

## ORIGINAL ARTICLE

# Sexual Orientation, Sexual Behaviors, and Pregnancy Among American Indian Adolescents

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**Purpose:** A recent study found a disproportionate number of pregnancies among Euro-American lesbian and bisexual adolescents compared to heterosexual peers. American Indian adolescents have reported higher prevalence of gay/lesbian/bisexual orientations than Euro-Americans; do they also report higher prevalence of pregnancy?

**Methods:** The study assessed prevalence of teen pregnancy and related factors by sexual orientation among sexually experienced, reservation-based American Indian adolescent males ( $n = 2056$ ) and females ( $n = 1693$ ) who participated in a national school-based survey in 1991. Self-reported orientation was classified as heterosexual, gay/lesbian/bisexual, and "unsure" of orientation.

**Results:** Gay/bisexual males were more likely than other males to report early heterosexual intercourse (<14 years), more consistent contraception, and a higher prevalence of abuse and running away ( $p < 0.05$  to  $p < 0.0001$ ). Likewise, lesbian/bisexual females were more likely to report early onset of heterosexual intercourse, more frequent intercourse, and running away. Sexual or physical abuse did not vary by orientation for females. Prevalence of pregnancy also did not vary by orientation (males, 18.6% gay/bisexual vs. 10.4% "unsure" vs. 11.8% heterosexual; females, 25.0% lesbian/bisexual vs. 22.1% "unsure" vs. 21.9% heterosexual). For lesbian/bisexual females, no variables were significantly associated with pregnancy history; for "unsure" females, pregnancy was

associated with contraceptive frequency and early onset of heterosexual activity. For heterosexual females, age, intercourse frequency, and physical abuse were associated. For gay/bisexual males, intercourse frequency, ineffective contraception, and physical abuse were associated with involvement in a pregnancy; for "unsure" and heterosexual males, most items except ineffective contraception were related to pregnancy involvement history.

**Conclusions:** Although prevalence of pregnancy is similar, findings show group differences in associated risk factors by sexual orientation. Interventions to reduce pregnancy among American Indian adolescents should include assessment of sexual orientation and behavioral risk factors. © Society for Adolescent Medicine, 1998

## KEY WORDS:

Adolescence  
Pregnancy  
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The links between sexual behaviors, pregnancy, and developing sexual orientation have long been hypothesized; for example, Troiden (1) identified "heterosexual immersion" as one of the coping strategies of gay, lesbian, and bisexual youth who are in the identity confusion stage of sexual orientation identity development. Empirical research has supported these links. Studies of gay and bisexual adolescent males (2-5) and of lesbian and bisexual adult women (6-8) report that the majority have experienced heterosexual intercourse, and nearly one in three report at least one pregnancy (9).

Several behaviors and risk factors have been strongly associated with a history of adolescent preg-

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nancy in the general population. In a review of research during the 1980s, Miller and Moore (10) identified sexual abuse, age at first intercourse, frequency of intercourse, frequency of contraceptive use, and effectiveness of contraceptive methods as some of the factors related to adolescent pregnancy. Recent research has continued to identify relationships between these factors and pregnancy in adolescence (11–13).

Gay, lesbian, and bisexual teens appear to be at increased risk for several of the factors related to adolescent pregnancy. Studies have consistently found a higher prevalence of both sexual abuse and early age at first heterosexual intercourse (at  $\leq 13$  years old) among gay, lesbian, and bisexual youth than is reported for their heterosexual peers (3,14–17). A recent study (18) of predominantly Euro-American adolescent girls from a Minnesota school-based survey found lesbian and bisexual girls significantly more likely to report a history of sexual and physical abuse, and an age at first intercourse of  $\leq 13$  years than were heterosexual girls or those unsure of their orientation. Among the sexually experienced respondents in the study, lesbian and bisexual girls reported more frequent heterosexual intercourse, were less likely to contracept regularly or to use effective methods of contraception, and were more likely to report involvement in prostitution than their heterosexual age mates. This same study found a significantly higher prevalence of pregnancy among lesbian and bisexual adolescent girls than their heterosexual or unsure counterparts.

To date, the majority of studies have included only Euro-American or African-American adolescents. Among American Indian youth, there has been little research exploring sexual orientation, sexual behaviors, and pregnancy. Information about sexual orientation among American Indians comes primarily from anthropological literature (19–21); these studies have found that many tribes throughout the United States have a long history of positive nonheterosexual roles or identities within their cultures. From interviews with a small number of Navajo informants, Sullivan (22) reported that homosexual and bisexual behaviors occurred more frequently among young Navajo men within their community than in mainstream populations, but no actual rates were documented. However, a higher prevalence of self-reported homosexual, bisexual and unsure orientation was found among American Indian adolescents in a national sample than among their Euro-American counterparts (23).

Studies of American Indian adolescent sexual be-

havior and risk factors are similarly few in number. A study (24) of 232 American Indian women in Montana, approximately one-third of whom were adolescents, found more than 75% respondents within this age group reported ever having had heterosexual intercourse; of all sexually experienced respondents, more than 1 in 10 reported an age at first sexual intercourse of  $\leq 14$  years. Blum and colleagues (26) found that rural sexually active Native American teens were half as likely to use contraception as rural non-Native peers. Rundle (25) examined childhood sexual abuse recalled by 203 Native American women; however, the study's sample was limited to women with a history of sexual abuse and did not include prevalence information.

Although it has been reported that 1 in 5 births to American Indian women are to adolescent mothers (27), patterns of sexual behaviors and pregnancy among American Indian adolescents have not been well documented. In 1991, the Indian Health Service (28) reported the rate of childbirth among Native American adolescents to be nearly twice that of all other U.S. races combined. In a study on pregnancy and related practices, Liu and colleagues (29) examined the reactions and prenatal care utilization of 25 Apache and Navajo adolescent girls within 24 hours of delivery; they found that pregnancy among all but one of the adolescents was unplanned, and contraceptives were not used by the majority of respondents.

Given the higher prevalence of self-reported gay/lesbian/bisexual identities among American Indian adolescents, do they likewise show a higher prevalence of sexual risk factors, such as sexual abuse or lack of contraceptive use, than their heterosexual counterparts? Furthermore, as has been shown for predominantly Euro-American lesbian and bisexual girls, do gay/lesbian/bisexual American Indian adolescents report a higher prevalence of pregnancy than heterosexual peers? And finally, do the sexual risk factors significantly associated with pregnancy differ among adolescents based on their self-identification of orientation?

The present study assessed the prevalence of teen pregnancy and related factors by sexual orientation among sexually experienced American Indian adolescent males and females who participated in a national school-based survey of health and risk behaviors. We hypothesized that, like their Euro-American counterparts, gay/lesbian/bisexual American Indian adolescents would report a higher prevalence of sexual behaviors associated with increased risk of pregnancy, and they would be more likely to report

**Table 1.** Demographic Information

Orientation Category	<i>n</i>	Age (yr)	
		Mean	SD
Boys ( <i>n</i> = 2056)			
Heterosexual	1561	15.66	1.57
Unsure	274	15.09	1.77
Gay/bisexual	46	15.28	1.64
		[Missing cases = 175 (8.5%)]	
Girls ( <i>n</i> = 1693)			
Heterosexual	1322	15.80	1.51
Unsure	241	15.61	1.62
Lesbian/bisexual	33	14.92	1.69
		[Missing cases = 97 (5.7%)]	

a history of involvement in pregnancy. Although we expected differences in the prevalence of sexual risk factors among the groups, we did not expect differences in the specific factors that would be associated with pregnancy, because studies appear to have documented these risk factors consistently (10–13).

### Methods

This secondary analysis assessed differences in prevalence of causing or having a pregnancy and patterns of associated risk factors by sexual orientation, including age at first heterosexual intercourse, histories of sexual and physical abuse, history of running away, frequency of heterosexual intercourse, as well as frequency and method of contraceptive use.

### Sampling Design and Measurement

Study participants (*n* = 3749) included those American Indian adolescent males (*n* = 2056) and females (*n* = 1693) who reported ever having had heterosexual intercourse on a survey of health and risk behaviors among a national nonprobability sample of 13,454 reservation-based American Indian youth. This comprehensive, anonymous, school-based survey was conducted in 1988–1990 and included adolescents from 55 tribes in 8 of the 12 Indian Health Service areas. This should not be regarded as a nationally representative sample of American Indian youth, since not all service areas chose to participate, urban youth were not sampled, and schools in areas with a relatively low proportion of American Indian students were not included for budgetary reasons. Psychometric properties, methods of sampling, and additional secondary analyses of this data set are reported elsewhere (16,23,27,30). Institutional review board (IRB) approval was obtained for the original

survey, as was specific IRB approval for this secondary analysis. Parental consent was obtained for, and assent was given by, all respondents who participated in the original study.

In the survey, sexual orientation was defined along a heterosexual–bisexual–homosexual continuum, with an additional response option of “don’t know” classified as “unsure” (16). For this secondary analysis, respondents were grouped according to self-reported orientation as nonheterosexual (“bisexual,” “mostly homosexual,” and “100% homosexual”), heterosexual (“mostly” and “100% heterosexual”), and “unsure.”

Demographic information about respondents by group is presented in Table 1. Although “unsure” respondents were younger overall than both heterosexual and gay/lesbian/bisexual respondents, separate analysis of variance for both boys and girls showed significant age differences only between “unsure” and heterosexual groups using Scheffé’s test post hoc at the 95% confidence level (for boys,  $F = 15.68$ ,  $df = 2$ ,  $p < 0.0001$ ; for girls,  $F = 33.09$ ,  $df = 2$ ,  $p < 0.0001$ ). Where older and younger responses vary in significance or trend, results are reported separately; however, when responses are similar in trend and significance, they are reported in aggregate.

### Analysis

Given the disproportionate sizes of the groups and the categorical nature of many of the variables, Chi-square analysis was used to assess differences in prevalence of pregnancy and associated risk factors both between and within groups, as it is more robust to extreme differences in group size because of reliance on proportions. There were significant differences in age between heterosexual and unsure

groups for both boys and girls. While age is only a rough proxy measure for developmental stage, to control for potential differences in behavior between groups owing to differences in age, each group was further subdivided as younger (ages 12–15 years) and older (16–18 years) for all analyses.

In addition, separate logistic regression analyses were attempted for boys and girls, with pregnancy history (dichotomized as “ever”/“never”) as the dependent variable, and all risk factors plus age and sexual orientation were entered into the model simultaneously. However, since respondents with a missing response to any one of the variables were excluded from the models, the sample size was reduced almost by half. Moreover, respondents who had reported a history of pregnancy were more likely to have missing responses. In these reduced samples, pregnancy occurred for fewer than 5% of respondents overall, so the models were skewed in favor of predicting nonpregnancy; this was demonstrated by both models, as they correctly classified over 98% or better of never-pregnant respondents, but only correctly classified 6% of males who had ever caused a pregnancy and 11% of females who were ever pregnant. In an attempt to resolve these difficulties, adolescents who reported a history of pregnancy were matched with a random, stratified sample drawn from the never-pregnant respondents, proportionally stratified by sexual orientation. While this eliminated the skew toward no history of pregnancy, in the computation of the logistic regression, the number of cases in each model was further reduced to only 278 boys and 526 girls. Thus, predictive power was substantially reduced; the models correctly classified fewer than 73% of cases among boys and 65% of cases among girls. Therefore, only results from the Chi-square analyses will be presented below.

## Results

### Sexual Behaviors Compared by Orientation: Boys

Group differences in sexual behaviors and risk factors were compared separately for boys and girls. As shown in Figure 1, gay/bisexual boys were more likely than their heterosexual and unsure counterparts to report an age of onset of heterosexual intercourse at <14 years ( $\chi^2 = 13.90$ ,  $df = 4$ ,  $p < 0.01$ ).

Both gay/bisexual and unsure boys were more likely to report they rarely used contraceptives than heterosexual boys. More than one in three gay/bisexual and unsure boys reported using birth con-

trol rarely, as did 28.0% of heterosexual boys ( $\chi^2 = 10.70$ ,  $df = 4$ ,  $p < 0.05$ ). While “unsure” boys were also more likely to report using ineffective birth control methods such as withdrawal, the rhythm method, or no contraception, the differences did not attain statistical significance ( $p = 0.057$ ).

Gay/bisexual boys reported a significantly higher prevalence of abuse and related risk factors than did their heterosexual peers. They were more likely to report a history of sexual abuse ( $\chi^2 = 26.92$ ,  $df = 2$ ,  $p < 0.00001$ ), a history of physical abuse ( $\chi^2 = 16.91$ ,  $df = 2$ ,  $p < 0.001$ ), and a history of running away ( $\chi^2 = 23.91$ ,  $df = 2$ ,  $p < 0.0001$ ).

### Sexual Behaviors Compared by Orientation: Girls

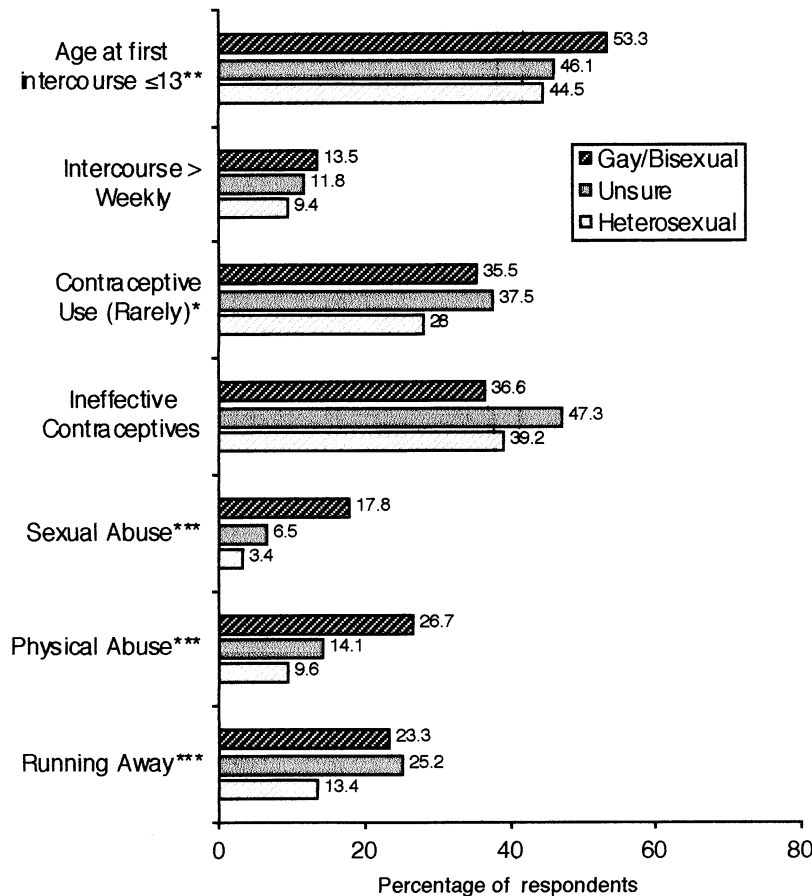
Among girls, there were fewer significant differences in sexual behaviors and risk factors based on sexual orientation than were among boys (Figure 2). Lesbian/bisexual and unsure girls were more likely than their heterosexual counterparts to report an age at first sexual intercourse of <14 years ( $\chi^2 = 26.19$ ,  $df = 4$ ,  $p < 0.0001$ ). Lesbian/bisexual girls were slightly more likely than heterosexual girls and twice as likely as “unsure” girls to report having sexual intercourse several times a week ( $\chi^2 = 10.19$ ,  $df = 4$ ,  $p < 0.05$ ).

Heterosexual girls were most likely to report frequent contraceptive use, while unsure girls were least likely to do so. Two in three sexually experienced heterosexual girls reported use of birth control often or always, while half of their nonheterosexual and 44.7% of their unsure counterparts reported the same; conversely, nearly 2 in 5 lesbian/bisexual and “unsure” girls reported they rarely to never used birth control, while fewer than 1 in 5 heterosexual girls reported the same ( $\chi^2 = 27.16$ ,  $df = 4$ ,  $p < 0.0001$ ). There were also significant differences in effectiveness of chosen contraceptive methods; 2 in 3 unsure girls reported using ineffective contraceptive methods such as withdrawal, rhythm, or no method, compared to just over half of heterosexual and nonheterosexual girls ( $\chi^2 = 16.06$ ,  $df = 2$ ,  $p < 0.001$ ).

Lesbian/bisexual girls reported a higher prevalence of running away ( $\chi^2 = 6.85$ ,  $df = 2$ ,  $p < 0.05$ ); however, when controlled for age, younger and older lesbian/bisexual girls still reported a slightly higher prevalence of running away, but the differences were no longer statistically significant ( $p = 0.18$  for younger girls and  $p = 0.58$  for older girls).

Unlike boys, however, history of physical or sex-





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

Figure 1. Sexual behaviors and risk factors, by orientation, for boys.

ual abuse did not vary significantly by orientation among girls.

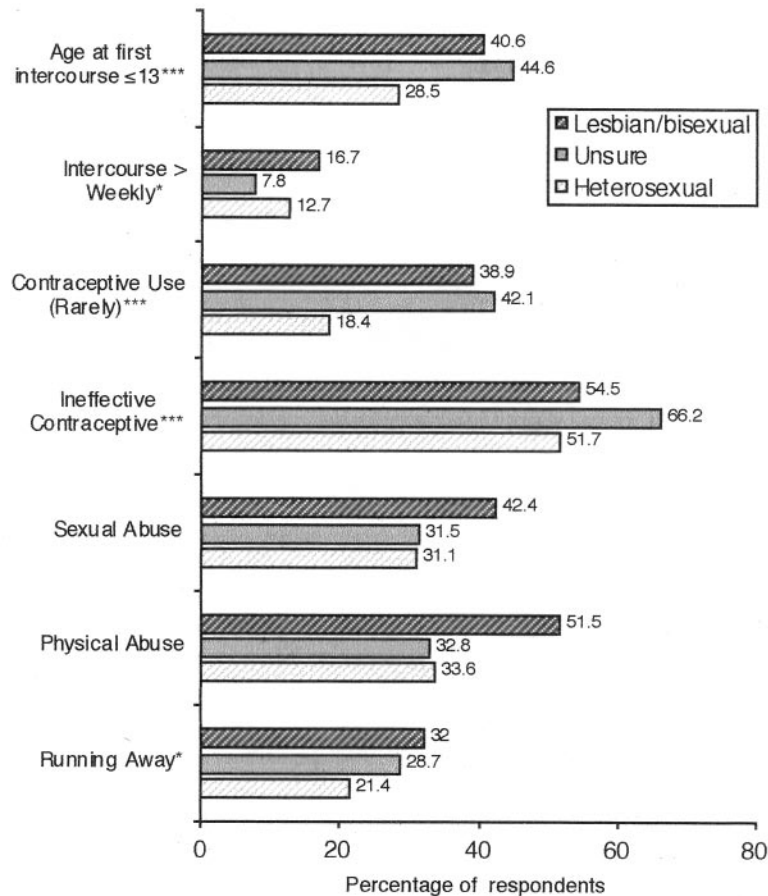
**Prevalence of Pregnancy by Orientation**

Although gay/lesbian/bisexual boys and girls both appeared to report a somewhat higher prevalence of pregnancies than the other groups (Figure 3), the differences were not statistically significant ( $p = 0.47$  for boys;  $p = 0.93$  for girls). Nearly 1 in 5 gay/bisexual males (18.6%) reported they had caused a pregnancy, compared to 11.8% of their heterosexual and 10.4% of their unsure counterparts. Likewise, 1 in 4 lesbian/bisexual girls (25.0%) reported a history of one or more pregnancies, as did 1 in 5 heterosexual (21.9%) and unsure (22.1%) girls.

**Patterns of Risk Factors Associated With Pregnancy, by Orientation**

Given the similar prevalence of pregnancy histories except for the significant intergroup differences in sexual behaviors, risk factors for pregnancy among girls and boys for each of the three categories of orientation were explored. Because age was significantly associated with pregnancy for heterosexual girls and “unsure” and heterosexual boys, analyses within the orientation groups controlled for age as well. Significant patterns are summarized in Table 2.

*Boys.* For gay/bisexual males, frequency of intercourse, ineffective contraception use, and physical abuse were significantly associated with having



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

Figure 2. Sexual behaviors and risk factors, by orientation, for girls.

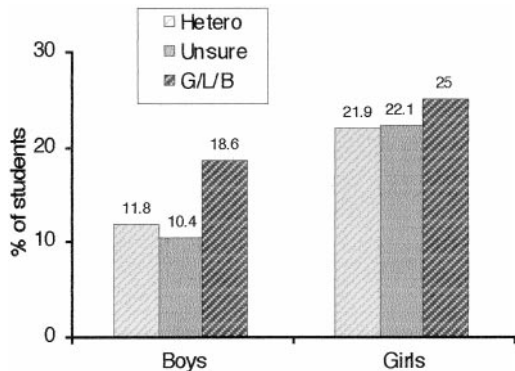


Figure 3. Prevalence of pregnancy history, by orientation. G/L/B = Gay/Lesbian/Bisexual.

caused a pregnancy. None of the boys who reported seldom having had intercourse indicated causing a pregnancy, compared to 1 in 4 boys having intercourse sometimes and 3 in 5 boys reporting intercourse several times a week ( $\chi^2 = 12.41, df = 4, p = 0.01$ ). More than 1 in 3 nonheterosexual boys who used ineffective birth control methods (35.7%) reported having caused a pregnancy, compared to only 4.2% of those who used effective methods ( $\chi^2 = 7.34, df = 2, p < 0.05$ ). Likewise, 1 in 5 nonheterosexual boys who had been physically abused (20.8%) reported having caused a pregnancy, compared to only 6.4% of those who had not been abused ( $\chi^2 = 6.32, df = 2, p < 0.05$ ).

For "unsure" boys, frequency of intercourse, history of running away, history of physical abuse, and history of sexual abuse were all significantly associ-

**Table 2.** Behaviors and Risk Factors Significantly Associated With Pregnancy, by Orientation

Gay/lesbian/bisexual	"Unsure"	Heterosexual
<b>Boys</b>		
Frequency of intercourse**	Frequency of intercourse**	Frequency of intercourse***
Ineffective contraception*	History of running away**	History of running away**
Physical abuse*	Physical abuse**	Frequency of contraception**
	Sexual abuse*	Sexual abuse* (younger)
		Age at first intercourse ≤13*
<b>Girls</b>		
None	Frequency of contraception* (younger girls)	Frequency of intercourse***
	Age at first intercourse ≤13* (older girls)	Age***
		Physical abuse***

\*  $p < 0.05$ .\*\*  $p < 0.01$ .\*\*\*  $p < 0.001$ .

ated with causing a pregnancy. Age at first sexual intercourse appeared significant for the entire group, but when age was controlled, pregnancy was not significantly associated with this variable. Respondents who reported more frequent intercourse had the highest prevalence of pregnancy: 44.4% of those who reported intercourse several times a week compared to 14.7% of those who had intercourse sometimes, and only 8.2% who had intercourse rarely ( $\chi^2 = 16.73$ ,  $df = 4$ ,  $p < 0.01$ ). Boys who reported they had run away once or more in the past year were more than twice as likely to have caused a pregnancy as those who did not run away (17.2% vs. 6.9%;  $\chi^2 = 9.41$ ,  $df = 2$ ,  $p < 0.01$ ). "Unsure" boys who reported they had experienced physical abuse were three times as likely to have caused a pregnancy (24.3% vs. 8.1%;  $\chi^2 = 9.28$ ,  $df = 2$ ,  $p < 0.01$ ). Likewise, "unsure" boys who reported sexual abuse were twice as likely to have caused a pregnancy (18.8% vs. 9.9%;  $\chi^2 = 6.43$ ,  $df = 2$ ,  $p < 0.05$ ).

For heterosexual boys, all items except ineffective contraception and physical abuse were significantly associated with pregnancy history. The presence of risk factors (e.g., onset of heterosexual intercourse at age ≤13 years, more frequent intercourse, less frequent contraception, history of running away, and history of sexual abuse) were associated with a higher prevalence of having caused a pregnancy. However, there were some differences based on age. Among younger heterosexual boys, the association of pregnancy and young age at first intercourse approached significance ( $p = 0.06$ ), primarily owing to the high number of boys whose age at onset of intercourse was ≤13 years who also reported not knowing whether they had caused a pregnancy. Among older boys, 17.7% whose age at onset of

sexual intercourse was ≤13 years had been involved in a pregnancy, compared to 15.0% of those whose age at onset of intercourse was 14–16 years and 9.0% whose age was ≥17 ( $\chi^2 = 12.98$ ,  $df = 4$ ,  $p < 0.05$ ). Among older boys, sexual abuse was not associated with pregnancy involvement ( $p = 0.09$ ), but younger boys who reported a history of sexual abuse were almost three times as likely as their nonabused agemates to have caused a pregnancy (20.7% vs. 7.2%;  $\chi^2 = 6.07$ ,  $df = 2$ ,  $p < 0.05$ ).

*Girls.* Among lesbian/bisexual girls, history of pregnancy was not significantly associated with any of the variables considered in the analysis, possibly owing to small subsample size ( $n = 28$ ).

For "unsure" females, only two variables were significantly associated with pregnancy: one for younger and one for older girls. For younger girls, frequency of contraceptive use was significantly associated with pregnancy; those who reported they used contraceptives sometimes were 10 times more likely to report a pregnancy as those who used contraceptives often to always (60.0% sometimes, 19.0% rarely, 6.7% often/always;  $\chi^2 = 6.80$ ,  $df = 2$ ,  $p < 0.05$ ). For older girls, an earlier age at onset of heterosexual intercourse was significantly associated with pregnancy; half of girls who reported an age at first intercourse of ≤13 years had been pregnant, compared to 21.2% whose first heterosexual intercourse occurred at ages 14–16 years, and 16.7% of those whose first heterosexual intercourse occurred at ≥17 years ( $\chi^2 = 5.93$ ,  $df = 2$ ,  $p = 0.05$ ).

For heterosexual females, age, frequency of intercourse, and physical abuse were significantly associated with pregnancy. Prevalence of pregnancy history increased with age among heterosexual girls,

from 7.1% of 12-year-olds to 39.6% of 18-year-olds ( $\chi^2 = 76.83$ ,  $df = 6$ ,  $p < 0.00001$ ). Among younger girls, 7.1% of those who seldom had intercourse reported a pregnancy; girls who had intercourse sometimes were three times as likely as the former to report a pregnancy (21.3%), and girls who had intercourse several times a week were twice as likely to report a pregnancy (14.8%) ( $\chi^2 = 14.06$ ,  $df = 2$ ,  $p < 0.001$ ). Among older girls, 1 in 5 who seldom had intercourse had been pregnant (19.7%), compared to more than 1 in 4 girls who sometimes had intercourse (27.9%) and half of girls who reported intercourse several times a week (49.5%) ( $\chi^2 = 36.42$ ,  $df = 2$ ,  $p < 0.00001$ ). Both older and younger heterosexual girls with a history of physical abuse were more likely to report pregnancy; 27.6% of girls who had been physically abused reported a pregnancy, compared to 19.7% of girls who had not been abused ( $\chi^2 = 76.83$ ,  $df = 6$ ,  $p < 0.00001$ ). Effectiveness of chosen contraceptive method appeared in aggregate to be significantly associated with pregnancy ( $p < 0.05$ ), but when age was controlled, ineffective contraception was not significant for either younger or older girls ( $p = 0.91$  younger;  $p = 0.13$  older), most likely owing to smaller size of each subsample.

### Discussion

Although the prevalence of pregnancy was similar among the different orientation groups of boys and of girls, behaviors and risk factors were quite different. Among the boys, gay/bisexual boys reported the highest prevalence of many of the risk factors that have been associated in other studies with adolescent pregnancy, yet the proportion of gay/bisexual boys who had caused a pregnancy did not vary significantly from heterosexual and unsure peers. Likewise, of the factors that were significantly associated with pregnancy in this study for gay/lesbian/bisexual youth (i.e., frequency of intercourse, effectiveness of contraceptive method, and history of physical abuse), only physical abuse was reported more often among gay/bisexual boys than among the other two groups. "Unsure" boys more closely resembled their gay/bisexual peers than they did their heterosexual peers in patterns of sexual behaviors and risk factors; however, the factors associated with pregnancy for unsure boys also included running away and sexual abuse in addition to frequency of intercourse, contraceptive effectiveness, and physical abuse. These other risk factors, except for contraceptive effectiveness, were also signifi-

cantly associated with pregnancy for heterosexual boys.

A possible explanation for this alternating similarity may reside in developmental considerations. Self-identification of sexual orientation is a developmental task that may take longer for gay/lesbian/bisexual youth to resolve because of societal stigma (1,2). Given that the "unsure" respondents were younger on average than either the heterosexual or gay/lesbian/bisexual youth, it is probable that some will eventually self-identify as gay, lesbian, or bisexual. Thus, to an extent, they appear to occupy a middle ground between the other two identities, both behaviorally and in outcomes.

For girls, there were fewer differences among orientation groups in behaviors and risk factors than there were for boys. As with boys, however, unsure girls were more similar to lesbian/bisexual than to heterosexual girls in several ways, including age at onset of heterosexual intercourse, contraceptive use and effectiveness, and running away, while they were unlike lesbian/bisexual girls only in reported frequency of intercourse. Sexual and physical abuse occurred with similar prevalence among all three groups, underscoring problems that appear to be more gender-linked than orientation-specific.

Despite the similarities of behaviors and risk factors, the three groups of girls were quite different in the factors significantly associated with a history of pregnancy. For lesbian/bisexual girls, none of the factors were significantly associated with pregnancy, although 1 in 4 lesbian or bisexual girls reported having been pregnant at least once. While it is possible that significant interactions among the variables exist but were not explored in this study (e.g., the combination of contraception and frequency of intercourse), the findings may also indicate that lesbian/bisexual girls have other unidentified factors associated with pregnancy during adolescence. "Unsure" girls again occupied a middle ground, with only one significant association among younger "unsure" girls (frequency of contraception) and one among older "unsure" girls (early age of onset of heterosexual intercourse). As compared to the other girls, heterosexual girls had the greatest number of risk factors significantly associated with pregnancy, but there were only three: age, frequency of intercourse, and history of physical abuse.

Although much higher than national averages, the finding of a similar prevalence of pregnancy across all the orientation groups indicates that for American Indian teens within this sample at least, a nonheterosexual identity is not associated with a higher likeli-



hood of adolescent pregnancy. Thus, none of our original hypotheses were supported.

In an anonymous self-report questionnaire such as this, the validity of self-report about highly sensitive issues such as orientation is always open to question. However, it should be noted that the items in this survey were used successfully in a previous large-scale survey of youth (16). In addition, these items were pilot-tested with over 1000 American Indian youth prior to full-scale implementation. In another article, we reported that the correspondence of same sex activity, intentions, and identification are more consistently interrelated for American Indian adolescents than in a multiethnic but predominantly Euro-American population previously studied (18).

Because the gay/lesbian/bisexual and unsure students who participated were drawn from the general population rather than from convenience samples in clinical settings or from among overtly "out" gay, lesbian, and bisexual youth, the study may better represent American Indian adolescents at various developmental stages of orientation acquisition. However, the lack of fit within this population for many of the risk factors that the literature has identified as associated with pregnancy could well indicate the existence of completely different cultural perspectives and motivations for behavior and outcomes among Native American adolescents. In summary, these findings underscore the current paucity of available knowledge about the meanings of sexual orientation, sexual behaviors, and pregnancy among American Indian youth on reservations.

Furthermore, it should be noted that the sample included only American Indian adolescents in reservation-based schools; while frequent travel between urban center and reservation has been documented as a norm for many American Indian tribal groups (22), the findings should not be regarded as generalizable to the population of American Indian adolescents living in urban communities.

### Conclusions

Although sexual behavior and risk factors appear to differ significantly among heterosexual, "unsure", and gay/lesbian/bisexual American Indian boys and girls, the risk for pregnancy appears to be equally high. Clinicians must not assume an absence of heterosexual activity among gay/lesbian/bisexual young people or a reduction in risk for pregnancy.

Among the different sexual orientation groups in this study, pregnancy history was inconsistently associated with variables described as risk factors in

the literature. Given this lack of consistent association, further research is needed. A wide array of qualitative and quantitative methods should be used to explore patterns of sexual behaviors, risk factors, and the meanings attributed to these factors and pregnancy among different tribal groups of American Indian adolescents. Additional research into culturally competent interventions is imperative to improve health outcomes for this population.

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