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IDENTIFYING SEXUAL HEALTH PROTECTIVE FACTORS AMONG NORTHERN PLAINS AMERICAN INDIAN YOUTH: AN ECOLOGICAL APPROACH UTILIZING MULTIPLE PERSPECTIVES

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Abstract

This study examined aspects of the sociocultural context in which American Indian (AI) teen pregnancy occurs, focusing specifically on protective factors for Northern Plains AI youth. Principles of community-based participatory research guided the qualitative data collection from 185 community members (focus groups with AI youth, youth parents, and elders; interviews with health care providers and school personnel) from a reservation and an urban community. Results indicated three protective systems impacted the sexual health and behaviors of AI youth: school, family, and enculturation. These findings provide a better understanding of how specific protective factors within these systems may buffer AI youth from involvement in risky sexual behaviors and work to inform culturally relevant prevention and intervention efforts.

INTRODUCTION

Adolescence is an important developmental period often associated with exploration and experimentation through which youth test their boundaries within society (Reio, 2010; Steinberg, 2008). While risky behaviors in adolescence are common, spanning across race and socioeconomic status, disparities in the prevalence and impact of risky behaviors are evident. Teen pregnancy rates, directly determined by engagement in risky sexual behaviors among teens (Centers for Disease Control and Prevention, 2015), have been consistently more robust among minority groups in the U.S. (Hamilton, Marin, Osterman, Curtin, & Mathews, 2015). After steadily declining from 1991 to 2005, teen pregnancy rates saw an increase from 2005 to 2007. During this time period, American Indian/Alaska Native

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(AI/AN) youth sustained the largest increase in teen pregnancy rates (12%; see Hamilton, Martin, & Ventura, 2009, p. 2), more than twice that of the national increase. Although rates have since fallen, findings continue to suggest disparities among AI/AN youth, such that, in 2012, birth rates for AI/AN youth were 34.9 per 1,000 live births, while national rates reached a historic low of 29.4, with non-Hispanic White teens even lower at 20.5 (Martin, Hamilton, Osterman, Curtin, & Mathew, 2013). Given these trends, researchers have often focused on the risk factors associated with the sexual health and behaviors of AI/AN youth.

Findings point to several potential risk factors likely associated with teen pregnancy and risky sexual behaviors among AI/AN youth, including increased rates of poverty (Misra, Goggins, Matte, & Lewis, 2014), substance use (de Ravello, Jones, Tulloch, Taylor, & Doshi, 2014), physical/sexual abuse (Rutman, Taualii, Ned, & Tetrick, 2012), and barriers to accessing health resources (Richards & Mousseau, 2012). It is evident, however, that the context surrounding AI/AN sexual health and behaviors is increasingly more complex. Prior research suggests that, for many female AI/AN adolescents, getting pregnant and having a child may provide an escape from stressful home environments and feelings of limited opportunities for higher education, extracurricular activities, and stable employment (Hanson, McMahon, Griese, & Kenyon, 2014). In addition, teen pregnancy is often normative in lower socioeconomic areas, which may relate to feelings and/or the reality that there are fewer opportunities for viewed success among many of these youth besides parenthood (Mollborn, 2010). Taken together, it is evident that, for many AI/AN youth, the various contextual factors within their daily lives may compound the potential for risky sexual behaviors. An important step within the research surrounding AI/AN teen pregnancy, therefore, is to understand better the numerous contextual factors impacting the sexual health and behaviors of this population.

THEORETICAL OVERVIEW

Bioecological Model

The bioecological model provides an important framework for studying adolescent development, suggesting that developmental processes occur within a particular context of environmental systems with which an individual has continued interaction over an extended period (Bronfenbrenner, 1995, 1999): 1) the microsystem—the individual and his or her interactions within the immediate setting (e.g., home, school, community), 2) the mesosystem—those situations or events in which two or more microsystems interact in some respect (e.g., home-school interactions), 3) the exosystem—the social system which connects microsystems to the larger social context, but with which the individual does not directly interact (e.g., parent's work environment), and 4) the macrosystem—the larger social context within which the individual develops (e.g., cultural values, customs, laws).

Given the encompassing nature of the bioecological model, it has been used to frame the various risk factors surrounding adolescent sexual health and behavior. For example, in a nationally representative study which applied the model, findings revealed that, after controlling for other demographic factors, daughters of teen mothers were 66% more likely to become teen mothers themselves (Meade, Kershaw, & Ickovics, 2008). This increased risk for teen pregnancy was attributed to microsystem factors of deviant peer norms and low

parental monitoring, as well as macrosystem factors of poverty and being Hispanic. Though the bioecological model has been used as a framework to examine the risk surrounding adolescent sexual health and behavior, to our knowledge, it has not been applied to AI sexual health and behavior, specifically in identifying potential protective factors present for these youth.

Protective Factors for AI Youth

Given the myriad risk factors unique to AI/AN youth (e.g., historical trauma, political disempowerment, and microaggressions; Grandbois, 2005), a goal of effective, culturally specific programming should be to identify protective factors that are indigenous to these youth. For example, findings across samples of youth suggest that positive parent-child relationships and parent connectedness are associated with lower participation in risky behaviors, including early sexual début and teen pregnancy. For AI youth, in particular, this finding may extend to the larger family structure, especially among reservation-based youth who may be more likely than their urban counterparts to have large family networks, including the immediate and extended family, proximally available and potentially able to serve as a protective factor (LaFromboise & Dizon, 2003). Research identifying effective sexual health interventions for AI/AN youth has further suggested the importance of integrating trusted family members into prevention efforts as a way to align with the strong collectivist nature of AI/AN families and communities (Garwick, Rhodes, Peterson-Hickey, & Hellerstedt, 2008).

LaFramboise and colleagues (2006) identified various protective factors present for Northern Plains AI youth, including maternal warmth and perceived support from one's community. Unique to these youth, who were found to be highly integrated into mainstream culture, was the finding that level of enculturation—measured by participation in traditional activities, identification with AI culture, and traditional spiritual involvement—was the strongest predictor of their resilience. This finding echoes prior research suggesting that engagement in cultural practices and internalization of cultural values can assist to develop strengths in AI youth (e.g., interdependence, courage) and can further serve as a protective factor (Whitbeck et al., 2001). To date, only a handful of studies have worked to identify the protective factors present in the lives of Northern Plains AI youth, and even fewer have examined the potential impact of such factors on the sexual health and behaviors of these youth. As such, the current study works to address the gap in the literature by identifying protective factors present in the sexual health and behaviors of Northern Plains AI youth.

PRESENT STUDY

In the few studies examining protective factors present in AI sexual health and behavior, weaknesses have included utilizing only survey-based (e.g., Chewning et al., 2001) and/or single-informant data collection methods (e.g.., Chewning et al., 2001; Garwick et al., 2008). Even more, one of the difficulties in studying AI populations is the heterogeneity of cultures. Findings regarding AI youth sexual health and behavior may differ based on the region, language, and cultural group with which they are affiliated (Whitbeck, Hoyt, Stubben, & LaFromboise, 2001). For the current study, the sample included youth from the

Northern Plains region. Youth in this region face unique, myriad risks, including 3 times the rates of adverse life events compared to other youth nationally, and have a life expectancy at birth of only 64.8 years, 11 years less than the national average (U.S. Department of Health and Human Services, Indian Health Service, 2008). Specific to their sexual health and behaviors, Northern Plains AI youth have the highest teen birth rates of any Indian Health Service area, with rates among older AI youth (ages 18–19 years) significantly on the rise (Winego et al., 2012). Given the unique risks present for youth in this region, working to identify potential protective factors present in their sexual health and behaviors appears necessary.

The current study is part of larger efforts to inform a culturally-specific positive youth development curriculum for Northern Plains AI youth. The goal of the present study, specifically, is to answer the following research question: What protective factors are present in the sexual health and behaviors of Northern Plains AI youth? We employed community-based participatory research (CBPR; similar to tribal participatory research, or TPR) methods through the use of focus groups and interviews to provide rich, qualitative findings. Research suggests that, to be successful when working with AI participants and communities, it is necessary to employ research methodologies that recognize AI tribes as unique politically and culturally diverse ethnic groups. This approach has been cited as having higher participation rates and a higher likelihood of producing lasting change within AI communities (Fisher & Ball, 2003; Stubben, 2001). Thus, applying a CBPR approach was vital for the current study given the focus on a population and an area of research that have often been overlooked for AI youth, applying a CBPR approach was vital. The various CBPR methods used in the current study are described in detail below.

We approached the study goal utilizing various sources and methods to better triangulate any protective factors that were relevant and present across contexts impacting these youth. The bioecological framework guided our identification of informants from the various systems present in the lives of Northern Plains AI youth. Specifically, our study employed focus groups with community youth (both those who were and were not parents), and elders, as well as semi-structured interviews with health care providers and school personnel. To our knowledge, this theoretical and methodological model has not been applied when examining a strength-based approach to examining the sexual health and behaviors of Northern Plains AI youth. Therefore, the current study expands the literature by using the bioecological theory when examining the responses drawn from multiple informants regarding protective factors present in the sexual health and behaviors of Northern Plains AI youth.

METHODOLOGY

Participants and Procedure

Qualitative data were gathered from multiple informants, including Northern Plains AI youth (parents and non-parents), AI elders, health care providers, and high school personnel, with hopes of capturing participants' unique points of view and experience in their own words. The specific community partners involved in this study were selected as a result of ongoing, long-term relationships and the collective prioritization and shared commitment to examining and bettering the sexual health and behaviors of these youth. Data collected were

part of a larger study meant to inform a culturally relevant, positive youth development curriculum for Northern Plains AI youth. Data collection occurred at one rural reservation site where almost all participants indicated one tribal affiliation, and at one small urban site (population less than 150,000 persons) with participants who indicated various tribal affiliations. The two sites are located relatively near each other (160 miles) and share a similar cultural heritage. The county that comprises most of the reservation site has a racial/ethnic breakdown consisting of primarily White (60.5%) and AI (35.8%), with 20% of its population below the poverty level. Teen pregnancy rates for AI youth in this county are 90.9 per 1,000 (vs. 17.2 for White youth). The county where the urban site is located has a racial/ethnic breakdown of primarily White (88.6%) and AI (4.6%), with 11% of its population below the poverty level. Teen pregnancy rates for AI youth in this county are 109 per 1,000 (vs. 19.8 for White youth). The reservation site participants were relatively assimilated, with prior research indicating they reflected similarly on the sexual health and behaviors of their youth as did the urban site participants (Hanson, McMahon, Griese, & Kenyon, 2014; McMahon, Hanson, Griese, & Kenyon, 2015). The two different sites were included to provide an additional source of data triangulation. As such, we were able to identify protective factors present across both sites, further supporting the positive youth development curriculum directed toward youth at each site. Data collection began in fall 2012 and continued through winter and spring 2013.

Youth parents and non-parents were targeted for recruitment given their direct experience in relation to risky sexual behaviors and pressures faced by youth in these communities. They also were integral to the application of results in the development of culturally specific programming specific to the needs and context of this population. Elders also were selected for participation in this study given that, traditionally, elders are accorded a place of significant importance, honor, and respect among Northern Plains AI tribes (Kehoe, 1982). Lastly, personnel at health care service facilities and schools with a high representation of AI patients and students, respectively, within both communities were recruited due to their familiarity with this population. Each of these perspectives supported the exploration of the bioecological systems impacting the sexual health and behaviors of Northern Plains AI youth. Participants were recruited from both tribal and public schools at the reservation site, and from public schools at the urban site. All of the public schools included had some culturally specific programming available for all AI students.

As previously mentioned, the CBPR/TPR approach was used in the development of this project. Based on the extensive CBPR research of Israel and colleagues (2008), this study utilized the following principles: recognizing the community as a unit of identity; identifying and building upon the strengths and resources within the community; facilitating a collaborative, equitable partnership in all phases of the research; working toward the mutual benefit of all partners; disseminating results to all partners and involving them in the dissemination process; and making a long-term commitment to sustainability. Moreover, our research aligned with the TPR approach (Fisher & Ball, 2003; Sahota, 2010) which prioritizes the needs of tribal partners and actively involves the tribe in ongoing regulation of the research process.

CBPR/TPR was also implemented in this study through the use of community advisory boards formed at both sites. These boards consisted of AI individuals of various ages, genders, and backgrounds and were consulted in developing data collection instruments (i.e., focus group and interview questions), implementing project protocols, establishing appropriate incentives, and identifying target populations for the study. This project was further developed with direction from the communities who indicated the need for identifying information on the sexual health and behaviors of their youth. The second author had worked with both communities for 3 years at the time of data collection and continues to do so. Specifically, during her earlier work on a Photovoice project with the reservation site, the theme of teen pregnancy was consistently raised. Even more, investment in teen health comes up consistently in conversations with tribal partners from both the reservation and urban sites, making this project a natural transition from our prior findings and discussions.

Our research team engaged in various local presentations (e.g., to the human services board) to provide updates and information throughout the data collection process. Since then, results continue to be disseminated to the community and tribe via local presentations, and we are currently implementing a culturally specific positive youth development curriculum with youth at both sites.

Prior to conducting this study, all study procedures were approved by the Sanford Research and Indian Health Service Aberdeen Area IRBs, and by the local tribe through a tribal resolution for the reservation site (Fisher & Ball, 2003; Sahota, 2010). Following CBPR/TPR and Institutional Review Board (IRB) guidelines, the specific tribal community is not identified in this study.

Local residents from each site were hired as research associates to assist in recruitment efforts and data collection, given their familiarity with the local population and culture. Participant recruitment was conducted similarly at both sites by means of flyers, community contacts, and word of mouth. For the interviews, key informants were identified by community contacts at each site. Eligibility criteria for participants in the focus groups included self-identification as AI and age (youth parents and non-parents were 16–24 years old; elders were 50 years old or older). Informants were not required to identify as AI, but were required to work directly with AI patients or students. Although many of the interviewees (50%) self-identified as White, they were able to provide relevant information regarding the protective factors present in the lives of the AI youth with whom they worked. The low representation of AI school personnel and health care providers in this study is reflective of the general underrepresentation of AI education and health professionals at the national level (U.S. Department of Education, 2013; Xierali, Castillo-Page, Conrad, & Nivet, 2014).

The focus groups and key informant interviews had similar questions. The questions were the result of collaborative efforts among study staff and the communities involved. Table 1 includes the questions that were used for the present study focused on protective factors present in the sexual health and behaviors of AI youth.

Measures for both focus groups and key informant interviews referenced cultural influences, social norms, access to reproductive services, risky sexual behaviors of adolescents, and contraceptive use. However, focus group questions included additional measures of youth needs for transitioning to adulthood, community attitudes toward teen pregnancy, media influences on sexual decision making, and recommendations for content, incentives, and locations for the positive youth development curriculum. Interviewees were also asked about the various ways they work with AI patients and students, as well as how the various factors influencing sexual health and behaviors differ for AI youth versus other youth with whom they work.

For the broader study, data collection included 20 semi-structured interviews (10 per site, 5 with health care providers and 5 with school personnel per site) and 24 focus groups (12 focus groups per site). See Table 2 for a breakdown of age, gender, and race. Focus groups included 5 to 11 participants per group; groups were stratified by age, gender, and parental status. Youth parents were invited into separate focus groups from youth non-parents. Overall, 185 community members participated in this study, 90 from the reservation site and 95 from the urban site. However, two female parents from the reservation site who participated in the focus group did not complete the demographics survey and are not included in Table 2. Written consent or assent was obtained from all participants, and parental consent was obtained for participants younger than 18 years of age. Participants were offered a $40 gift card to a retail store as an incentive for their participation in the focus group or interview. The interviews and focus groups were facilitated by the local community research associates hired for this project, were conducted in private rooms at local community health service buildings or at libraries at each site, and were tape recorded and then transcribed verbatim.

Data Analysis

Transcripts were stored and analyzed using the QSR NVivo 10 software program. NVivo was used to operationalize codes, update and revise the evolving codebook, and create an electronic database of the transcripts that had been coded using the consensus codebook. Strategies set forth by Fernald and Duclos (2005) were followed by holding in-depth discussion and negotiation of the coding structure as it evolved throughout the preliminary analyses of the transcripts. The inductive content analysis was used to uncover overall themes by reading all transcripts, making notes on initial impressions, and letting the codes emerge directly from the text.

Interrater reliability was used to ensure consistency in agreement of the codes. Two independent coders, a PhD and a masters-level (third author), examined specific sections of text independently and then met to review codes and discuss discrepancies. Any inconsistencies were reviewed by the coders and the principal investigator (second author), problems with code definitions and/or coder errors were identified and discussed, and the codebook was modified as needed. All previously coded text was reviewed after this process and, if necessary, recoded to remain consistent with revised definitions.

To calculate Cohen’s kappa for interrater reliability, two coders separately coded a random selection of 300 lines from the final transcripts using the final draft of the codebook

(procedure recommended by Lombard, Snyder-Duch, & Bracken, 2004). The resulting value was 0.62, which is considered “substantial” (0.61 to 0.80) when interpreted using the previously defined benchmarks (Landis & Koch, 1977). Additional validity and reliability were established through various methods. For example, ontological appropriateness and contingent validity were strengthened through the use of a diverse range of participant perspectives to describe the reality of teen pregnancy among AI youth (Healy & Perry, 2000). Descriptive validity was strengthened through the use of verbatim responses and investigator triangulation, obtained by cross-checking coding schemes to ensure that the investigators agreed upon the categorization of the data. Interpretive validity, which refers to the accuracy with which the researchers portrayed the meaning attached to the data as perceived by the participants, was also strengthened through the use of verbatim responses, in that little was left to interpretation other than the creation of categories in which the verbatim responses were coded. The results and discussion relate closely to the actual written responses of the participants and would, therefore, be deemed as having strong theoretical validity.

Data Analysis Specific to the Present Study

In alignment with the goals of the current study, results reported here focus only on the protective factor themes that emerged in the data, although both risk and protective responses were detailed in participant responses. By using *protective factors* as a section criterion, coding categories examined further were the “decision making” and “environment” codes. Next, using the selection criteria of responses focused only on *sexual health protective factors,* the “don’t have sex” subcategory within the decision-making category was examined, along with the school, peer, culture, religion/spirituality, morality, and family subcategories within the environment category. Once responses that focused only on sexual health protective factors were identified, the first author and principal investigator (second author) agreed upon the overarching themes and subthemes that best reflected the similarities and recurrences of the final responses.

RESULTS

No statistical analyses were performed to determine differences (e.g., chi-square) given the small subset of data focusing specifically on protective factors examined for this study. Throughout the results, however, we do highlight differences by informant and location. The most common protective factors for AI youths’ sexual health and behaviors were reflected in three major themes: family, school, and enculturation. Within two of these themes, subthemes were also present.

Family

The family was an important overarching protective system indicated by four of the five sources (elders, non-parent youth, youth parents, and school personnel), most consistently by the elders at the reservation site. Most of the responses signifying the family as a protective factor alluded to the type of parenting, in particular, as well as to the level of warmth (including responsiveness and communication) and appropriate discipline (discipline accompanied by reasoning and discussion).

Warmth

Several respondents indicated that an important protective function of the family system is having someone the youth feels comfortable communicating with and who will provide him/her with support and encouragement to make healthy sexual decisions. For example, a school staff member indicated that communication with the family was an important factor in teens using contraception, stating, "…if there's open communication and there's confidence, they're getting confidence built into them, and they're gonna have a lot more courage to make those decisions, make the right choices." This sentiment was echoed by a male elder: "Parents showing them that they really care and encourage them to do the right thing, or what makes them feel comfortable, I think."

> Several responses suggested the importance of parents as positive roles models and sources of support, highlighted by a female non-parent youth:
>
> I feel like that [having parents as positive examples] is huge because, if they didn't really have parents in their life—especially for guys—if they don't have that relationship with their father, they may not feel like that's a huge deal if they have a kid.

There also was reference to individuals in one's larger family structure, as detailed by a female elder who suggested that talking with one's "aunties" was an important protective factor for teens to decide not to have sex. She noted, "I told her [daughter] to go talk with her aunties about becoming an adult or teenager. And I had a lot of open communication with her, talking to her about different things, possibilities and stuff like that." This sentiment was echoed further by another female elder who suggested, "…my grandchildren, they're very open with me, you know, and they can't talk to their mothers, but they can talk to me."

From the current study findings, it is clear that open communication and support from both one's immediate family and the larger family structure can help instill a feeling of pride and confidence to make healthy sexual decisions.

Discipline

Another important protective factor at the family level was the use of discipline. Respondents indicated it was important that youth have a "healthy fear" of or respect for their parents that stemmed from knowing that there were consequences for their behaviors. For example, a female elder responded:

> They have to have that healthy sense of fear from their parents. They have to know there's going to be a consequence. Because, if they think nothing's going to happen, then anything goes, I guess. And I've never, well, she said I spanked her one time, but I don't remember spanking her. But you don't have to do it, physically. I mean, I just think they have to know there are consequences.

It is evident that youth need to understand the reasoning behind and consequences of the boundaries that are set for them. In doing so, respondents felt there would be a positive impact on the sexual health and behaviors of AI youth.

Some reflected on the parenting they received, alluding to a sense of responsibility toward their family. This idea was reflected by a female youth parent:

> That's kind of how my family was, and, well, my parents lived with me, like, when I was a younger teen. You know, I never had the want to have sex, or I never really wanted to do it, because it was just like going behind their back, because I knew I'd tell them about it anyway.

Youth who have family members who can provide a reason for not engaging in risky sexual behaviors by explaining the consequences of these behaviors and enforcing family rules appear less likely to engage or want to engage in risky sexual behaviors. Given these findings, it is evident that an important protective function of the family is positive discipline, demonstrating that there are boundaries while simultaneously communicating and enforcing the consequences of stepping outside those boundaries.

School

All types of informants from both sites believed activities and relationships formed within the school context were significant protective factors in the sexual health and behaviors of AI youth. School personnel identified this factor most consistently, followed by elders and youth parents. Subthemes identified were sexual health content, extracurricular activities, social support, and educational goals.

Sexual Health Content

Addressing sexual health and behaviors in school through appropriate education was seen as an important protective factor. This belief was illustrated by responses suggesting the school system should support, rather than fight, sexual education. For example, a health care provider stated:

> Role modeling, education, allowing sex education in the schools is very important… I think they [schools] should be supportive of, you know, the rules or the laws, whatever it is that allows sexual education, and to be more open-minded about allowing it.

Further, it was suggested that sexual education should not be limited to simply talking about sex and STD/STIs. Rather, as indicated by several participants, sexual education should include opportunities to interact with positive role models and to engage in activities that could heighten self-esteem and feelings of empowerment, thus energizing youth to make healthy sexual decisions. Attention also was given to the idea that early sexual education, even before middle school, was an important protective factor for later sexual health decision making. For example, an elder male responded to the question, "What do you think are some reasons youth decide not to have sex?" by stating:

> I think the education system is a key part, especially for the girls in the school, young girls. I think they should be told a lot younger than 12 or 13 about it. Instill it in them to, hey, you don't have to do this to be with somebody, or make yourself look good, or popular, or what. That's why I think it's a key part, to me, what they teach in the school.

Extracurricular Activities

Another important protective factor within the school system was engagement in extracurricular activities (specifically sports), which provide youth with a sense of belonging. For example, a school staff member explained:

> …you kinda see just the general sports programs that kids get involved in, and I think that's huge. And I think keeping kids active and giving them something to do with their time is—I guess that's another thing, kind of, you know, with just that prevention piece—is keeping kids active so they're not having nothing to do and searching for things that they maybe shouldn't be involved in, you know… You don't see as many kids, when they're involved in sports, end up pregnant when they, you know, worked, you know, all the way through high school. It just doesn't happen as often 'cause they have something that they're committed to. They're committed to their teammates, their coaches, their schools, and it gives them something to work towards and to feel, you know, excited about and proud. That's huge.

Extracurricular activities may further serve as a protective factor because they encourage youth to take responsibility in their commitment to a larger team. One female non-parent youth suggested this factor in her response when asked why youth decide to delay having sex:

> I think that, umm, like the kids in sports, they are going to be, like, more focused on getting better and, like, doing more stuff. And, like, I think they know, like, the responsibility. Like, if you do have sex, it can make you, like, especially for girls—the ones who want to play basketball and stuff—like, when they get pregnant, they can't play while they are pregnant. So, it kinda makes them want to be safe, so they can continue playing.

Several participants believed that being part of school-based activities (primarily sports related) would make students feel as if they belonged to something that demanded their responsibility to themselves as well as the school, team, and/or coach, which could provide a feeling of attachment and connection within the school system and further serve as an important protective factor in the sexual health and behaviors of AI youth.

Social Support

Another important protective factor indicated at the school level was social support, including support from school personnel, teachers, and peers. One way this support likely occurs is through open communication about sex and reproductive health. Some respondents felt having a close peer to consult with regarding sexual health decision making was vital. For example, a female elder reported, "I realized that it's good to have a best friend who would talk to them, tell them what's bothering them, you know?" Other respondents felt that a positive relationship with a teacher or other adult within the school context was an important protective factor—maybe even more so than peer relationships—as suggested by the following response from a school staff member:

> So, I think those positive adult relationships not only are obviously super important before they get pregnant, but also during and after, you know? Letting them know where condoms are at, or where to get birth control, or knowing that they can wait even. And that's, that's what's going to influence them, I think, even more than pop culture or their friends, is a positive adult relationship.

Others felt that teachers have an obligation to provide guidance and support in the sexual health and behaviors of youth. A school staff member reported:

> I think teachers have a great influence and a great moral responsibility and ethical responsibility to make sure that the youth in their charge are prepared, not just with academics, but with living skills. What's the use of those academics if you're just going to be stuck at home with a kid the rest of your life?

Educational Goals

The pursuit of educational goals was also a common protective factor reported by AI youth. For example, in response to the question regarding why some AI youth decide to delay parenting, a health care provider suggested "…maybe make [graduating from high school] more of a thing of pride for the youth, something they can feel a lot of honor or respect for…" Having a sense of pride about their education may make youth more likely to set educational goals and less likely to engage in risky sexual behaviors that can deter from these goals. This feeling was echoed by a female youth parent:

> I think more people set their sights on higher education, you know? That they're starting to set their goal, and they know that they were already realizing, if you have a kid, you are kind of gonna have that road block for a while. As opposed to, you know, if you want to go to college, get a degree, and start a job, you know, when, when will be the right time to have a kid? You will have at least a focus about it.

Enculturation

Three of the five sources from both sites indicated that engagement in cultural activities and spiritual traditions, or enculturation, was an important protective factor in the sexual health and behaviors of AI youth. These responses were most consistently indicated by elders and youth parents, followed by non-parent youth.

Cultural traditions, including visiting sacred sites, were viewed as an important part of teaching AI youth about their cultural values and spirituality, a strength that can be drawn upon in difficult situations. This feeling was reflected in a response from a female elder:

> And so the next year, that next summer, we put her on Bear Butte [a sacred site for Northern Plains AIs], because we wanted her to have some kind of spirituality, foundation to help her. Because we knew that as she got into teenage years, there was going to be a struggle, you know? It was, and I think that's what helped her, you know, and helped her to become stronger, you know?

Elders and those surrounding AI youth recognize the difficult decisions teens face. Respondents indicated that providing youth with ways to connect to their ancestors and better understand the values and spiritual strengths within their culture would empower them

to face the difficulties that lie ahead of them, including those associated with sexual health and behaviors. A female non-parent youth indicated:

> I know a lot of kids and see around my culture that there's kids that, like, you know, they do Sun Dances and they do a lot of traditional things, but they're also involved in, like, a lot of negative things. Which I don't think you can really do both, 'cause it's, like, our culture is really, like, about positive…, and you're not supposed to have no bad things involved with it. It's like, whenever you see them, like, doing that [Sun Dances], you can tell, like, they have a passion for it and love it.

These findings highlight the evident struggle for some AI youth who experience and understand the protective function their cultural traditions can serve, and yet see other youth who are simply going through the motions and continuing to engage in risky behaviors. For these youth, exposure to cultural traditions may not be enough to protect against risky behavior; rather, further education and guidance in their cultural traditions and values may provide the protection needed to deter them from engaging in risky behaviors.

DISCUSSION

Given the evident disparities in the outcomes associated with risky sexual behaviors among AI youth (e.g., teen pregnancy rates), studies to date have focused primarily on deficit-based sexual health and behavior models. These models often overlook potential sources of resilience and strength that may be present. In working to address this limitation, the current study utilized a strength-based approach to identify sexual health protective factors for AI youth. This study's CBPR/TPR approach included community members in all stages of the research process and guided the collection of rich data regarding the dynamic systems and related processes associated with the sexual health and behaviors of AI youth. Findings from the current study illustrate the presence of three important contextual systems—family, school, and enculturation—that protect against poor sexual health outcomes and further inform prevention efforts specific to Northern Plains AI youth.

Family

Multiple informants (youth parents and non-parents, elders, and school personnel) indicated the family was an important microsystem protective factor. Specifically, the parenting dimensions of warmth (through communication and modeling) and positive discipline (through respect and responsibility) were mentioned. These findings align with the larger research field examining the protective function of the family for risky behaviors—particularly with parenting style research suggesting the protective function of both warmth and positive discipline (characteristics of authoritative parenting; Maccoby & Martin, 1983). To date, however, the majority of these studies have focused on European American adolescents. The current findings add to the extant literature by suggesting the potentially positive impact of authoritative parenting in the sexual health and behaviors of AI youth.

While responses came from multiple informants, elders from the reservation site were the most consistent in indicating the family as a protective factor. Elders living on the reservation are likely to identify protective factors that align with traditional parenting values in AI culture, including values that encourage positive behaviors through parental warmth

and responsiveness (BigFoot & Funderburk, 2010). Previous findings also suggest that reservation-based elders are more likely to be aware of, and see the positive impact of, the role the extended family plays in raising children (Coleman, Unau, & Mayfingers, 2001). Elder responses in the warmth subtheme mentioned “aunties” and “grandparents” as sexual health and behavior protective factors. These findings extend beyond the Westernized terminology of parents and reinforce the importance of kinship within Native cultures. Further, given that reservation youth often live nearer family and tribal members, they may receive a higher level of support from and feel more connected to family members than do their urban counterparts (LaFromboise & Dizon, 2003).

School

Respondents from both sites and all sources indicated that various aspects within the school system were important protective factors for the sexual health and behaviors of AI youth. While prior research findings suggest that a sense of belonging to one’s school is often predictive of safer sexual behaviors (Chewning et al., 2001) and diminishes the likelihood of giving in to negative peer pressure (Dickens, Dieterich, & Beauvais, 2012). The use of qualitative methods in the current study allowed for the identification of unique mesosystem dimensions interacting within the school system (e.g., family-school, culture-school) that contribute to its overall protective function.

Participants reported that sexual education within the school system was important. Many suggested that youth should begin sexual education early (i.e., before middle school), which may increase the likelihood that they will apply this information to positive and responsible sexual health, including behaviors and decision making later in life. Given disparities in early teen pregnancy among AI youth, providing early, appropriate sexual education appears to be an important step. Engagement in extracurricular activities also was an important protective factor within the school system. The current findings support prior research findings highlighting the importance of a sense of belonging to one’s school (Dickens et al., 2012; Moilanen, Markstrom, & Jones, 2014), particularly through engagement in sports-related activities. Informants suggested that being part of a larger group, such as an athletic team, was important for youth to feel as if they were accountable to something bigger than themselves. This finding aligns with research suggesting that feeling a sense of belonging is particularly important for AI youth due to the interdependent nature of AI communities and families (Sarche & Spicer, 2008). The concept of belonging also was woven throughout the responses suggesting the importance of social support from teachers, personnel, and peers at school, findings echoed by prior research (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004). Finally, respondents reported that having educational goals was an important protective factor for AI youth. This finding is particularly important, as research suggests that, for AI adolescents, having a child may provide an escape from the feeling that their opportunities (e.g., for higher education) are limited (Sipsma, Lewis, Ethier, & Kershaw, 2011).

The school system and numerous aspects within it appear to serve as vital protective factors in the sexual health and behaviors of AI youth. This is an important finding given the historical context within which AI people have often experienced formalized education

(Churchill, 2004). While the impact of boarding schools must be considered when working with AI communities, findings from the current study suggest that respondents, including AI youth and elders, understand the important function the school system can have in encouraging positive sexual health and behaviors.

Enculturation

Another evident theme indicated by respondents was the positive impact of culture and spirituality (referred to here as enculturation). In particular, findings indicated that cultural and spiritual activities were important macrosystem influences that empowered youth to engage in positive sexual behaviors. For example, one youth (non-parent) highlighted the struggle she felt between the sacred tradition of the Sun Dance and the risky behaviors in which many youth around her were engaging. In general, youth indicated that cultural activities align with positive decision making, and they were concerned about youth who engaged in sacred ceremonies while also engaging in risky behaviors. These findings suggest the impact that cultural traditions can have on youth and the value they see in these ceremonies, and further support prior research suggesting that promoting cultural activities and values is an important aspect in the positive development of AI youth (Heavy Runner & Morris, 1997).

However, responses suggesting the importance of enculturation were only indicated by elders and youth (parents and non-parents) from both sites. While it is reassuring that youth recognize the importance of cultural activities and spiritual practices in making positive choices, it is alarming that school personnel and health care providers did not recognize these protective factors present for the youth with whom they work. One potential reason for this finding is that half of the school personnel and health care providers in this study did not identify as AI; rather, they were individuals who worked with AI youth. This is an important finding in working to inform prevention efforts, in that it provides direction for future work. There is an evident need to train individuals who have a direct influence in the daily lives of AI youth about the importance of cultural activities and spiritual practices within Native cultures.

These findings are also of particular importance for Northern Plains AI youth, as prior research with this population has been mixed. Some findings indicate that enculturation may not necessarily function as a protective factor (Kaufman et al., 2007), while others suggest it promotes resilience (LaFromboise, Hoyt, Oliver, & Whitbeck, 2006).

We have engaged in various projects with the Northern Plains AI youth represented in the current study, and they show high levels of assimilation with mainstream culture. Prior findings suggest engaging in cultural activities such as Sun Dances, smudging, or powwows, can increase feelings of alienation for highly assimilated youth (Kaufman et al., 2007). The current findings are unique in suggesting that, while these youth may show features of cultural assimilation, they continue to recognize that risky behaviors are at odds with their cultural values. Thus, findings from the current study extend the literature suggesting the importance of enculturation for Northern Plains AI youth.

Limitations

The focus of the present study was to identify protective factors present in the sexual health and behaviors of AI youth. The participants represented, however, were Northern Plains AIs and are not necessarily representative of AI/ANs nationwide. This is likely both a limitation and strength. While there is need for more research focused on the protective factors present in the sexual health and behaviors of AI/AN youth in general, it is also evident that, given the heterogeneity within this population, there is a need to examine specific regions/tribes in order to best inform culturally specific prevention efforts.

Participants included in the current study were from both urban and reservation sites, yet there were limited findings regarding potential similarities or differences between the two sites. Further, given that the goal of the current study was much broader—informing a positive youth development curriculum—data specific to sexual health protective factors were limited, which reduced our ability to conduct chi-square analyses examining potential differences between our multiple reporters and sites.

Future Directions

Utilizing multiple informants from all arenas impacting AI youth sexual health and behaviors was viewed as a strength for the current study. Triangulation is a qualitative method used to check and establish validity in a study by gathering data from multiple perspectives. Thus, future research could utilize similar methods, but expand by including questions that focus specifically and exclusively on sexual health and behavior protective factors. Including additional informants could also broaden the information collected and the potential impact of future studies. For example, including other school officials who work directly with AI students, such as principals or coaches, may provide another perspective on potential protective factors. Tribal leaders and those directly connected to and impacting policy change regarding AI sexual health and behaviors and the policies surrounding it could also be included. Finally, future studies could include both AI and non-AI youth to understand better what unique strengths and difficulties should be addressed in AI-specific programs.

Implications and Conclusion

Findings across sites and informants suggesting the importance of the family structure and indicate the need to engage families within teen pregnancy prevention programs for AI youth. Given findings that highlight reservation-based elders as the most consistent source reporting the family as a protective factor, there is an evident need to include the family system in prevention efforts for urban youth, who may not have a larger family structure and associated support and discipline proximally available. Prevention program goals, especially among urban AI youth, may include facilitating communication between parents, the extended family (or a trusted adult), and youth to assist in building decision-making skills likely to impact their sexual health and behaviors.

As previously indicated, the history behind the education system for Native peoples suggests that it may not be considered a protective factor by all informants. However, findings from this study suggest the potential importance of the school system in providing culturally

relevant prevention efforts focused on positive outcomes (e.g., service learning, community volunteering opportunities) wherein youth can engage with and feel accountable to their schools and communities. Further, prevention programs could engage both adults and peers to provide needed sexual education and support.

Finally, it appears evident that there is a need to develop culturally relevant prevention programs that incorporate both the cultural and spiritual traditions of AI communities. Such programs may be particularly important for urban AI youth who experience a lack of cultural connectedness and associated feeling of hopelessness due to distance from family or resources that reinforce culture as a protective factor (Freedenthal & Stiffman, 2004). These programs should work to preserve and sustain traditional cultural and spiritual teachings for both urban and reservation youth through revitalization of cultural traditions and active engagementby all those involved. For example, AI community members might serve as mentors or guest speakers, sharing stories of cultural traditions and values around relationships and marriage. Program content also might address cultural pride and ethnic identity using Native concepts, teachings, and learning theories, such as the Medicine Wheel, which other programs have found to resonate with AI youth (de Ravello, Rushing, Doshi, Smith, & Tulloch, 2011). Prevention efforts would also benefit from educating school personnel and health care providers about the important cultural and spiritual traditions that encourage positive sexual health and behaviors.

While there has long been a call for teen pregnancy prevention efforts, little has been known about how to best approach pregnancy prevention and overall positive sexual health and behavior in Northern Plains AI reservation and urban communities. Findings from the current study provide direction on the systems most amenable to prevention efforts that can assist in strengthening critical protective factors and larger systems in the sexual health and behaviors of AI youth.

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Table 1

Study Questions

Method	Questions (specific to the present study)	
Focus Groups		
Elders (ages 50 years or older; self-identified as AI)	Now we'd like to hear your opinions about how youth in the American Indian community make decisions about sex:	
	1	What do you think are some reasons youth decide not to have sex?
	2	What do you think are some reasons youth decide to use contraception (condoms, pill, etc.) to prevent pregnancy?
	3	What do you think the community's role is, if any, in preventing teen pregnancy?
Youth (ages 16–24 years; self-identified as AI; parents and non-parents)	Now we'd like to hear about how youth in the Native community make decisions about sex:	
	1	What do you think are some reasons your friends or people your age decide not to have sex?
	2	What do you think are some reasons youth decide to use contraception (condoms, pill, etc.) to prevent pregnancy?
	3	What reaction do youth your age have toward teen pregnancy?
Semi-structured Interviews		
School Personnel	**1**	What ways do you work with Native American teen parents?
	2	What reasons do you feel influence Native American youth to decide to delay parenting until after their teenage years?
	3	What do you think are some reasons Native American youth decide to use (condoms, pill, etc.) to prevent pregnancy?
Health Care Provider	**1**	What ways do you work with Native American teen parents?
	2	What do you think are some reasons Native American youth decide to delay parenting until after their teenage years?
	3	What do you think are some reasons Native American youth decide to use contraception (condoms, pill, etc.) to prevent pregnancy?

Table 2

Demographic Characteristics of Study Sample (*N* = 183)

Method		Age[a]	Gender[b]		Race[c]		
	n	**mean (*SD*, range)**	**Female *n* (%)**	**Male *n* (%)**	**AI/AN (alone) *n* (%)**	**AI/AN (multiple) *n* (%)**	**White (alone) *n* (%)**
Focus Groups (*N* =24)	**163**	**33.5 (3.72, 15–79)**	**91 (55.8)**	**71 (43.6)**	**135 (82.8)**	**24 (14.7)**	**2 (1.2)**
Youth (non-parents)	48	18.7 (2.13, 15–24)	26 (54.2)	22 (45.8)	36 (75.0)	9 (18.8)	2 (4.2)
Youth (parents)[d]	57	21.8 (2.22, 17–25)	34 (59.6)	22 (38.6)	44 (77.2)	13 (22.8)	0
Elders	58	58.5 (6.81, 44–79)	31 (53.4)	27 (46.6)	55 (94.8)	2 (3.5)	0
Interviews (*N* = 20)	**20**	**48.4 (11.35, 28–69)**	**19 (95.0)**	**1 (5.0)**	**9 (45.0)**	**0**	**10 (50.0)**
School Personnel	10	47.5 (15.04, 28–69)	9 (90.0)	1 (10.0)	5 (50.0)	0	4 (40.0)
Health Care Provider	10	49.3 (7.67, 31–59)	10 (100.0)	0	4 (40.0)	0	6 (60.0)

[a]Three participants from the elder focus group did not report their age.

[b]One participant from the youth parent focus group identified as both male and female.

[c]One participant from the youth focus group did not report race. One participant from the elder focus group identified as Hispanic only. One school personnel did not report race.

[d]Two female parents did not complete the demographics survey.