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Preventing alcohol-exposed pregnancy among American-Indian youth

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Abstract

Research has determined that the prevention of alcohol-exposed pregnancies (AEP) must occur pre-conceptually with women, either by reducing alcohol intake in women planning pregnancy or at-risk for becoming pregnant, or by preventing pregnancy in women drinking at risky levels. One such AEP prevention programme with non-pregnant American Indian women is the Oglala Sioux Tribe (OST) CHOICES (Changing High-risk alcohol use and Increasing Contraception Effectiveness Study) Programme, which shows promise in reducing AEP risk in American Indian women aged 18 or older. A community needs assessment was conducted with key informant interviews and focus groups with an emphasis on how to expand OST CHOICES. To identify interconnected themes, a content analysis methodology was used on the qualitative feedback from the focus groups and interviews. Altogether, key informant interviews were completed with 25 health and social service professionals. Eight focus groups were held with 58 American Indian participants, including adult women of child-bearing age, elder women, and adult men. Several sub-themes regarding the prevention of AEP with youth were identified, expanding the OST CHOICES curriculum into the schools, and the role of family and culture within AEP prevention.

Keywords

Alcohol consumption; Alcohol-exposed pregnancies; American Indian; Contraception; Youth

Introduction

Early adolescence has increasingly become the focus of research when addressing substance use concerns and other risky health behaviours (Faden and Goldman 2004/2005; Whitesell et al. 2014). Data from the US National Survey on Drug Use and Health (SAMHSA 2010) revealed that almost 52% of teenagers, aged 12 and older, used alcohol in the past 30 days. This same survey found that girls reported higher or similar levels of substance use than boys when aged 12 to 17 (SAMHSA 2010; Chen 2012). Additional research from 2011 found that up to 75% of high school students reported using tobacco, alcohol, or other illicit drugs (Connery, Albright, and Rodolico 2014). Young People are frequently at high risk for detrimental health outcomes associated with alcohol abuse or dependence, and early initiation of substance use is associated with an increased risk for substance use disorders later in life (Whitesell et al. 2014; Windle et al. 2008).

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Of additional concern, teenage alcohol consumption often goes hand-in-hand with risky sexual activity. The Youth Asset Survey found that 22.5% of sexually active youth in the USA used alcohol or drugs prior to their last sexual encounter (Aspy et al. 2012). Other research has found that 22% of sexually active high school students in the USA used alcohol or other drugs before their last sexual experience (Connery, Albright, and Rodolico 2014). Additionally, although age of first sexual activity among teenagers has decreased, for example, 57% of female teenagers in the USA had never had vaginal intercourse in the year 2010 an increase from 49% in 1995, only about 50% of female teenagers who used a condom for contraception reported consistent use (CDC 2012).

Alcohol consumption and sexual activity rates are higher among some minority ethnic groups, such as American Indian (AI) youth. AI youth are more likely to have consumed alcohol in their lifetime (72.1%) compared to their Caucasian counterparts (48.9%) and also have higher rates of binge drinking (15% for American Indians compared to 7%) (Rees, Freng, and Winfree 2014; Friese and Grube 2008; Friese et al. 2011; Caetano, Clark, and Tam 1998; Spear et al. 2005). The rate of lifetime alcohol use among AI girls, spanning ages 12 to 18 years old, (nearly 71%) is significantly higher than the rates reported by Caucasian girls (56%) and AI boys (58.4%) (Spear et al. 2005).

Moreover, AI adolescents are less likely to use contraception during sexual intercourse. For example, only 41% of AI youth reported condom use at last intercourse (Mitchell, Kaufman, and Pathways of Choice and Healthy Ways Project Team 2002; Gilley 2006). Pregnancy rates for AI youth are disproportionately higher than any other ethnic group, and unplanned pregnancy among AI youth is two to three times greater than non-Hispanic Caucasian teenagers (Whitesell et al. 2014; Wingo et al. 2012; Garwick et al. 2008). According to Garwick et al. (2008), the AI birth rate among young people (69 out of 1000) exceeds that of the national rate (49 out of 1000), and one-fifth of all births to AI women are to women younger than 20 years old, compared with the national rate of one in nine births to those of equivalent age. The higher rate of teen pregnancy among AI youth is partially due to the underlying factors of social and economic disparities, such as poverty (Selk 2003; Macartney, Bishaw, and Fontenot 2013), drug and alcohol use (Beals et al. 2003; Beauvais 1998; Dennis and Momper 2012; Kaufman et al. 2007), and physical/sexual abuse (Macartney, Bishaw, and Fontenot 2013; de Ravello et al. 2014; Kenney, Reinholtz, and Angelini 1997; Mylant and Mann 2008).

The combination of binge drinking and risky sexual behaviour is concerning for all populations as it may lead to both unplanned and alcohol-exposed pregnancies (AEP). Current research concludes that prevention of AEP should begin preconceptionally, by either reducing alcohol intake or preventing pregnancy in women who are at risk for, or planning, pregnancy. Some 10–26% of sexually active women may be at-risk for an AEP because of binge drinking while being at risk for an unplanned pregnancy. In many AI communities, the risk for AEP is even higher, with up to 30% of AI women at risk for AEP (Hanson et al. 2013).

One project for AEP prevention in preconceptional women is Project CHOICES (Changing High-risk alcohol use and Increasing Contraception Effectiveness Study), which focuses on

reducing risk for AEP through alcohol reduction and pregnancy prevention using an in-person brief intervention and motivational interviewing sessions (Floyd et al. 1999; Project CHOICES Intervention Research Group 2003; Floyd et al. 2007; Project CHOICES Research Group 2002). The original Project CHOICES focused on non-pregnant adult women at high risk for an AEP who received four face-to-face motivational intervention sessions over several weeks, with a separate contraception counseling session. Each participant was given personalised feedback on how their risk for an AEP compared to that of other women, and they logged daily drinking behaviour, sexual activity, and contraception utilisation as a way to evaluate behaviour change over time. The Project CHOICES intervention significantly decreased AEP risk in the intervention group compared to the control group (Floyd et al. 1999; Project CHOICES Intervention Research Group 2003; Floyd et al. 2007; Project CHOICES Research Group 2002).

Currently, the Oglala Sioux Tribe (OST) in South Dakota is implementing the Project CHOICES approach with AI women at risk for AEP. The programme emphasises a positive collaborative relationship between AI women and the programme developers in order to reduce alcohol consumption and increase birth control use. Because the OST CHOICES Programme has been successfully implemented and shows promise in lowering the AEP risk with adult AI women, aged 18–44 (unpublished data), a community-based needs assessment was conducted to gather data on expanding this tribally-run AEP prevention programme. The goal of this article is to describe tribal community input on the importance of expanding the OST CHOICES Programme and its curriculum to AI youth.

Methods

Approval was acquired from all the appropriate institutional boards, including the OST tribal research review board, as well as the Indian Health Service institutional review board. The research team comprised the principal investigator (JDH), a research associate (JJ), and the OST CHOICES Project Coordinator. Focus groups were held with American Indians living in two communities where the OST CHOICES Programme was made available. They included focus groups with adult women of childbearing age, elder women, and adult men. Research staff considered conducting focus groups with AI teenagers, but because no teenagers had been enrolled into OST CHOICES, it was decided to defer including members of this age group in CHOICES-related research until it was clearer how appropriate this programme might be for them. Additionally, key informant interviews were completed with health and social service professionals who work at local health care centres, non-profit agencies, and tribally-run organisations.

The open-ended, semi-structured questions for the focus groups and key informant interviews were reviewed by members of the OST CHOICES project's community advisory board and are listed in Table 1. Accompanying the questions, a brief description of the OST CHOICES Programme was provided by the focus group leader. This description explained eligibility for OST CHOICES (e.g., AI women who are currently not pregnant, but are at risk for getting pregnant and are drinking at risky levels), as well as the education that the OST CHOICES Programme provides, such as learning about how much alcohol is in each drink, how alcohol affects the baby in the womb, various contraception methods, and also

activities that OST CHOICES participants complete, such as listing the good and bad things about drinking alcohol and their current contraception practices.

Recruitment for focus groups was completed by advertising in local newspapers, distributing flyers across the communities, and through community contacts and word-of-mouth. Recruitment for key informant interviews occurred by asking individuals who currently work with the population as health care providers or within non-profit health care settings come across while working with the OST CHOICES Programme and/or who were recommended via current contacts. Focus groups took place in private meeting rooms at non-profit organisations in the respective communities, while key informant interviews occurred in the professionals' offices or clinic rooms. Written informed consent was obtained before data collection began. With participants' permission, all focus groups and interviews were tape-recorded and transcribed verbatim. Data collection lasted approximately one hour with each interviewee/focus group and was facilitated by an individual from the research team. Each participant received a \$25 gift card to thank them for their time.

Data Analysis

After data collection, the qualitative data was organised and coded. A single coder (JJ) read through all transcripts to uncover impressions about the inclusion of youth in preventing AEP, letting the data emerge from the text. The principal investigator (JDH) met with the coder to determine any variances in coding and to finalise the codebook. A conventional content analysis methodology was used to determine and construe consistent themes concerning the expansion of the OST CHOICES Programme to include young people in the prevention of AEP in the AI communities.

Findings

A total of eight focus groups were held with 58 AI participants: three with adult women of child-bearing age (aged 18–44; n=20), two with elder women (aged 45 and older; n=20) and three with adult men (aged 18 and older; n=18). The focus groups included an average of seven participants (range 4–15). Key informant interviews were completed with 25 health and social service professionals (n=15 from an urban city and n=10 from a rural/reservation sites). See Table 2 for additional demographics of the study participants. Based on input from focus groups and key informant interviews, several subthemes within prevention of AEP among youth stood out, including the importance of education, parental/elder involvement, and the importance of culture. Pseudonyms have been used in the quotes below in place of participants' actual names to protect their anonymity. One pervasive theme throughout the needs assessment was the necessity of including young people themselves within the programme.

Prevention of AEP with Youth

Concerned about the number of young people who are drinking alcohol and becoming pregnant before the age of 18, participants urged that prevention efforts start younger. Regarding pregnancy prevention, participants felt it was essential to educate young people

before they become teenage parents. One female key informant, Sheila, shared a common occurrence she deals with day to day working with youth,

“When we talk to our kids I think of the teens that are actively using, and there’re so many of them, and the binge drinking and the unprotected sex ... do you really realise that you may be ‘x’ weeks pregnant ... and you’ve been drinking?”

Despite this being a sensitive topic for some parents and schools, participants felt that sexual activity and alcohol consumption needed to be addressed with this age group. Katherine, an elder female focus group participant specifically asked, “What about expanding your programme for the younger people?” One male focus group participant, Tom, agreed, stating that, “When 14, 15 years old they’ve already raised their brothers and sisters, they know how to cook, clean, and are pretty out there; so it’d be the spot to hit I think.” As well, participants desired a focus on youth due to the number of teenage pregnancies they had witnessed, with some young women between 10 and 12 years old getting pregnant. An adult female focus group participant, Melanie, stated that, “I’ve actually met one that was 12 when she had her first baby.” Myrna, another female key informant interviewee explained:

We’ve had a string of girls who are 15, 16, 13 actually, 13 to 16 who are pregnant in the last six months... and a lot of them have been abusing alcohol or have those concerns. I think that it needs to be expanded because... if you lay a foundation earlier then maybe you will be able to prevent some of the teenage pregnancies, not only alcohol-exposed pregnancies, but some of the teen pregnancies and then you get a healthier community as a whole. So you have to really look at your population; that these girls are getting pregnant when they’re 16, 17, 18 yeah and they would miss a big component if you limited your sample to over 18.

Education

The role of education in preventing AEP was viewed as paramount by participants. Participants indicated that many young girls are not being taught at home about sexual safety and/or drinking; or if their parents drink, they may think it is normal. Many ideas were generated about the best ways to educate young people on this topic, such as summer programmes or having a school programme that occurs every two weeks or monthly. Another suggestion was to provide AEP prevention education (for example, risky drinking and prevention of pregnancy education) during sports physicals, also called pre-participation exams which are required by most all schools in the USA before partaking in a sport, since young people tend to part in at least one sport. Mike, a male focus group participant stated, “I think you’re definitely going to need to go into the schools, set the age to maybe 12 years old; because there are young girls that are getting pregnant.”

Participants felt that it would be beneficial to have a sexual education class and more post-secondary education available; education which goes beyond the high school level. Rita, a female key informant said, “I think the good thing about being in the schools is that we’re getting kids when they are at their highest risk times. Early education is key.” Participants in the focus groups were very enthusiastic about potentially having a parenting class in high school that might include the Oglala Sioux Tribe CHOICES curriculum along with parenting skills. As Karen, an elder female focus group participant surmised, “I think sex education is

really important at a really young age, before they go into their moon [their period] and all this, then they know how their body functions and what to expect if there's sex or unsafe sex." Participants felt that young women also needed to be educated on what takes place if one drinks and is pregnant, or could become pregnant. Brenda, an adult female focus group participant said, "I would be thrilled if my daughter was part of this programme. It's all about education and supporting them on making better choices." Another adult female focus group participant, Theresa, said,

A lot of what is being taught in school isn't, they don't really get the exposure to the details of-of what alcohol does, um, there's a lot of health classes that don't even touch base on things like that and it only makes sense for the education system to look at the-the culture, the environment that they're working in.

Family

Participants viewed the role of family as integral to preventing AEP. Much of the information from within the family comes from elder female relatives and "aunties." Participants felt that elder female relatives could connect young women to their culture and thus reduce harmful health behaviors, such as risky alcohol consumption or risky sexual behavior. Susan, an elder female focus group participant expressed, "I think it would really be great if we could have some kind of women's and daughters' programme; that we could instill some of those traditional ways back with our daughters." In the community studied, there remains high respect for elder female members of the family and sitting with the young women in a traditional way could enable teaching about the risks.

Participants stated that beyond elders and aunties, parents needed to be more involved. However, they also felt that parents do not talk with their kids; and if they do, the children will not listen. One female key informant, Amber, suggested that there should be education for parents on the value of helping their teenagers with services for AEP prevention. "I think sometimes parents are just scared and they get freaked out, and they think that if they don't get them contraceptives then they won't have sex; let's educate and empower our parents." Another female key informant, Dawn, commented that,

This programme would be really beneficial to those young women that don't have somebody at home talking to them about 'get on birth control' or if they become sexually active, you know, to talk with their parents...a lot of people you know don't want to come up to their parents. They'd probably like to come up and talk with someone else.

Culture

According to participants, prevention efforts for AEP should also include a strong cultural component. Amanda, a female key informant interviewee thought that, "It would be great... if they were to learn and educate more about maybe identity and cultural aspects of life, I think that would make a tremendous difference for the youth." The role of elders was again stressed with Bernard, a male participant mentioning that,

If you get someone who's experienced in the talking circle and let out all her emotions and what happened in her life and these other, other kids see that and then

they emotionally get involved and they tell the whole truth and they just let it all out and so talking circles are very powerful.

An integral part of incorporating culture in AEP prevention present in the OST CHOICES curriculum is the use of the women's coming of age ceremony or *Isnati Awica Dowanpi* in welcoming and educating a young woman during this important transition in her life. Tracey, an adult female focus group participant described her own earlier experiences in this respect,

When I was 11 years old, I had that coming into womanhood ceremony when my family, you know, chose to put me into that ceremony and in that ceremony, you have-you have women that come into your teepee and talk to you about respecting yourself; respecting your body...the things you should do as a woman. And all of these things, for me, have stayed with me for a long time. So I think for our children that can go through that, it will really help with prevention.

Discussion

This study has highlighted the community-defined importance of beginning AEP prevention efforts early with AI youth. Through community engagement, our study produced qualitative data to support the expansion of AEP prevention efforts by educating AI youth about alcohol consumption and contraception use. Sub-themes described earlier point to varying ways of accomplish this such as early education, family involvement, and through a focus on culture.

Both focus group participants and key informant interviewees stressed how the OST CHOICES and similar programmes could partner with existing school-based programmes to provide education on AEP prevention. There is a parallel need however to provide education to parents and other guardians on how to talk about alcohol consumption, sexual activity, and AEP. The importance of family involvement is evident both in this study and in findings from previous research that Van Der Vorst et al. (2012) and Messler, Quevillon, Simons 2014; Wood et al. (2004).

There was extensive discussion on the role that culture can play in AEP prevention and within the OST CHOICES Programme. In particular, elder women were cited as central to the success of any type of prevention effort, especially those involving girls. This fits with findings from other research (Loppie 2007; Gauss 2004). The importance of the *Isnati Awica Lowappi* (First Moon) ceremony was discussed, which celebrates the initial coming of a girl's moon time or menarche (Gauss 2004, Youth RSFAI 2015). This powerful tradition could be incorporated more centrally into the OST CHOICES Programme as it expands to work with youth.

Another powerful resource that could be incorporated into future work is the use of Talking Circles, which offer a traditional a way of making group decisions among AI people (Haozous et al. 2010). Proven to be a respected tool in AI health research, Talking Circles offer a way for a group of people to discuss a topic in an equal and non-confrontational manner, conveying convey information in the AI oral storytelling tradition (Haozous et al. 2010; Fleischhacker et al. 2011; Struthers et al. 2003; Strickland, Squeoch, Chrisman 1999).

In our own work, the OST CHOICES Programme offers participants the option of receiving the intervention in a group setting. This provides participants with the opportunity to provide feed back to fellow group members as well as to hear others' experiences.

Limitations

This study is not without its limitations however. First, participants in the focus groups and many of the key informant interviews were primarily Northern Plains AI and their views were, therefore, not necessarily representative of all AI communities. Like other studies of its kind, our research may have suffered from recall error, participant reactivity to the interviewer, and self-serving responses (Patton 2002). Finally, although we recognise the role that young men play in preventing AEP, the CHOICES programme does not currently focus its curriculum on men and therefore their perspectives are underplayed in this account.

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Table 1**Key Informant and Focus Group Questions**

Main Question	Follow-up questions or prompts
Tell me about some successful public health programmes in your community.	Prompt: For example, for women, families, youth
What pregnancy prevention programmes currently exist in your community? What about for alcohol cessation?	Follow-up question: What are some good things about these current programmes? Follow-up question: How could these current programmes be improved?
Tell me your thoughts on preventing alcohol-exposed pregnancies with women that aren't currently pregnant.	Prompt: What is the best way to prevent alcohol-exposed pregnancy? Prompt: Do you think alcohol-exposed pregnancy is an issue in your community?
Now I am going to describe the CHOICES and <i>Yuonihan</i> programmes. What are your overall thoughts on these programmes?	Prompt: What are some good aspects, what are things that could be improved? Follow-up question: How could these programmes be utilised in this community or healthcare setting?
If CHOICES was to be implemented in your community, would CHOICES be identical to what I described or how would it be different?	Follow-up question: What do you think of the use of "talking circles" to prevent alcohol-exposed pregnancies? Prompt: What would be the focus population (for example, adult women only)? Prompt: Where would an intervention best take place (i.e., school, media campaign, etc.)?
What barriers do you see in implementing an alcohol-exposed pregnancy prevention programme?	Prompt: For example, logistics in putting the intervention into practice (e.g., time to get approval, staff time, and other issues)?
You mentioned several barriers to implementing an alcohol-exposed pregnancy prevention programme. (For example) What are some solutions to these barriers?	
One challenge that other public health-based programmes face is sustainability. Tell me how you would keep the alcohol-exposed pregnancy (AEP) prevention programme running long-term (for example, for the next 5 years, 10 years, etc.).	Follow-up question: In what ways would you like to be involved?

Table 2

Participant demographics

Characteristics	Key Informants (n=25)	Focus Groups (n=58)	Total (n=83)
Gender			
Female	24 (96.0)	40 (69.0)	64 (77.1)
Male	1 (4.0)	18 (31.0)	19 (22.9)
Ethnicity *			
American Indian	10 (40.0)	54 (93.0)	64 (77.1)
White	12 (48.0)	2 (3.5)	14 (16.9)
Native Hawaiian/Pacific Island.	-	2 (3.5)	2 (2.4)
Marital Status **			
Married, living together	14 (56.0)	6 (10.3)	20 (24.1)
Partnered, living together	2 (8.0)	8 (13.9)	10 (12.0)
Partnered, not living together	1 (4.0)	3 (5.2)	4 (4.8)
Separated	-	5 (8.6)	5 (6.0)
Divorced	1 (4.0)	17 (29.3)	18 (21.7)
Single, never married	5 (20.0)	13 (22.4)	18 (21.7)
Widowed	1 (4.0)	6 (10.3)	7 (8.4)
Employment Status			
Employed	25 (100.0)	26 (44.8)	51 (61.4)
Unemployed	-	15 (25.9)	15 (18.1)
Self-employed	-	3 (5.2)	3 (3.6)
Homemaker	-	2 (3.4)	2 (3.4)
Student	-	1 (1.7)	1 (1.2)
Retired	-	6 (10.3)	6 (7.2)
Unable to work	-	3 (5.2)	3 (3.6)
Education Level **			
Less than high school	-	5 (8.6)	5 (6.0)
High school/GED	-	15 (25.9)	15 (18.1)
Some college	1 (4.0)	18 (31.0)	19 (22.9)
2-year college degree	3 (12.0)	11 (19.0)	14 (16.9)
4-year college degree	6 (24.0)	8 (13.8)	14 (16.9)
Master's degree	13 (52.0)	-	13 (15.7)
Doctorate degree	1 (4.0)	-	1 (1.2)
Professional degree	-	1 (1.7)	1 (1.2)
Mean Age (range)	40.5 (23–66)	42.5 (20–83)	

* Missing n = 3

** Missing n = 1