

Spirituality and Religion: Intertwined Protective Factors for Substance Use among Urban American Indian Youth

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Background and objective: This article explores the aspects of spirituality and religious involvement that may be the protective factors against substance use among urban American Indian (AI) youth. **Methods:** Data come from AI youth ($N = 123$) in five urban middle schools in a southwestern metropolis. **Results:** Ordinary least squares regression analyses indicated that following Christian beliefs and belonging to the Native American Church were associated with lower levels of substance use. **Conclusions and Scientific Significance:** Following AI traditional spiritual beliefs was associated with antidrug attitudes, norms, and expectancies. Having a sense of belonging to traditions from both AI cultures and Christianity may foster integration of the two worlds in which urban AI youth live.

Keywords: urban American Indian, substance use, youth, spirituality, religion, Native American

INTRODUCTION

Compared with their nonnative counterparts, American Indian (AI) youth report higher rates, heavier amounts, earlier onset, more severe consequences, and less perceived harmfulness of substance abuse (1–3). Nearly one third of AIs have tried alcohol by age 11 (4) and half report use of illicit drugs by age 17 (5) – rates that are higher than for other racial/ethnic groups (6). Despite these elevated risks for substance use, AI youth are not without protective factors that promote well-being and buffer them from the risk processes (7). Alcohol abstinence rates are higher for AIs than other ethnic/racial groups (8), pointing to important sources of resilience. Protective factors that may help mitigate substance use among AI youth include spirituality and religious involvement (9).

There is a unique AI cosmology which does not separate spirituality from other aspects of life, making

spirituality for AIs a profoundly complex, deeply cultural, and holistically intertwined topic (10). Spirituality in this broader sense may not match Western conceptions that are tied to particular religious beliefs or institutions. Because urban AIs have a unique set of sociohistorical experiences and cultural challenges, the extent to which spirituality, religion, and culture act as a protective factor for substance use among urban AI youth has not yet been fully elucidated. Accordingly, this study examines whether and how substance use among urban AI middle-school students is associated with spirituality and religious involvement. Understanding the protective processes connected with spirituality and religion can be useful in designing efficacious prevention and treatment interventions for youth in partnership with urban AI communities.

SPIRITUALITY, RELIGION, AND CULTURE

Understanding and assessing the role of spirituality and religion in AI communities is an especially complex undertaking (11). Christianity has permeated many aspects of AI culture through the legacy of colonialism (9), making it nearly impossible to separate pre-conquest spirituality from the subsequent amalgamation of traditional spirituality and Christianity. While spirituality is an essential component of AI cultures (12), nurtured by enduring narrative traditions, it is also dynamic and ever changing (13). Rituals and ceremonies have helped AI communities adapt to change, integrate elements of different tribes, infuse aspects of Western organized religions, and make them their own (14). Urban AIs can adhere to tribal spiritual beliefs and practices that incorporate Western traditions, such as Catholicism. They might participate in AI cultural practices, affirm the importance of AI beliefs, yet be affiliated with Christian churches and attend religious services regularly (14).

Studies of AI youth substance use and spirituality/religious involvement have frequently, although not universally, found an inverse relationship. For instance,

enculturation (i.e., spiritual involvement, identification with AI cultures, and participation in AI activities) has been linked to greater resilience among AI youth from three Midwestern reservations (15). Religious participation was positively associated with abstinence from alcohol and other drugs among urban inner city AI youth in Oklahoma (16). Affirmation of spirituality/AI ancestry and religious affiliation was inversely associated with alcohol symptoms among AI youth from southwestern reservation and urban environments, while participation in generic cultural activities was positively associated with alcohol symptoms (17).

More research is needed to clarify how closely intertwined elements of spirituality and religion may constitute protective factors against substance use among urban AI youth (18). This article examined the hypothesis that various aspects of spirituality and religious involvement would be associated with stronger antidrug attitudes, norms, and expectancies and lower levels of substance use among urban AI middle-school students.

METHODS

The data for this study came from a randomized controlled trial to test the efficacy of a culturally grounded substance use prevention program oriented specifically to urban AI seventh and eighth grade students. The current analysis is based on self-administered pretest questionnaires in fall 2009 before the prevention curriculum was delivered. The respondents were self-identified AI students enrolled in five urban middle schools of a large southwestern city – 94% in seventh or eighth grade. All respondents participated voluntarily in their schools' educational and cultural enrichment programs for native students, an elective class led by a native instructor during regular school hours. The study followed policies for protecting human subjects. Every self-identified AI student in the targeted elective classes was invited to participate. Active parental consents and student assents were obtained in a noncoercive manner. University-trained survey proctors administered a written questionnaire in the classrooms. Students were informed that the survey was part of a university research project, participation was voluntary, and answers were confidential. A total of 123 students completed the questionnaire.

Measures

Substance Use Outcomes

Substance use was measured by combining indicators of the frequency of lifetime use, frequency of last 30 day use, and amount of last 30 day use. The items for each specific substance were standardized and combined into mean scales, producing highly reliable measures of alcohol ($\alpha = .91$), cigarette ($\alpha = .91$), and marijuana ($\alpha = .94$) use. An additional measure of polydrug use was calculated by counting the number of different substances that the student had ever used: alcohol, cigarettes or tobacco (non-ceremonial use), marijuana, inhalants, nonmedical prescription drugs, crystal meth, and any other illicit drug (such as cocaine, heroin, and ecstasy).

Pro-drug Attitudes

A composite measure of pro-drug orientations was created from seven scales that assessed attitudes, norms, and expectancies regarding substance use. Each of the original seven scales (19–21) loaded onto a single factor with good reliability ($\alpha = .77$): (1) intentions to use substances; (2) personal antidrug substance use norms; (3) parents' injunctive norms (expected disapproval of the student's use of substances); (4) grandparents' injunctive norms; (5) friends' injunctive norms; (6) positive expectancies about drug use; and (7) drug offer refusal efficacy.

Substance Use Exposure and Resistance

The last set of outcomes assessed (1) number of substance offers received in the last 30 days; (2) positive decision-making (22); and (3) use of four effective drug resistance strategies (Refuse, Explain, Avoid, Leave; hereafter REAL) (19).

Spirituality

A mean scale ($\alpha = .79$) was calculated from two items assessing the respondent's overall level of spirituality: "How important is being spiritual to you?" "Are spiritual values a part of your life?"

Involvement in Spiritual Practices

A more behavioral measure of spirituality was created by calculating a mean scale ($\alpha = .89$) from 11 items gauging level of involvement in AI spiritual practices (memorials/feasts, powwows/dances, giveaways, healing ceremonies, sweats, religious events, naming ceremonies, talking circles, spiritual running, drumming groups, and putting out tobacco).

Spiritual and Religions Beliefs

Two parallel questions assessed adherence to AI and Christian belief systems: "How important is it for you to follow traditional Indian beliefs?" "How important is it for you to follow Christian beliefs?"

Religious Affiliation

Religious affiliation was measured as dummy variables: Native American church (NAC), Christian church, and no church affiliation, the reference group.

Religious Services

Two separate items assessed involvement in religious services: (1) frequency of attendance and (2) the main reason for attending services, coded as dummy variables: religious reasons (e.g., to be closer to God), nonreligious reasons (e.g., parents require it), or nonattendance, the reference group.

Demographic Characteristics

The respondent's age and gender were included in analyses as control variables.

Analysis Strategy

Ordinary least squares (OLS) regression analyses predicted the outcomes with several groups of measures of spirituality and religious involvement. While multiple models were tested including hierarchical block models, only the final models are presented because there was no evidence of multi-collinearity among the predictors (all variance inflation factors (VIFs) < 1.9) and few changes in the size of the effects as different blocks were entered. The final OLS regression results were confirmed with mixed models that adjusted for clustering of individual respondents within school sites; random effects were of trivial size (< 1.01) and main effects were similar in direction, size, and statistical significance to those of the OLS regressions.

RESULTS

Descriptive statistics for the study outcomes and predictors are presented in Table 1. The sample was nearly gender balanced (47% male, 53% female), and the average age was 12.6 years. The first three outcomes are the standardized composite measures of alcohol, cigarette, and marijuana use that are not substantively interpretable. Separate analyses (not reported in tables) showed that a substantial minority of the respondents had used alcohol (32%), cigarettes (25%), and marijuana (30%).

The composite measure of pro-drug attitudes, norms, and expectancies was also based on standardized items. The original component items showed that most students had very strong anti-substance use orientations, often choosing the most extreme antidrug response option for all items (data not presented in tables). A majority said that they “definitely would not” use alcohol, cigarettes, or marijuana if given an opportunity (55%), that it was “definitely not okay” for students their age to use those substances (63%), and that their parents (78%) and

grandparents (69%) would be “very angry” if they did use any of those substances. A majority felt “very sure” that they would reject any offers of these substances (51%), and over one-third reported no positive expectancies about using substances (34%) as well as extremely negative reactions from friends if the respondent used any substance (42%).

The mean for the number of recent substance offers (.50) indicated relatively low and infrequent exposure. The mean for positive decision-making placed a typical student at the midpoint, as “sometimes” choosing the desirable strategies. About half (53%) of the respondents had used a REAL drug resistance strategy in the last 30 days.

The descriptive statistics for measures of spirituality and religious involvement showed them to be salient for most students. More than 80% of students said that spirituality held some importance to them and was part of their lives. The mean for AI spiritual practices corresponded to “a little” or “some” involvement in each of these 11 practices, with at least minimal involvement in 6 of the 11 activities, on average. While 79% of the students felt it was “somewhat” or “very important” to follow traditional AI beliefs, approximately 50% felt it important to follow Christian beliefs. Church affiliation was distributed fairly and evenly into three groups: NAC (30%), a Christian Church (37%), or no church (33%). The distribution of attendance at religious services was skewed toward attending “never” (33%) or “rarely” (31%). One quarter (26%) of the students indicated that they attended services for religious reasons.

Table 2 presents the standardized coefficients from regression analyses of the study outcomes. The general measure of spirituality was associated with both undesirable and desirable outcomes. Greater spirituality predicted not only more polydrug use, stronger adherence to pro-drug attitudes, and more receipt of drug offers, but also

TABLE 1. Descriptive statistics.

	<i>N</i>	Mean	Standard deviation	Range
Alcohol use (composite)	116	.11	1.07	-1.4 to +3.3
Cigarette use (composite)	116	.10	1.08	-1.3 to +3.2
Marijuana use (composite)	116	.17	1.10	-1.4 to +4.1
Poly-drug use: number of substances ever tried	112	.86	.98	0-6
Pro-drug attitudes	122	.05	.67	-1.9 to +2.9
Substance offers	122	.50	.92	0-5
Positive decision-making skills	118	2.97	1.04	1-5
Number of REAL drug resistance strategies	123	3.10	3.85	0-13
Spirituality	119	2.51	.91	1-4
American Indian spiritual practices	123	2.28	.79	1-4
Follows American Indian beliefs	121	3.04	.95	1-4
Follows Christian beliefs	120	2.43	1.03	1-4
Native American church affiliation (yes = 1, no = 0)	123	.30	.45	0-1
Christian church affiliation (yes = 1, no = 0)	123	.37	.48	0-1
Frequency of attendance at religious services	119	2.46	1.46	1-5
Attends services for religious reason (yes = 1, no = 0)	118	.26	.44	0-1
Gender (male = 1, female = 0)	123	.47	.50	0-1
Age in years	123	12.59	.73	10-15

TABLE 2. OLS regression analyses of substance use-related outcomes (standardized coefficients).

	Alcohol	Cigarettes	Marijuana	Poly-drug use	Pro-drug attitudes	Substance offers	Decision-making	Drug resistance strategies
Spirituality	.108	.182	.109	.243 [†]	.254*	.248*	.060**	.344**
American Indian spiritual practices	-.073	-.118	.061	-.041	-.057	-.197	-.132	-.234 [†]
Follows American Indian beliefs	.123	.041	.026	-.033	-.260*	.185	.205 [†]	.155
Follows Christian beliefs	-.197 [†]	-.247*	-.023	-.085	-.082	-.125	.250*	-.227*
Native American church affiliation	-.213 [†]	-.146	-.209	-.246 [†]	-.086	-.024	.017	.063
Christian church affiliation	-.049	.034	-.017	-.009	.019	.062	-.127	.170
Attendance at religious services	-.001	-.002	-.112	-.033	-.104	.049	-.101	-.087
Attends services for religious reason	.141	.112	.094	.010	.051	.143	.308**	.127
Gender: male versus female	-.081	-.043	-.037	-.138	.031	-.109	.052	-.108
Age in years	.246*	.171 [†]	.133	.204*	.205*	.309**	-.080	.147
<i>N</i>	104	104	104	100	109	109	105	110
<i>R</i> ²	.160	.137	.098	.189	.168	.211	.212	.198

Note: [†]*p* < .10; **p* < .05; ***p* < .01.

more use of drug resistance strategies and better problem-solving skills. Involvement in AI spiritual practices was unrelated to all the measures of substance use behaviors and attitudes and was a significant predictor of only one outcome, less use of drug resistance strategies. Following beliefs systems – AI or Christian – generally emerged as a protective factor. Those following AI beliefs more strongly reported less adherence to pro-drug attitudes as well as better decision-making skills. Stronger Christian beliefs predicted less use of alcohol and cigarettes, fewer drug resistance strategies, and better decision-making skills. Compared to the seventh and eighth grade students who were not affiliated with any religion, those belonging to the NAC reported significantly less alcohol and polydrug use, and there was a similar sizeable but nonsignificant effect for marijuana use. Those affiliated with Christian churches, however, were not significantly different from the religiously unaffiliated on any outcome. Finally, frequent attendance at religious services and attendance specifically for religious reasons were also unrelated to any outcome, with one exception. Those attending services for religious reasons reported better decision-making skills than those who did not attend or attended for nonreligious reasons.

DISCUSSION

This article explored aspects of spirituality and religious involvement that may have a protective effect against substance use among urban AI middle-school students, particularly in delaying or reducing use of substances. The overall hypothesis was confirmed as several of the measures of spirituality and religious involvement were associated with less substance use and stronger antidrug norms. All the aspects of spirituality and religion were salient to most of these urban AI middle-school students,

although to varying degrees. Most of the AI students reported a sense of spirituality, widespread involvement in AI spiritual practices, adherence to AI or Christian beliefs, affiliation with the NAC or a Western Christian church, and attendance at religious services. The associations between these measures and substance use were selective. None of the measures were found to be protective against the entire range of substance use behaviors, attitudes, and exposure. The aspects of spirituality and religion associated most strongly and consistently with lower levels of substance use were adherence to Christian beliefs and affiliation with the NAC. Adherence to AI beliefs was the strongest predictor of antidrug attitudes, norms, and expectancies.

The protective nature of adherence to spiritual and religious beliefs – AI or Christian – emerged as the most salient factor that we examined. Both AI and Christian beliefs provide links to established values systems and traditions, but do not necessarily require attendance at spiritual activities, affiliation with a church, or regular church attendance. Because many AI cultures have an oral tradition, the passing on and sharing of these spiritual or religious beliefs may also help strengthen connections to cultural heritage. These findings suggest that for these AI youth at a particular developmental stage, having links to established values systems and traditions may be more protective against substance use than the act of practicing them.

Another finding was that affiliation with the NAC, but not with Christian churches, was protective against alcohol use and poly-substance use. Belonging to a church that draws on traditions from both AI cultures and Christianity may strengthen identification with belief systems, and help integrate the two worlds in which urban AI middle-school students live. The lack of similar results for a mainstream Christian church affiliation may be due to the diverse

number of Christian denominations represented, ethnic diversity of the congregations attending Christian churches, or the structure of the NAC compared with Christian churches. While Christian churches typically have an institutional structure, physical location, and set schedule for religious services (i.e., every Sunday), the NAC typically is loosely structured with religious ceremonies as needed. Although the survey specifically asked about the NAC, the students may not have perceived this “church” in the same way. Some students who are less familiar with the NAC may have claimed an affiliation with it because they attend a church where the majority of attendees are also AI or a church led by an AI.

A general sense of spirituality – based on items that did not refer specifically to AI traditions, beliefs, or culture – was not found to be a protective factor against substance use. Contrary to the expectations, where spirituality was a salient, it mostly predicted undesirable substance use-related outcomes. Spirituality may be protective against substance use only when it is integrally connected to AI cultures, is enacted in community contexts, or is anchored in specific beliefs (18). When multiple generations have lived in an urban area, this deep connection may be diminished, thus our measure of spirituality may not reflect traditional spirituality but rather a more urbanized and secularized sense of spirituality. Similarly, degree of involvement in spiritual practices was also unrelated to drug use behaviors and attitudes. This finding is consistent with previous research that found participation in AI cultural activities that did not exhibit a protective effect (17). Participation in spiritual practices may be more for social than spiritual or religious reasons (23) or it may foster connection to secular, urbanized pan-Indian traditions (24,25), thus potentially eroding the spiritual nature of the ceremonies.

LIMITATIONS

This study was based on a non-probability sample in a metropolitan area of the southwest with a large AI population. Although the study drew on respondents from different school districts, the results cannot be generalized reliably to the rest of the metropolitan setting or to other urban Indian communities in the United States. The study’s recruitment methods were a source of possible selection bias, as the respondents were all students who participated voluntarily in a cultural enrichment program for native students. It is likely to represent students from families that actively embrace their native heritage and students interested in learning about that heritage in structured programs with other native students. Another study limitation is that the results provide only a cross-sectional view of how spirituality and religious involvement are connected to substance use, ruling out any direct causal influence. In addition, the cross-sectional design does not address how protective effects of spirituality and religious involvement on substance use may change in the transition from adolescence into adulthood. While many of the measures used in this study were multidimensional, some were single indicators of very complex matters. Native

spirituality is difficult to assess even with multiple scale items, thus the results should be interpreted with caution rather than as providing definitive answers to how spirituality and religion impact substance use among urban AI middle-school students.

CONCLUSIONS AND IMPLICATIONS

These findings among urban AI seventh and eighth grade students highlight the importance of having a spiritual or religious belief system and the special salience of the blending of traditional native spirituality and Christianity represented by the NAC. The unexpected findings regarding a general sense of spirituality – inconsistent with the larger body of research demonstrating inverse or no association between spirituality and substance use among nonnative populations (23,26,27) – also underscore how much remains unknown about the mechanisms through which spirituality and religion impact substance use among urban AI youth. Urban AIs have unique histories of cultural integration which create complex belief systems and practices intertwined in the urban landscape. Understanding how to translate the findings into the design of efficacious prevention and treatment interventions for urban AI youth will require respectful working partnerships with spiritual leaders in urban areas and close partnerships with urban AI communities and the organizations that serve and represent them.

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Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

REFERENCES

1. May PA, Gossage P. New data on the epidemiology of adult drinking and substance use among American Indians of the Northern states: Male and female data on prevalence, patterns, and consequences. *Am Indian Alsk Native Ment Health Res* 2001; 10:1–25.
2. Rutman S, Park A, Castor M, Taulii M, Forquera R. Urban American Indian and Alaska Native youth: Youth risk behavior survey 1997–2003. *Matern Child Health J* 2008; 12:76–81.
3. Substance Abuse and Mental Health Services Administration. Results from the 2003 National Survey on Drug Use and Health: National Findings (DHHS Publication No. SMA 04–3964, NSDUH Series H–25). Rockville, MD: Substance Abuse and Mental Health Services Administration, 2004.

4. Mail PD. Early modeling of drinking behavior by Native American elementary school children playing drunk. *Int J Addict* 1995; 30:1187–1197.
5. Substance Abuse and Mental Health Services Administration. Results from the 2005 National Survey on Drug Use and Health: National Findings (DHHS Publication No. SMA 06-4194, NSDUH Series H-30). Rockville, MD: Substance Abuse and Mental Health Services Administration, 2006.
6. Indian Health Service. Facts on Indian Health Disparities. Rockville, MD: Indian Health Service, 2005.
7. Fraser MW, Richman JM, Galinsky MJ. Risk, protection, and resilience: Toward a conceptual framework for social work practice. *Social Work Res* 1999; 23:131–143.
8. Beals J, Spicer P, Mitchell CM, Novins DK, Manson SM, AI-the SUPERPPF Team. Racial disparities in alcohol use: Comparison of two American Indian reservation populations with national data. *Am J Public Health* 2003; 93:1683–1685.
9. Stone RAT, Whitbeck LB, Chen X, Johnson K. Traditional practices, traditional spirituality, and alcohol cessation among American Indians. *J Stud Alcohol* 2006; 67:236–244.
10. Locust C. Wounding the spirit: Discrimination and traditional American Indian belief systems. *Harv Educ Rev* 1988; 58: 315–330.
11. Hodge DR, Limb GE. A Native American perspective on spiritual assessment: The strengths and limitations of a complementary set of assessment tools. *Health Soc Work* 2010; 35 (2):121–131.
12. Whitbeck LB, Hoyt DR, Stubben JD, LaFromboise T. Traditional culture and academic success among American Indian children in the upper Midwest. *J Native Am Educ* 2001; 40:48–60.
13. Cheyfitz E. Balancing the earth: Native American philosophies and the environmental crisis. *Ariz Q* 2009; 65:139–162.
14. Hertzberg HW. *The Search for an American Indian Identity: Modern Pan-Indian Movements*. Syracuse, NY: Syracuse University Press, 1982.
15. LaFromboise TD, Hoyt DR, Oliver L, Whitbeck L. Family community, and school influences on resilience among Native American adolescents in the upper Midwest. *J Community Psychol* 2006; 34:193–209.
16. Beebe LA, Vesely SK, Oman RF, Tolma E, Aspy CB, Rodine S. Protective assets for non-use of alcohol, tobacco and other drugs among urban American Indian youth in Oklahoma. *Matern Child Health J* 2008; 12:S82–S90.
17. Yu M, Stiffman AR. Cultural and environment as predictors of alcohol abuse/dependence symptoms in American Indian youths. *Addict Behav* 2007; 32:2253–2259.
18. Hodge DR, Andereck K, Montoya H. The protective influence of spiritual-religious lifestyle profiles on tobacco use, alcohol use, and gambling. *Soc Work Res* 2007; 31:211–219.
19. Cialdini RB, Reno RR, Kallgren CA. A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *J Pers Soc Psychol* 1990; 58:1015–1026.
20. Hansen WB, Graham JW. Preventing alcohol, marijuana, and cigarette use among adolescents: Peer pressure resistance training versus establishing conservative norms. *Prev Med* 1991; 20:414–430.
21. Hecht ML, Marsiglia FF, Elek E, Wagstaff D, Kulis S, Dustman PA, Miller-Day M. Culturally grounded substance use prevention: An evaluation of the *keepin' it REAL* curriculum. *Prev Sci* 2003; 4:233–248.
22. Botvin GJ, Griffin KW, Diaz T, Iffil-Willimas M. Drug abuse prevention among minority adolescents: Posttest and one-year follow-up of a school-based preventive intervention. *Prev Sci* 2001; 2:1–13.
23. Hodge DR, Marsiglia FF, Nieri T. Religion and substance use among youth of Mexican heritage: A social capital perspective. *Soc Work Res* 2011; 35(1):137–146.
24. Kunitz SJ, Levy JE. *Drinking Careers: A Twenty-Five Year Study of Three Navajo Populations*. New Haven, CT: Yale University Press, 1994.
25. Paper J. *Native North American Religious Traditions: Dancing for Life*. Westport, CT: Praeger, 2007.
26. Koenig HG, McCullough ME, Larson DB. *Handbook of Religion and Health*. New York: Oxford University Press, 2001.
27. Yonker JE, Schnabelrauch CA, DeHaan LG. The relationship between spirituality and religiosity on psychological outcomes in adolescents and emerging adults: A meta-analytic review. *J Adolesc* 2012; 35:299–314.

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