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HIV/AIDS Protective Factors among Urban American Indian Youths

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Abstract

This research examined how family and individual factors influence three HIV/AIDS risk behaviors: having more than one sexual partner in the last three months, substance use at last sexual intercourse, and condom non-use at last sexual intercourse. The sample includes 89 sexually active American Indian adolescents living in a large Southwestern city. Logistic regression results revealed that family communication acts as a protective factor against HIV risk through a lower reported substance use during last sexual intercourse, but it did not appear to affect the number of multiple recent sex partners. Family and personal involvement in American Indian cultural activities, both low on average, had no effect on the outcomes. This study helps to fill the gap in knowledge on sexual health risk and protective factors among American Indian adolescents, an understudied group, and provides implications for intervention with American Indian youths and their families.

Keywords

HIV/AIDS; family context; protective factors; American Indian youth

While there is a growing body of research on HIV/AIDS in the general population, less is known about the protective and risk factors associated with HIV/AIDS infection among youth in general¹ and American Indian youth in particular. Relative to other ethnic groups, American Indians have received minimal attention because they have had low rates of infection since the early days of the epidemic.^{2–4} Yet, recently, rates of infection among American Indians have begun to increase, especially among youth, who make up a large portion of the American Indian population.^{2,3} The change in rates raises questions about this group's vulnerability to HIV/AIDS and marks a need to better understand the factors that may lead to or prevent behaviors associated with disease contraction in this group. Toward that end, this study uses a sample of sexually active, urban American Indian youth and explores the influence of family and individual factors on behaviors associated with HIV/AIDS risk: having multiple recent sexual partners, substance use during sex, and unprotected sex.

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American Indian Youth and HIV/AIDS

According to surveillance data from the Centers for Disease Control⁵, there were 2,875 AIDS cases among American Indians as of December 2002, less than 1 percent of the total AIDS cases, representing a 3 percent AIDS rate among American Indians. The validity of these official rates of infection has been questioned, and claims have been made that actual rates may be higher. Poor record keeping by the Indian Health Service (IHS), poor and under-reporting of disease, ethnic misclassification of American Indians, and low levels of HIV testing among American Indians may explain the alluded underestimates.^{3,6}

Some researchers have described HIV as the new smallpox, an epidemic which could wipe out entire American Indian communities in a way reminiscent of the epidemics caused by early European colonization.^{2,3} The fact that many American Indian communities present risk factors commonly associated with HIV infection contributes to the level of concern. For example, American Indians report high rates of substance use, especially alcohol use,^{2,4,7,8} and high rates of sexually transmitted diseases.^{4,7} Furthermore, American Indians face high rates of poverty and low rates of educational achievement which may constitute barriers to prevention and access to health services.^{3,6,7} On the other hand, the community's past low levels of infection necessitate further research to identify possible protective factors. Once these protective factors are identified and better understood, they can be integrated into effective and culturally grounded prevention programs. This article aims to advance the existing knowledge in this area by examining the unique characteristics of the Native American youth residing in urban areas.

The Urban Context

Despite their identified high HIV-risk behaviors, American Indians are sometimes thought to be relatively protected from HIV/AIDS because many live on tribal lands in rural, isolated areas. Residence on tribal lands may provide risk-reducing social support and cultural connectedness due to proximity to family and other tribe members and traditional events.⁸ Urban areas, in contrast, have been associated with greater HIV/AIDS risk because residents are exposed to more infected people, behavior norms associated with greater HIV/AIDS risk, and other problems, such as homelessness, which may ultimately increase the risk of infection.^{8,17,26} Yet, urban areas may be protective in some respects. American Indians residing in urban areas may benefit from greater access to HIV/AIDS knowledge and education.²

For American Indian youth, living in an urban area involves navigating through two worlds and a mix of risk and protective factors. As adolescents, they are already experiencing multi-faceted changes in their lives.⁴⁶ Their daily bicultural experience of home and community may produce cultural conflicts and raise questions about identity and sense of belonging.⁴⁷ For example, American Indian identity may take on greater salience as the youths interact with students and teachers of other ethnic backgrounds. They may come to be viewed narrowly as "Indian," and negative interactions may lead to poorer self-appraisal.⁴⁸ The urban context, thus, is the backdrop for the behavioral choices urban American Indian youth make about sexual behavior and HIV/AIDS risk.

Sexual Behavior and HIV/AIDS

Sexual activity continues to be the main mode of HIV transmission for adolescents in general.⁹⁻¹¹ American Indian youth are no exception.³ Among sexually active youth the number of sexual partners, substance use during sex, and not using condoms have been associated with HIV/AIDS infection. Although national data on sexually active youths' number of recent sexual partners are not available, evidence suggests that the number of partners may increase HIV risk when no protective measures are taken.⁹ Unfortunately,

American Indian youth, as youth from other ethnic backgrounds, are inconsistent and infrequent users of protection.^{12,13} Nationally, 42% of youth of all ethnic backgrounds report no condom use during the last sexual intercourse.¹⁴ Relative to their non-Native peers; American Indian youth are about half as likely to use contraceptives.¹⁵

Studies in the general adolescent population show that condom use is less likely when youth are under the influence of substances.⁹ According to a national survey of adolescents aged 15 to 24, 11% report having used alcohol or drugs during the most recent sexual intercourse.¹⁴ Studies among American Indian adults have linked substance use to less condom use, especially by females.^{8,16–18} Few studies have explored this link among youth.

Some research has explored the family's role in encouraging healthy sexual behavior, although few studies have thus far explored this association among American Indian youth. Existing research suggests that parental monitoring, positive family relations, and parent-child discussions about sex can protect against risky sexual behavior among American Indian youth.^{7,19} Other research has documented the relationship between family relations and substance use.^{20–22}

Cultural factors also are considered to be key variables in prevention for American Indians.³ The belief is that developing cultural pride will strengthened youth's perceptions of their own value, thereby motivating them to engage in healthy behaviors.³ Yet, little research on American Indian youth has tested this association in relation to HIV/AIDS risk. One study found that American Indian adolescents' cultural connectedness and Native religious involvement had no effect on sexual behaviors.¹⁹ In contrast, another study found that youth in more culturally traditional families became sexual active at a later age and had higher rates of condom use,² suggesting an important prevention role for the family's cultural context.

A Contextual Approach to American Indian Youth Sexual Behavior

The standard knowledge-attitudes-behavior (KAB) approaches to explaining risky sexual behavior (e.g., the theory of reasoned action,²³ the theory of self efficacy,²⁴ and the health belief model²⁵) focus heavily on the individual. The models generally posit that people with greater knowledge about HIV transmission and modes of prevention and greater self efficacy will be less likely to engage in risky sexual behavior and more likely to engage in risk reduction behavior. Although this approach has helped to generate needed information on existing HIV knowledge and attitudes, it has been less effective in explaining adolescents' actual sexual behavior. Knowledge and attitudes do not consistently predict behavior.^{2,10,26–31}

The inconsistent findings have been explained, in part, in terms of a failure to account for context. A person's ability to translate knowledge and norms into healthy behavior may be encouraged or constrained by contextual factors.^{28,32–34} This limitation of the KAB approach, among others, has prompted some researchers to call for less individual, more contextual approaches and more strengths-based rather than risk-based approaches to understanding and preventing HIV/AIDS among youth.^{35–37} In addition, some researchers have stressed the importance of taking into account community-level experiences, such as communities' historical oppression as a group,³⁸ and cultural contexts³⁷ when examining American Indians' health behaviors.

Given the limitations of standard approaches and the importance of context for American Indians, we advance a contextual model for examining the relationship between American Indian youth and HIV/AIDS protective and risk behaviors. Calling upon Bogenschneider's³⁹ Ecological Risk/Protective Theory, we explore family factors that form part of the social

context that may influence sexual behavior. Bogenschneider's theory explains youth outcomes in terms of adolescents' personal attributes and the dynamic environments in which youth live. It accounts for protective factors that may offset risks in adolescents' lives. From this perspective, we hypothesize that urban American Indian adolescents' family context may include supports and stressors that influence their sexual behavior and consequently, their exposure to HIV/AIDS.

We propose to advance the existing knowledge on protective and risk factors influencing the sexual behavior of urban American Indian youth by examining individual factors and contextual family factors, specifically family relations, family communication about HIV/AIDS, and family cultural involvement. The current study will research the possible impact of these factors on sexually active, urban American Indian youth.

Methods

This article reports the findings of a secondary data analysis using data from the first wave of the American Indian Multisector Help Inquiry (AIM-HI). AIM-HI examined service use and drug use in 2 American Indian populations, 1 living on tribal lands (reservations) and 1 living in a large metropolitan urban area, from a single Southwestern state. The AIM-HI sample is representative of American Indian youth in both areas and consists of 401 youth, approximately 200 from each population, who were interviewed in 2001. Youth aged 12 to 19 years were randomly selected from complete tribal enrollment and school district records. One child per household was enrolled. Internal review boards at Washington University in St. Louis, the tribal council, and the urban school district approved the study's procedures. Local American Indian educational and health services staff initially notified families of the study and encouraged their participation. Families returned a pre-stamped postcard indicating their consent to or refusal of the research. Only 6 families or youth refused in each area.

Interviewers administered a brief interview tapping behavior and functioning: the Youth Self Report,⁴⁰ the child version of the Columbia Impairment Scale,⁴¹ and substance use questions from the Youth Risk Behavior survey.⁴² Of the 300 youth in each area who completed the brief interview, 150 were randomly sampled to complete a long interview. An additional 50 youth, who were not randomly selected but were identified as in high need of services, based on the brief interview, were added to the sample. Of the youth selected for the long interview, fewer than 3 percent refused or had a parent withdraw consent. Those who participated were paid \$25. The field supervisors and interviewers, most of whom were American Indian, were trained by the AIM-HI research team. Additional details on the study are summarized by Stiffman, Striley, Brown, Limb, and Ostmann.⁴³

Sample

The present analyses were conducted using a sub sample from the aforementioned study. The sub sample consisted of 89 youth who lived in a large metropolitan urban area and reported that they had ever had sex and were not married. A comparison of the sub sample to the rest of the original sample revealed that the sub sample was older with a mean age of 16.2 years, whereas unselected youth from the original sample had a mean age of 15.3 years. The sub sample reported greater family and personal involvement in American Indian cultural activities, but the size of the difference was marginal and not practically meaningful. Both groups reported relatively low involvement.

Demographics

The sample of 89 youth was 51% female. According to respondents' reports of their tribal membership, 35% of the sample was Navajo only, 12% Hopi only, 6% Pima only, 3% Apache only, 1% Maricopa only, and 21% some other tribe only. The remaining 22% of the sample affiliated with more than one tribe. Respondents' ages ranged from 14 to 20 years with an average of 16.5 years. A majority of respondents (66%) indicated that their families received some form of tribal or other governmental financial assistance, indicating lower socioeconomic status. Almost the entire sample (87%) reported that they had ever been taught in school about AIDS/HIV infection.

Measures

We analyzed three outcomes: having more than one sexual partner in the last three months, alcohol or drug use during last sexual intercourse (1=Yes, 0=No), and sexual intercourse without a condom during last encounter (1=Yes, 0=No).

Family relations were measured by an index with five items.⁴⁴ The respondent indicated the frequency, ranging from rarely (1) to all or most of the time (5), with which: the family gets on their nerves, they really enjoy their family, they can really depend on their family, their family argues too much, and they feel like a stranger in their family. Negatively worded items were reverse coded so that higher values indicated more positive family relations. The standardized Cronbach's Coefficient Alpha for the measure was 0.70.

Family communication about HIV/AIDS was measured by a single item indicating whether the youth ever talked about HIV/AIDS infection with their parents or other adults in his/her family (1=Yes, 0=No).

Individual and family involvement in American Indian culture was measured using questions from Oetting and Beauvais' Orthogonal Cultural Identity Scale.⁴⁵ Family cultural involvement was measured by a single item assessing the degree of family involvement in American Indian traditions. Individual cultural involvement was measured by a set of items assessing the respondent's involvement in American Indian traditions (including memorials/feasts, powwows/dances, giveaways, healing ceremonies, sweats, religious events, naming ceremonies, talking circles, spiritual running, and other traditional activities) and private American Indian spiritual activities (including using sweet grass, juniper, sage, or corn pollen, or praying in the home). Responses to the items were averaged. The standardized Cronbach's Coefficient Alpha for the measure was 0.87. The responses to all individual and family involvement items ranged from "a lot" (3) to "not at all" (0), with higher values indicating greater cultural involvement.

Substance use was captured by a dichotomous variable distinguishing users from non users. It was a composite of several measures capturing lifetime experience with alcohol, tobacco, and other drugs. Alcohol use was measured by a single variable indicating whether the person had had at least six drinks in his or her lifetime (1=yes, 0=no). Tobacco use was measured by several variables that captured whether the person had ever used cigarettes, cigars, a pipe, snuff, or chewing tobacco for recreational purposes (1=yes, 0=no). Other drug use was measured by a series of 46 substance-specific variables capturing whether the person had ever used the substances (1=yes, 0=no). A value of "1" on the alcohol, tobacco, or other drug measure qualified the adolescent as a substance user.

Demographic variables included gender (1=Female, 0=Male), age, tribal affiliation, and socioeconomic status. Age categories ranged from 14 years or younger to 18 years or older, with single years in between. Socioeconomic status was measured by the family's receipt of financial assistance, such as Tribal Assistance, Medicaid, TANF, food stamps, WIC,

Housing assistance, Social Security, and subsidized day care (1=Receipt of any assistance, 0=No assistance).

Analysis Strategy

Descriptive statistics were produced and bivariate analyses conducted to assess relationships between each of the predictor variables and the three outcomes. Then, multivariate logistic regression was conducted. Demographic predictors and individual factors were entered first. Each family measure was then entered individually, along with controls. Finally, a full model with all predictors and controls was produced for each of the three outcomes: having more than one sex partner in the last three months, using substances during last sexual intercourse and sex without a condom during last sexual intercourse. Analyses were weighted to account for the sampling methodology.

Results

Univariate analyses of the outcome variables revealed that 11% of the youth reported having more than one sex partner in the last three months. Sixteen percent reported using alcohol or drugs during last sexual intercourse – five percentage points higher than national figures. Finally, 32% reported *not* using a condom during last sexual intercourse, 10 percentage points lower than national figures. Table 1 contains these proportions as well as differences by gender. Although the pattern suggests that boys were more likely to have more recent sex partners and use substances at last intercourse and girls were more likely to have sex without a condom, these differences were not statistically significant.

Additional analyses revealed high levels of family support in the sample, with youth on average reporting positive family relations “a good part” of the time in the last six months ($M=4.06$). Sixty percent of the sample reported that they had ever talked about HIV/AIDS with parents or other adults in their family. On average, the youth reported that their families had “some” involvement ($M=1.97$) in American Indian traditions. Personal involvement was somewhat lower. On average, the adolescents reported only “a little” personal involvement ($M=0.98$) in American Indian cultural traditions. The vast majority of adolescents (83%) reported recreational substance use experience.

Table 2 shows the proportions of youth engaging in HIV/AIDS risk behaviors based on whether they engage in family communication about HIV/AIDS. A pattern of protection appeared for two of the three outcomes. Fewer youth in families that talk about HIV/AIDS reported substance use or no condom use at last intercourse, relative to youth in families that do not discuss HIV/AIDS. However, more youth in these same families reported sex with multiple recent partners.

Table 3 reports the logistic regression estimates from the final multivariate models predicting the likelihood of having more than one sex partner in the last three months, substance use at last intercourse, and condom non-use at last intercourse and including all controls. These results indicated that family HIV/AIDS communication, but not positive family relations or family involvement in American Indian cultural traditions, were related to HIV/AIDS risk behavior. In particular, family communication about HIV/AIDS had a positive effect on the likelihood of having more than 1 sex partner in the last three months and a negative effect on the likelihood of using substance at last intercourse. Relative to youth without family communication about HIV/AIDS, youth who discuss HIV/AIDS with their parents or other adult family members had nine ($=e^{2.22}$) times greater odds of having multiple recent sex partners and 0.24 ($=e^{-1.44}$) times lower odds of using substances at last intercourse. Family HIV/AIDS communication was not related to the likelihood of having unprotected sex.

At the individual level, only substance use was significant. A powerful predictor, it was associated with a much greater likelihood of having multiple recent sex partners and using substances at last intercourse. However, it was not associated with condom non-use. Individual American Indian cultural involvement, age, gender, and socioeconomic status, measured by financial assistance, had no effect the three outcomes. According to the log likelihood ratio tests, the models predicting multiple recent sex partners and substance use during sex had good fit, but the model predicting condom non-use only marginally improved on the intercept-only model.

Discussion

This study examined the prevalence of three sexual risk behaviors among sexually active American Indian youth, providing needed information on an understudied group. It explored their relationship between individual and contextual family factors and HIV/AIDS risk. The findings provide a snapshot of the risk status of a selected group of sexually active American Indian youth residing in a large metropolitan area of the Southwest U.S. The finding of lower than national average rates of unprotected sex is reassuring, but it runs counter to previous research¹⁵ and warrants further investigation. It may reflect an existence of resources and supports unique to these urban American Indian youth. In particular, it may reflect greater access to condoms and HIV/AIDS information due to urban residence or some other factor. The vast majority of the sample (98%) reported receiving HIV education in school. This programming may be accompanied by a condom distribution plan, thereby facilitating condom use in this particular sample. If so, this finding would suggest that greater access to HIV/AIDS prevention resources fosters lower risk among American Indian youth, though further study is required to confirm this possibility.

The finding of higher than national rates of substance use during sex lends credence to some concerns voiced by researchers about the under-reported risk for HIV/AIDS experienced by this population.^{3,4} The high rates of substance use in this sample and among American Indian youth in general contribute to the salience of this risk behavior in this population. Prevention efforts in this population should emphasize this risk behavior as an avenue of disease transmission.

Of the family factors assessed here, only family communication about HIV/AIDS was a significant factor. Positive family relations had no effect. The measure may be too general to explain a youth's sexual risk behavior. It may be that sex-specific family attitudes and norms, such as those reflected in conversations about sex or HIV/AIDS, are more salient predictors in this group of already sexually active youth. Furthermore, the finding of no effect does not necessarily mean that families are not protective or have no influence on American Indian youth's sexual behaviors. It may mean that good relations alone will not foster healthy sexual activity. Targeted family intervention, such as family communication about HIV/AIDS, may be required to have an impact on HIV/AIDS risk. It appears that family communication has an impact, but that impact can be positive or negative and is perhaps dependent on the content of the conversations. The finding of their impact, coupled with the finding of generally positive family relations in the sample, suggests that the family may be a resource to be tapped for prevention. The seriousness of HIV/AIDS as a topic of conversation may make family HIV/AIDS communication a more salient factor than general family relations. Some families make speak only rarely about sexuality such that when they do, the experience resonates sharply for the youth, influencing their subsequent behavior.

We must be cautious in our interpretation of findings, however. Here, causal ordering is unclear and detailed information about the content and tone of the family HIV /AIDS conversations is unknown. It may be that these conversations portray sex as a normal,

healthy human activity, thus fostering sexual activity and reducing the need to rely on substance use to get through the experience. Yet, they may, at the same time, fail to distinguish the circumstances under which sexual activity can threaten health, such as unprotected sex with multiple partners. Further exploration of family exchanges about HIV/AIDS may yield important information about possible prevention interventions. Mixed methods or ethnographic research could be useful venues to better understand the nature and meaning of those conversations.

Family involvement in American Indian culture had neither a protective nor a risk effect on the outcomes. Individual involvement also had no effect. There were low levels of both types of involvement in the sample as a whole, perhaps due to its proximity to a large urban area and a consequent bicultural perspective. In addition, because the cultural involvement variable assessed only American Indian culture, it may have failed to distinguish between youth with high and low involvement in mainstream culture, thus suppressing a possible protective effect of Native orientation as well as a risk effect of mainstream orientation. Future studies could explore the effects of mainstream cultural involvement and enculturation stress at the family and individual levels. Biculturalism and enculturation need to be explored. It is worth noting, however, that the one other study of American Indian youth sexual practices that was identified also found no relationship between cultural involvement and safer sexual practices.¹⁹

Youth with substance use experience were more likely to report having multiple sex partners and using substances at last intercourse, and the effects were very strong. Consistent with prior research, this finding suggests that substance abuse is an important predictor of sexual risk behavior and that HIV/AIDS prevention programs must address substance use as a separate but related problem.

No family or individual variable predicted condom non-use. Prior research has found substance use to be a consistent predictor of condom non-use.⁹ The perplexing absence of an effect here may be due to the failure to include more proximal variables, such as partner or sexual encounter characteristics, which have been found to be related to condom use.^{28,32–34}

Conclusion

This study provided important descriptive information on the HIV/AIDS risk of sexually active American Indian youth, an understudied group. It also identified important contextual family factors that are related to HIV/AIDS risk and protection. Service providers working with American Indian families should implement and evaluate interventions that capitalize on the protective effects of family. Efforts should foster these strengths to promote healthy sexual behavior. For example, interventions might enhance family relations and communication by promoting communication skills and the creation of safe environments for discussing sexual topics with youths. In the meantime, researchers should continue to examine contextual factors to develop greater understanding of the factors influencing American Indian adolescents' sexual behaviors and the need for comprehensive prevention interventions. In particular, they should explore the conditions under which family HIV/AIDS communication is associated with risk and protection.

A key finding of this study is the reported high incidence of substance use during sexual intercourse. More coordination seems to be needed between existing discrete prevention programs targeting substance abuse and HIV/AIDS. Substance abuse and HIV/AIDS prevention can no longer be treated separately. In addition, individualistic approaches to prevention may be overlooking American Indian families as key resources in keeping their children healthy. Family-focused prevention approaches that include training and support for

parents may better serve American Indian youth. Future research could explore this possibility. It could also explore whether topic-specific family communication can be employed to protect against other outcomes. It is possible that family discussion about substance use may be protective against substance use during sex in the way that HIV/AIDS family communication was protective against it. If so, families may need support from service providers on how to engage in conversations with their children about substance use and safer sex.

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Table 1

PROPORTIONS OF YOUTH ENGAGING IN HIV/AIDS RISK BEHAVIORS BY GENDER

	Boys N=44	Girls N=45	All N=89
More than 1 sex partner in last 3 months	15%	8%	11%
Substance use during intercourse	17%	15%	16%
No condom use during intercourse	26%	39%	32%

Table 2

PROPORTIONS OF YOUTH ENGAGING IN HIV/AIDS RISK BEHAVIORS BY FAMILY HIV/AIDS COMMUNICATION (No communication/Communication)

	No HIV/AIDS Communication N=35	HIV/AIDS Communication N=54
1+ sex partner in last 3 months	2%	18%
Substance use during last intercourse	23%	11%
No condom use during last intercourse	42%	26%

Table 3

LOGISTIC REGRESSION ESTIMATES (STANDARD ERRORS): PREDICTING THE LIKELIHOOD OF HIV/RISK BEHAVIORS

	More than 1 Sexual Partner in Last 3 Months	Substance Use at Last Sexual Intercourse	Condom non-Use at Last Intercourse
Family Communication about HIV/AIDS	2.22 (1.00)*	-1.44 (0.64)*	-0.68 (0.56)
Positive Family Relations	-0.29 (0.62)	-0.39 (0.48)	-0.11 (0.38)
Family American Indian Cultural Involvement	0.16 (0.60)	0.99 (0.69)	-0.23 (0.49)
Individual American Indian Cultural Involvement	-0.24 (0.38)	-0.06 (0.51)	0.21 (0.33)
Substance Use	17.23 (0.49)***	17.18 (1.01)***	-1.22 (0.76)
Female	-0.66 (0.89)	-0.26 (0.71)	0.66 (0.54)
Financial Assistance	1.11 (0.88)	0.31 (0.70)	0.83 (0.61)
Age	0.38 (0.43)	0.58 (0.28)*	0.11 (0.22)
Intercept	-26.20 (7.53)***	-27.00 (4.95)***	-1.88 (3.88)
Likelihood Ratio Chi-Square (df)	20.59 (8)**	22.71 (8)**	14.96 (8) [†]
Weighted N	127	127	124

[†] p<0.10

* p<0.05

** p<0.01

*** p<0.001