in the influence of peer approval on drug and alcohol use. These findings indicate the importance of incorporating the relational context to understand the drug use patterns of American Indian adolescents.

### **Gender Differences in Drug Use of American Indian Adolescents**

The research examining gender differences in the drug use of American Indian adolescents has illustrated mixed findings. Some studies have shown

differences in drug usage patterns of American Indian females that are distinct from their male counterparts. For example, Novins and Mitchell (1998) and Wallace et al. (2003) found differences in patterns of marijuana use for American Indian boys versus girls, although these studies presented somewhat conflicting findings. Both studies found that more boys than girls report high-frequency marijuana use, although they differ in the developmental trajectory of drug use. Whereas Novins and Mitchell found that American Indian boys' use of marijuana increased more steeply across adolescence than girls' use, Wallace et al. found steeper increases in American Indian girls' daily and 30-day marijuana use from 8th through 12th grade compared with boys' marijuana use, rendering girls' usage equal to or more than boys' use by the 12th grade. Novins and Mitchell also noted that high-frequency marijuana use of both boys and girls was related to the use of other substances such as alcohol and cocaine.

Research has also suggested that the relational context of American Indian adolescents has a different impact on girls compared to boys. For example, Novins and Mitchell (1998) found that low-frequency marijuana use among American Indian girls was associated with their reports that peers encouraged alcohol and/or stimulant use. However, peer influence did not significantly influence marijuana use for boys in their study. Kulis et al. (in press) found that exposure to drug use opportunities from parents was a particularly salient risk factor for girls. The degree of exposure to drugs through parents predicted a higher frequency of recent gateway drug use for girls compared with boys.

Although some epidemiological studies have indicated that there do not appear to be significant differences in the drug use rates of American Indian girls and boys (see Hawkins, Cummins, & Marlatt, 2004, for a review of these studies) or that drug use is significantly higher for boys than for girls (Gray & Winterowd, 2002), several recent studies have suggested that American Indian girls are at particularly high risk for tobacco, alcohol, and illicit drug use. American Indian girls reported higher rates of cigarette use than their male counterparts and higher rates of smokeless tobacco use compared to Caucasian girls and to boys from most ethnic racial groups (Schinke et al., 2000). Using data from the Monitoring the Future study, Wallace et al. (2003) found that American Indian girls had the highest lifetime, 30-day, and daily drug use when compared to girls from other ethnic groups (e.g., Caucasian, African American, Mexican American, and Asian American). Most notably, Wallace et al. found that 70.4% of all American Indian girls have tried marijuana or hashish and 80.2% have tried cigarette smoking by the 12th grade (compared with 53.6% and 69.4%, respectively, for American Indian boys).

Research has suggested that the physical and social consequences of drug use among American Indian adolescents are dire and differ for females and males. American Indian women who exhibited patterns of alcohol abuse in their youth appear to be particularly vulnerable to adverse effects of alcohol. Adult females have been shown to account for nearly half of all American Indian deaths as a result of cirrhosis of the liver, even though they tended to drink less than their male counterparts (Walker et al., 1996). Socially, sanctions for drug use have been found to be more severe for American Indian girls versus boys. Bates, Beauvais, and Trimble (1997) stated that American Indian families generally view female drug use with disapproval, as perhaps does the entire community, whereas males typically do not receive such repercussions for drug use.

Although there is a small, developing body of literature on the drug use of American Indian girls, research exploring the actual frequency and difficulty of refusing drugs offers and the type of people offering drugs has not been conducted for this population. Research in this area is important, as it may provide insight into the unique ecodevelopmental correlates and patterns related to drug use of American Indian girls and the unique social pressures around drug use that these girls face. Research studies focusing on gender differences in drug use and drug offers for minority youth populations have illustrated that types of drug offerers tend to vary between boys and girls (e.g., Hecht, Trost, Bator, & MacKinnon, 2000; Moon, Hecht, Jackson, & Spellers, 1999); however, these studies have not included American Indian youth in their samples. To fill this gap in the research, the purpose of this study was to examine gender differences among southwestern American Indian youth in the frequency of drug offers from parents, other adult family members, friends, other peers, and cousins, and the perceived difficulty of refusing drugs from each of these offerers. This study used an inventory of drug related problem scenarios specifically developed for this population to examine these differences. The findings contribute toward an understanding of the unique etiology of drug use for American Indian girls.

## METHOD

### **Instrument Development**

The Problem Situations Inventory for American Indian Youth (PSIAI) was developed from data collected during 10 gender-specific focus groups (12 male and 20 female American Indian participants) within three public middle schools in a large southwestern metropolitan area (see Hurdle et al.,

2003; Waller et al., 2003, for a more detailed description of the focus group procedure). During the initial focus groups, the 32 American Indian students were asked to discuss situations in which they had encountered opportunities to use alcohol, tobacco, and harder drugs, and to detail their relationships to the offerers of drugs, the presence of others during the drug offer situations, and the place and time. Final transcripts from the focus group discussions were analyzed to extract the 62 distinct situations that were then organized into the PSIAI inventory format (see Table 1 for a sample of representative problem situations). The final PSIAI consists of 62 items intended to measure the frequency of exposure to drug-related and alcohol-related situations and the perceived difficulty in dealing with these situations (see Okamoto et al., 2004, for a complete version of the inventory and its psychometric properties).

## Participants

The current study followed the development of the PSIAI and was conducted with 71 American Indian youth within three public middle schools in a large metropolitan area in the Southwest. Of these schools, two differed from those in the instrument development (focus group) phase, and only one student in the sample participated in both phases of the research. All three schools were located in school districts adjacent to a tribal reservation, and they were selected because they enrolled a substantial minority of American Indian students, many of whom traveled away from the reservation to attend middle school. American Indian students at the participating schools comprised 15.4%, 9.8%, and 7.7% of the total enrollment. Students were recruited in collaboration with school-based liaisons (such as school counselors), who assisted the researchers in identifying and recruiting American Indian students willing to participate in the study and in obtaining active parental consent from the youth. These liaisons had long-standing relationships with the sponsoring university, as many of them participated in a large-scale, federally funded efficacy trial focused on culturally grounded drug prevention for Mexican-American youth (Gosin, Marsiglia, & Hecht, 2003). Data were collected through questionnaires that were administered immediately after school in-group settings ranging from 16 through 28 students and lasted for approximately one hour. Students were advised both orally and in writing about the purpose of the study, given guarantees of confidentiality and anonymity, and reminded that their participation was completely voluntary.

The schools consisted of predominately nonnative students and served both reservation and nonreservation youth. Sixty-three percent of the survey participants were female ( $n = 45$ ; males,  $n = 25$ ; missing,  $n = 1$ ), and the mean

**TABLE 1: Representative Problem Situations from the Problem Situations Inventory for American Indian Youth**


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Situation 24:	Your aunt and uncle have an extra pack of cigarettes, and they offer it to you.
Situation 31:	All the cousins are together, and one of the older ones passes a joint of marijuana around the group, calling everyone names who doesn't want to take a hit.
Situation 44:	It's Saturday night and you are at a party with some friends. There is a lot of music, and many people of all ages are drinking and smoking. Your friend comes over to you with this person you don't know, who offers you a joint of marijuana.
Situation 48:	You've been driving around with your friend and now you're parked out in the middle of nowhere. Your friend pulls out some hard drugs from behind the seat and asks you if you want some.
Situation 56:	You go home after school, and your mom and dad are at home with a couple of friends, and they have been drinking and are pretty messed up. They give you some liquor and say you need to learn how to hold your own.

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age for participants was 14 years. Forty-six percent of the participants were in the seventh grade, 38% were in the eighth grade, and 16% were in the ninth grade. A large majority of the students (78%) reported that they lived on a tribal reservation. The sample included students from 11 tribal backgrounds, including many with mixed tribal heritage; however, no tribal affiliations proved dominant. The two tribes most commonly represented in the sample accounted for 25% and 11% of the total, respectively, and one-third of the sample reported an affiliation with more than two tribes. Most of the participants (73%) qualified for either a free or reduced-cost lunch through the Federal school lunch program.

## Measures

The main dependent variables in the current study were scales created from clusters of items that described drug offer situations involving the same type of offerer (e.g., drug offers from cousins). In the survey phase of the study, respondents were asked to carefully read each of the original 62 drug related problem scenarios described in the PSIAI and respond to each scenario based on their experience within two dimensions, using 5-point Likert-type scales: (1) "How often have you been in a situation like this?" (1 = *never* to 5 = *more than 10 times*), and (2) "How difficult would it be for you to deal with this situation if you wanted to refuse (the offer)?" (1 = *very easy* to

5 = *very difficult*). Within each particular item cluster, the relationship of the offerer to the respondent was the same, such as offers from parents or from friends. Specific scales were not planned in advance for these measures; however, reliability analyses (Cronbach's alpha) identified several strong item clusters among those that measured frequency of exposure to such situations from specific offerers. These clusters included offers of substances from parents (5 items,  $\alpha = .86$ ), other adult family members (6 items,  $\alpha = .78$ ), cousins (12 items,  $\alpha = .88$ ), friends (20 items,  $\alpha = .93$ ), and other peers (12 items,  $\alpha = .90$ ).

A variety of methods were employed for combining information across the items in these clusters, such as calculating the mean frequency of exposure across items within a cluster, counting the number of different situations for which any exposure was reported, or using dichotomies that indicated whether an offer from this source had ever been received. Exploratory analyses showed that similar conclusions would be reached using each of these measures. In the multivariate analyses presented below, the dependent variables are measures of the mean frequency of exposure to offers from a particular source, whereas bivariate results use the dichotomies to simplify interpretation.

Another set of scales measuring the perceived difficulty of refusing drug offers from each of these offerers was also developed. Again, the items were grouped according to the relationship between respondent and offerer, in categories that matched those of the frequency scales described above. The difficulty items included ratings from both respondents who had and those who had not been exposed to the situation. Although the sample was not large enough to examine separately those reporting the perceived difficulty of hypothetical situations versus those who had actually encountered such drug offers, we also calculated a second measure of offer difficulty that assigned those who had never experienced a particular drug offer situation the least difficult score (*very easy*). Results using this latter measure are reported in the text rather than in tables.

The key independent variable in this study was the self-reported gender of participants. Other variables entered as predictors in multivariate regression analyses included self-reported age, grade in school (7, 8, or 9), participation in the federal school lunch program (a proxy for socioeconomic status), family structure (two-parent household versus all other arrangements), and reservation or nonreservation residence.

## Analyses

Descriptive, bivariate, and multivariate analyses are reported. A series of ordinary least squares multiple regression equations were conducted to

explore possible gender differences among respondents in the degree of exposure to offers of substances from various members of their social networks and their perceived difficulty in refusing drug offers from each of these offerers.

## RESULTS

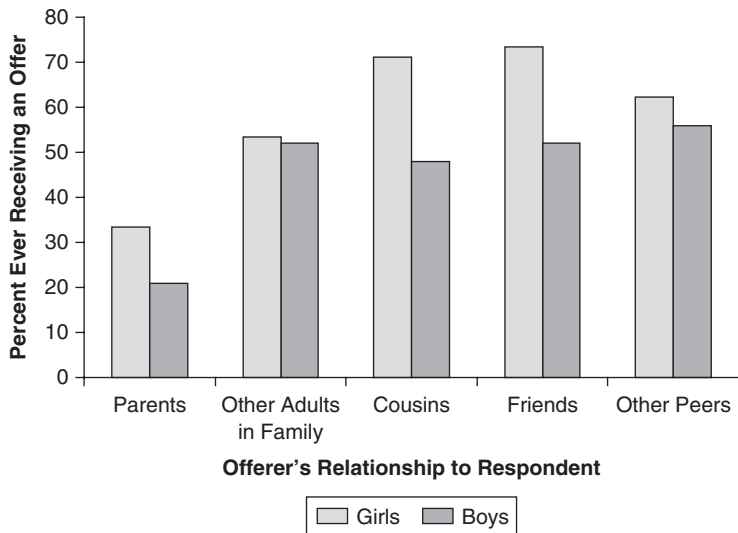
Descriptive statistics in Table 2 illustrate the relative frequency of participants' reported drug use offers from parents, other adult family members, cousins, friends, and other peers, and the perceived difficulty of handling such offers. Variables used as controls in multivariate analyses are also presented. The means are presented for all respondents together and then separately for females and males. Based on the original scaling, all of the means for frequency of exposure to substance offers suggest that the average respondent, whether female or male, received between zero (a score of 1) and one offer (a score of 2) from each source, although somewhat fewer offers from parents than from others. The average respondent rated the difficulty of handling the offers as *easy*. Although there was a consistent pattern in which girls, when compared to boys, reported both a higher average frequency and difficulty of refusing offers from every source, none of these gender differences were significant in *t*-test analyses. Apparent gender differences in means on the control variables (boys slightly older and in higher grade levels) were also not statistically significant. The differences in the percentages of boys and girls living on reservations (76% vs. 80%) and in the percentage receiving a free or reduced-price school lunch (68% vs. 76%) were also not significant.

The means for exposure to substance offers in Table 2 are based on scores calculated across offer scenarios that apply to a particular category of offerer. Another way to approach gender differences in offer sources is to examine the percentage of respondents who reported ever having an offer from a particular source, regardless of how frequently or across how many different scenarios these offers were experienced, as shown in Figure 1. This chart indicates that substantial majorities received offers from cousins, friends and other peers, and that about half received offers from family adults other than their parents. There is again a consistent pattern in which girls were more likely than boys to report being exposed to substance offers from every source. In the case of offers from cousins and friends, independent sample *t*-test results indicated that about 20% more girls than boys reported such exposure. Although large within the sample, these differences were only marginally significant statistically ( $p < .07$ ).

**TABLE 2: Descriptive Statistics**

Variable	N	Total Sample		Girls Only	Boys Only
		Standard Deviation	M	M	M
Frequency offered substances by parents	70	0.626	1.280	1.298	1.258
Frequency offered substances by other adults in family	71	0.589	1.400	1.416	1.380
Frequency offered substances by cousins	71	0.664	1.534	1.581	1.457
Frequency offered substances by friends	71	0.585	1.457	1.501	1.391
Frequency offered substances by other peers	71	0.614	1.446	1.472	1.417
Difficulty handling offers from parents	69	1.056	1.847	2.089	1.421
Difficulty handling offers from other adults in family	71	0.968	1.941	2.135	1.623
Difficulty handling offers from cousins	71	0.991	1.995	2.240	1.582
Difficulty handling offers from friends	71	1.018	2.012	2.305	1.519
Difficulty handling offers from other peers	71	1.042	2.031	2.286	1.593
Age (in years)	70	0.973	13.557	13.400	13.840
Grade (7, 8, or 9)	68	0.734	7.706	7.622	7.870
In a school lunch program (0 = no; 1 = yes)	70	0.448	0.729	0.756	0.680
In a two-parent household (0 = no; 1 = yes)	71	0.504	0.493	0.444	0.600
Lives on a reservation (0 = no; 1 = yes)	71	0.421	0.775	0.800	0.760

Table 3 reports multiple regression analysis results predicting the mean frequency of exposure to substance offers in scenarios involving particular offerers. The gender gap revealed in the bivariate results—that girls receive more substance offers than boys—also appears in the regression analyses even after controlling for age, grade level, school lunch participation, family structure, and reservation residence. In the case of offers from cousins and friends, independent samples *t*-test results indicated that the gender differences were statistically significant ( $p < .05$ ). Exploratory analyses, however, showed that these gender differences are significant only after controlling for age. Because boys were slightly older on average, they may have been exposed to more drug offers overall. But among boys and girls of the same age, independent samples *t*-test results indicated that girls were exposed to significantly more offers from cousins and friends ( $p < .01$ ). Age, however, increased exposure to offers from cousins, friends, and other peers, even without controlling for gender. The models with significant gender differences explained between 20% to 25% of the variance in exposure to offers from cousins and friends. Finally, respondents in two-parent households



**Figure 1: Gender Differences in Receipt of Offers of Alcohol, Tobacco and Other Drugs, by Relationship to the Offerer**

received fewer offers from family adults other than their parents, cousins, and friends.

Table 4 presents regression analysis results predicting the perceived difficulty of handling substance offers from different members of the respondent's social network. Again, there was a consistent set of significant gender differences. Girls reported more difficulty than boys in dealing with drug offers, whether they originated from their parents, other adults in the family, cousins, friends, or other peers. These gender differences were significant ( $p < .01$ ) whether age was controlled, whereas age was unrelated to perceived difficulty, regardless of whether gender was controlled. As suggested by Figure 1, the difficulty measures being predicted in these regressions included substantial numbers of respondents who reported only a hypothetical sense of difficulty (i.e., the expected level of difficulty in situations they had not yet faced). Using a modified difficulty measure that assigned hypothetical responses the lowest possible difficulty score, the same pattern was found for girls to report greater difficulty than boys, but the gender differences were statistically significant only for offers from friends and cousins (results not presented in tables).

**TABLE 3: OLS Regression of Frequency of Receipt of Alcohol, Cigarette and Other Drug Offers, by Type of Offerer**

Variable	Frequency of Offers from Parents (N = 66)		Frequency of Offers from Other Family Adults (N = 67)		Frequency of Offers from Cousins (N = 67)		Frequency of Offers from Friends (N = 67)		Frequency of Offers from Other Peers (N = 67)	
	b	se	b	se	b	se	b	se	b	se
Gender (0 = male; 1 = female)	0.144	0.166	0.150	0.144	0.302*	0.150	0.273*	0.133	0.202	0.151
Age (in years)	0.217	0.132	0.137	0.113	0.350**	0.118	0.329**	0.105	0.264*	0.119
Grade (7, 8, or 9)	-0.070	0.169	0.110	0.146	-0.048	0.152	-0.110	0.135	-0.003	0.153
In a school lunch program (0 = no; 1 = yes)	-0.050	0.173	0.036	0.150	-0.018	0.157	0.097	0.140	0.096	0.158
In a two-parent household (0 = no; 1 = yes)	-0.179	0.154	-0.304*	0.133	-0.327*	0.139	-0.261*	0.124	-0.185	0.140
Lives on a reservation (0 = no; 1 = yes)	0.074	0.183	-0.030	0.160	0.106	0.167	0.021	0.148	0.048	0.168
Intercept	-1.018	1.137	-1.124	0.978	-2.669*	1.021	-2.045*	0.907	-2.072*	1.029
Adjusted R <sup>2</sup>	0.019		0.108		0.251		0.203		0.117	

\*p < .05. \*\*p < .01. \*\*\*p < .001.

**TABLE 4: OLS Regression of Perceived Difficulty in Handling to Offers of Alcohol, Cigarette and Other Drugs, by Type of Offerer**

Variable	Frequency of Offers from Parents (N = 65)		Frequency of Offers from Other Family Adults (N = 67)		Frequency of Offers from Cousins (N = 67)		Frequency of Offers from Friends (N = 67)		Frequency of Offers from Other Peers (N = 67)	
	b	se	b	se	b	se	b	se	b	se
Gender (0 = male; 1 = female)	0.778**	0.265	0.555*	0.257	0.706**	0.258	0.838**	0.258	0.763**	0.264
Age (in years)	0.127	0.219	0.125	0.202	0.109	0.204	0.225	0.204	0.231	0.208
Grade (7, 8, or 9)	-0.409	0.277	-0.286	0.261	-0.293	0.263	-0.465	0.262	-0.540*	0.268
In a school lunch program (0 = no; 1 = yes)	-0.413	0.277	-0.246	0.269	-0.234	0.271	-0.155	0.271	-0.235	0.276
In a two-parent household (0 = no; 1 = yes)	0.613*	0.246	0.161	0.238	0.110	0.240	0.222	0.240	0.394	0.245
Lives on a reservation (0 = no; 1 = yes)	0.349	0.299	0.278	0.285	-0.040	0.280	0.156	0.287	0.195	0.293
Intercept	3.253	1.814	2.532	1.748	3.118	1.761	2.733	1.760	3.149	1.796
Adjusted R <sup>2</sup>	0.165		0.028		0.060		0.118		0.123	

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## DISCUSSION

This study investigated patterns of drug offers among a group of American Indian early adolescents. Specifically, the study sought to identify gender differences in the degree of exposure to offers of drugs, patterns of drugs offers from different persons in the adolescents' social networks, and differences among females' and males' degrees of perceived difficulty in negotiating drug offers from different individuals. Results suggested that American Indian female adolescents may be at greater risk for drug use than boys because they reported receiving significantly more drug offers and indicated more difficulty in refusing drug offers than boys. Consistent with ecodevelopmental theory (Coatsworth et al., 2002), it seems that social and familial relationships influence the number of drug offers given to American Indian youth. However, results indicated a disparity of experiences for female and male American Indian adolescents regarding their exposure to drug offers and the degree of perceived difficulty in handling such offers, suggesting that social and familial relationships may affect girls and boys differently.

The discrepancy between American Indian females' and males' drug use experiences and behaviors may be likely influenced by the bicultural systems in which they are raised and the ecodevelopmental factors contributing to their drug usage. Because most American Indian youth are reared in bicultural contexts, they are influenced both by the mainstream United States macrosystem of social ideals and the microsystems and mesosystems at work in their familial and tribal affiliations (Garrett & Herring, 2001; Herring, 1997a, 1997b). The expectations often differ among these systems in their lives, and these youth often experience conflicting sociological influences related to gender roles from their acculturative experiences in the broader society and from traditional, tribal influences in their families and Indian social networks (Herring, 1997a). It is likely that there are factors from American Indian youths' experiences in broader society and their tribal cultures that affect their drug use decisions and the pressure for them to use drugs. Thus, the results of our study may be better understood when taking into account the multiple ecodevelopmental systems and/or contexts in which American Indian youth are exposed and embedded.

The adolescents in this study were asked to reflect on situations in which they had been exposed to offers of drugs from a variety of sources from their social networks, and their responses were examined in association with self-reports of their difficulty in refusing such drug offers. Results indicated that the majority of the participants received most drug offers from cousins, friends, and other peers, and only about half received offers from family adults other than their parents. This finding aligns with past research indicating that

peers and cousins are more influential than parents or other adult family members in American Indian adolescents' decisions to use drugs or alcohol (Kulis et al., in press; Okamoto et al., 2004). Kulis et al. and Okamoto et al. suggested that substance use for American Indian youth may have more to do with whom the substances are being used than with what types of substances are being offered or in which ecological context they are being used. Peers and cousins may be particularly influential in American Indian youths' decisions to use drugs, as the youth in this study received more offers from these individuals than from adults.

In addition, the female American Indian adolescents in this study reported significantly more drug offers from their friends, cousins, and other peers than did their male counterparts. These findings are consistent with research that has indicated that peer pressure has a stronger effect on girls than boys in the United States culture (Farrell & White, 1998). It also has been suggested that American Indian youth's tribal peers, siblings, and cousins exert strong pressure to use or resist drugs (Trotter et al., 1997; Waller et al., 2003); however, no prior studies have closely examined the gender-based differences in this pressure for American Indian adolescents. Because the female adolescents in this study experienced more drug offers than their male peers from their friends, cousins, and others peers, they may be at increased risk for actual drug use. Future research should further delineate the possible differences in drug offers for female and male American Indian youth and more closely investigate the relationship between drug offers and actual drug use.

An interesting finding was that regression results indicated that age also was a factor in the frequency of receipt of offers, with older adolescents receiving more frequent offers from cousins, friends, and other peers. Because boys were slightly older in our sample, they may have been exposed to more drug offers overall. Kroger (1999) stated that as most United States adolescents age and become more autonomous, they have increased social interactions away from home and family that may result in increased drug offers. However, more traditional American Indian adolescents are in closer proximity to their parents and families and are likely to receive more drug offers as they get older because of the amount of free time they have (Herring, 1997a). It may be that the females in our sample had greater amounts of free time and were spending that time with their mainstream friends and tribal-affiliated cousins, friends, and peers who were more likely to offer them drugs. The positive relationship between age and frequency of drug offers emphasizes the importance of initiating drug prevention intervention efforts in early childhood and adolescence when the frequency of drug offers is relatively lower than in later adolescence. Nonetheless, among boys and girls of the same age in our sample, girls were still exposed to significantly more

offers from cousins and friends. Future longitudinal research might examine the interaction of gender and age in the drug use patterns of American Indian youth. Findings from this research might elucidate the steep developmental trajectory of drug use for American Indian girls described in previous research (Wallace et al., 2003).

For the females in our study, there were no significant differences in their self-reported difficulty of refusal of drug offers when explored across offer sources. When arising from any member of their social networks, both the number of drug offer situations encountered and the perceived difficulty in handling them were crucial in these females' lives. This may be indicative of social influence and stereotyping that remains for adolescent females in the greater United States society regardless of race and ethnicity (Sue & Sue, 2003). United States societal expectations encourage independence and assertiveness in boys but view assertiveness in girls as "unladylike" (Banaji & Hardin, 1996). In other words, female adolescents may feel the pressure to fulfill stereotyped feminine social roles in which they are evaluated based on their passivity and obedience when faced with situations where others are offering or pressuring them into specific behaviors (Banaji & Hardin, 1996; Sue & Sue, 2003).

In addition to the broader macrosystem influences, when American Indian females are offered drugs, they may experience internal and external pressures to accept the offers because of their desire to be accepted within tribal and familial affiliations. Prior research indicates that American Indian females have been socialized to believe that relationships are of primary importance in their lives (Portman, 2001), and it has been suggested that girls may develop strong relationships with members of their tribal and familial social networks earlier than boys and thus spend more time with them (Dixon Rayle, Sand, & Chee, in press; Gilligan, 1982; Portman, 2001). This is likely to enhance American Indian females' exposure and vulnerability to drugs and alcohol through relational contact with parents, other adult family members, friends, cousins, and other peers. American Indian females also may have greater difficulty refusing drugs because they remain less assertive than their male counterparts because of United States societal and some Indian tribal and familial expectations (Banaji & Hardin, 1996; Compas & Wagner, 1991; Gilligan, 1982).

Within this study, it is important to note the distinct differences between cultural, ceremonial, and recreational drug use of American Indian youth. Although hallucinogens and other drugs play a critical role at valued tribal and familial cultural activities, this practice represents religious and spiritually sanctioned use of substances and is believed to reinforce cultural cohesion and commitment (Grob, 1994; Grob & Dobkin de Rios, 1996). It has

been suggested that cultural activities such as powwows, purification lodges, and familial ceremonies may indirectly lead to greater risk of increased overall drug use not because of the ceremonial use of drugs but because youth are spending increased social time with their siblings, cousins, and peers at these events (Kegler et al., 1999; Moncher et al., 1990; Sanchez-Way & Johnson, 2000). The substances used in ceremonial functions are not misused or abused. Instead, this usage represents a vastly different pattern than that which the youth have reported to occur in the social activities taking place around these gatherings (Grob & Dobkin de Rios, 1996).

Finally, it is important to note that the American Indian tribes in the United States differ greatly in regard to their social structure. Some tribes, such as the Diné, are matrilineal and may exert an alternate pattern of cultural norms and values than another tribe that may be patrilineal (LaFromboise & Low, 1989; Still & Hodgins, 2003). These structural characteristics may significantly affect the way in which girls perceive appropriate behavior in regard to assertiveness. Although this exploratory study did not focus on tribal gender differences, these differences could be further explored through quantitative studies with larger numbers of adolescents representing different tribes in which intertribal differences could be determined. In addition, future research might include qualitative studies focusing on the phenomenological experience of being male or female in American Indian culture and how relationship development and time spent with others affect the number of drug offers they are receiving.

### **Limitations of the Study**

When inferring from the current study's results, it is important to note its exploratory nature, certain limitations of measurement, model specification, causal interpretation, and generalizability. Measures of exposure to drug offers from different informal social network sources reflected actual situations reported by focus groups of American Indian adolescents from the same area as the survey respondents, not a priori conceptual categories designed to produce parallel scenarios. The number of situations, the array of drugs offered, and the drug offer settings and complexities varied somewhat across the different categories of people offering substances to the youth. The variations may account for the reports of more exposure to offers from cousins and friends than from parents and other adult family members to some degree. Regardless of the accuracy of the measures of comparative exposure to drug offers, however, the findings suggest that the sheer number of drug offers from parents, adult family members, friends, cousins, and other peers may be more

apparent for American Indian females than for males and therefore may affect females' difficulty in refusing drug offers, regardless of the offerer. In addition, as an exploratory study, the analyses examined the differential impact of exposure to drug offers and difficulty of refusal for female and male American Indian adolescents from various sources but did not assess their role in the etiology of American Indian youth substance use. Finally, it is important to note that because of the small sample size, the data are preliminary in nature and should be interpreted with caution until further data become available.

Because our sample was drawn from a population of American Indian adolescents attending public middle schools with non-Indian majorities in a large urban area of the Southwest and included both youth living on and off tribal reservation lands, the generalizability of the study findings is difficult to establish. Nationally, there are 562 federally recognized tribal nations (Bureau of Indian Affairs, 2002), with significant tribal and regional differences, such as residential patterns, degree of Indian ancestry or blood quantum, and cultural affiliation, identity, and participation (Hawkins et al., 2004). The findings from this study possibly will not reflect these differences.

## CONCLUSIONS

Despite these limitations, findings from this study have implications for furthering the understanding of possible gender differences in American Indian adolescents' exposure to drug offers and difficulty of refusal of drug offers in an ecodevelopmental framework. Concurrently, the results directly inform the development of culturally grounded, gender-sensitive drug prevention practices and programs in schools, community agencies, and reservation and nonreservation communities. For example, the differences in drug use patterns based on the type of drug offerer and the level of difficulty of refusal of drug offers from this study could be used to adapt drug resistance skills and life skills training programs to the unique worldviews of American Indian boys and girls. For professionals to help American Indian adolescents learn to differentiate between healthy relationships and non-healthy social influences and learn effective refusal strategies for unhealthy drug use, they must first understand the relational contexts of both female and male American Indian adolescents that place them at greater risk of drug offers and use. Future research might explore these phenomena and examine other culture-specific and gender-specific aspects of drug use risk and resiliency with this understudied population of adolescents.

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