BeLIEVING IN NATIVE GIRLS: CHARACTERISTICS FROM A BASELINE ASSESSMENT

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Abstract: BeLieving In Native Girls (BLING) is a juvenile delinquency and HIV intervention at a residential boarding school for American Indian/Alaska Native adolescent girls ages 12-20 years. In 2010, 115 participants completed baseline surveys to identify risk and protective factors. Initial findings are discussed regarding a variety of topics, including demographics and general characteristics, academic engagement, home neighborhood characteristics and safety, experience with and perceptions of gang involvement, problem-solving skills, self-esteem, depression, sexual experiences and risk-taking behaviors, substance abuse, and dating violence.

INTRODUCTION

The purpose of this article is to describe the characteristics of 115 American Indian/Alaska Native (AI/AN) adolescent girls ages 12-20 years who participated in BeLieving In Native Girls (BLING), a juvenile delinquency and HIV intervention at an AI/AN residential boarding school.

BACKGROUND

In response to the high levels of HIV and juvenile delinquency among young girls, in 2008-2009 the Office on Women's Health (OWH) initiated a competitive call for proposals for the *HIV/AIDS Prevention Education Services for Female Youth at Greater Risk for Juvenile Delinquency Project*. Ten programs, including BLING, were funded. Each of the 10 sites served minority adolescent females and shared common directives, goals, and objectives. Each site provided evidence-based programming across multiple sessions; however, specific program curricula varied, based upon the cultural needs of the respective minority groups. To determine the effectiveness of the programs, OWH contracted an external evaluator, Global Evaluation and Applied Research Solutions (GEARS), Inc., to conduct a national cross-site evaluation using a standard instrument.

The process used to develop the evaluation instrument started with a literature review of 196 articles pertinent to adolescents and access to health services, risk assessments, and topically relevant program assessment. Based on this information, the external evaluator and the OWH Project Officer defined core elements to be used for the national evaluation tool. These included violence, reproductive health, conflict resolution, communication skills, mental health, overall wellness, substance abuse, self-esteem, cultural identity, and gender and societal norms.

With a focus on measuring these core elements, the external evaluator and a team of subject matter experts then identified a set of widely accepted scales used in research within adolescent populations. The survey scales were selected based on their relevance, validity, and reliability, as well as their potential to best determine measurable changes that could be attributable to the intervention. In addition to published scales identified throughout this process, the external evaluator utilized an internally developed scale, which has been used in evaluations with similar populations, to measure problem solving skills (internal consistency = 0.76). Also, a 10-item measure previously developed by the external evaluator for college-aged women attending minority institutions was used to gauge girls' sexual experience.

All of the instruments and items were presented to and discussed with the national evaluation stakeholders (i.e., OWH and the 10 funded programs). The external evaluator then created a survey from which to gauge how knowledge, attitudes, behaviors, skills, and intents to change behavior might be affected by the different interventions employed. The survey was designed to be administered at pre-assessment, post-test, 6 months post-test, and 12 months post-test. The instrument received Institutional Review Board (IRB) and Office of Management and Budget clearance in Fall, 2010 and was first administered during October 2010. All sites, including the school offering the BLING program, will input evaluation results into a national database, in order to inform the OWH about the efficacy of each program.

The following standardized survey instruments were used to derive questions for the larger risk assessment:

- Neighborhood Environment Scale (Crum, Lillie-Blanton, & Anthony, 1996);
- Exposure to Gangs Survey (Dahlberg, Toal, & Behrens, 1998);
- Problem Solving (Developed by GEARS for this project);
- Adolescent Femininity Ideology Scales (Tolman & Proche, 2000);
- Rosenberg Self-Esteem Scale (Rosenberg, 1979);
- Center for Epidemiologic Studies Depression Scale for Children (CES-DC; Fendrich, Weissman, & Warner, 1990);
- Intentions for Safer Sex Scale (Lux & Petosa, 1994);
- Attitudes towards Gangs (Nadel et al., 1996);

- Acceptance of Couple Violence (Dahlberg et al., 1998);
- Original Conflict Tactics Scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996);
- Rochester Youth Development Study (Thornberry & Krohn, 2000);
- Sexual Behavior (Lepkowski et al., 2006);
- Victimization in Dating Relationships (Foshee et al., 1996);
- Relational Aggression, Gender, and Social-psychological Adjustment (Crick & Grotpeter, 1995);
- Alcohol, Tobacco, and Other Drugs – Age At First Use (Substance Abuse and Mental Health Services Administration [SAMHSA], 2009); and
- Alcohol, Tobacco, and Other Drugs (ATOD) 30-day use scale (Centers for Disease Control and Prevention [CDC], 1991-2009).

THE BLING PROGRAM

In 2010-2011, BLING provided programming to 115 AI/AN girls between the ages of 12 and 20 years, who were living at a residential boarding school in a Plains state. The school annually provides elementary, middle, and high school education to approximately 500 residential students from 75 federally recognized tribes across the U.S. All are AI/AN students at risk for a variety of physical, emotional, and/or behavioral problems due to health care inequities, poverty, homelessness, substance abuse, family violence, domestic violence, and/or gang violence. When asked, students said they attended the school for one of three primary reasons: to distance themselves from problems with family, friends, or law enforcement in their home communities; to attend school with other AI youth; or because they had no other housing alternatives. According to the school administration, approximately 25% of the students are technically homeless in any given year.

This school was selected for participation based on the AI/AN student population it serves and the willingness of the superintendent and staff to provide access to the campus and adolescent girls. Although there is no research on the representative nature of boarding schools compared to schools on reservations or in other areas, this school admits students from every federally recognized tribe, so the assumption was made that this diversity would have at least some resemblance to behaviors occurring within students' home communities.

Residential boarding schools, without any other mitigating factors, can be stressful environments, particularly for new students, who are now sharing everything—living space, recreational space, dining space, and classroom space. Peer observation and review is ongoing and unrelenting, and privacy is scarce. Everything is new and homesickness is pervasive. In the first several weeks, cliques have yet to be formed and students are receptive to and accepting of

support. Consequently, BLING staff took advantage of this window of opportunity and initiated an introductory process early in the 2010 program year to help build relationships with the students, while also identifying girls with a need for more individual attention. That process consisted of a short one-on-one interview and evolved into an unanticipated mental health intervention. All new female students ages 12 years and older are eligible for BLING. The girls planning to participate in 2010-2011 were asked a series of basic questions about their lives. Examples of the questions were: "Tell me about your family." "Do you feel safe when you are at home?" "How are you doing in school?" "Do you have any health concerns?" "Do you have someone you can talk to about problems?" The interviewers, who were BLING facilitators or counselors, then made subjective assessments based on the discussions. Girls with interview ratings of 3 or 4 (on a 4-point scale of 1= *Low risk/Having no problems* to 4 = *High risk/Having problems*) were referred to the school counseling staff for further assessment. Examples of automatic referrals included girls who disclosed substance abuse, death in family, suicide ideation, and/or pregnancy/motherhood. Girls were asked if they would like to talk to a counselor; they could also request a referral for an undisclosed reason. BLING staff made 40 referrals for additional assessment during the first several months of school (35% of participants). The high percentage of initial referrals was not an anomaly, but an indicator of the educational and social support needs within this population.

The BLING curriculum consists of 24 teachings focused on building protective factors and educating about anatomy and sexual health, sexually transmitted infections, HIV prevention, communication and interpersonal relationship skills, racism, substance abuse, and mental wellness. The program is built upon two theoretical constructs of behavioral change, the *Transtheoretical Stages of Change* (Prochaska & DiClimente, 2005) and the *Social Learning Theory* (Bandura, 1986). The 90-minute teachings are delivered weekly in female dorms after curfew to minimize conflicts with other school activities. AI staff members from the local community are trained to deliver HIV prevention information, and the program manager, a graduate-level person, attends all meetings. The construct of the teachings is framed around the Medicine Wheel and the connectedness and consequences of choices and decisions regarding every aspect of our being. For HIV content, teachings were adapted from an evidence-based curriculum based on the work of Jemmott and Jemmott (1992) and from *Be Proud! Be Responsible!* and *Circle of Positive Choices* (National Indian Women's Health Resource Center, 2006). Teachings about relationships were also adapted from Circle of Positive Choices. Additional teachings were developed by the BLING Program Director to address bullying, substance abuse, historical trauma, problem-solving, racism, and suicide prevention. Each session was reviewed and adapted (when necessary) by BLING staff into a "see, say, do" learning style that has been shown to be effective with AI communities (McIntosh, 2005). Teachings integrate active learning methods such as talking circles, role plays, and games.

The number of participants for each session ranges between 12 and 24. A school-assigned liaison assists with space and meeting logistics. An AI psychologist rotates between sessions in the various dorms on a monthly basis, and serves as a behavioral health provider for girls needing additional support. By employing these theoretical and cultural frameworks, BLING aims to educate girls and to increase individual-level protective factors to reduce the risks for HIV and other sexually transmitted infections.

METHODS

Recruitment was open to all girls ages 12 years old and older who had not been in a similar program the prior year. (Girls who had already completed a similar program were referred to a supplemental program during the school year described in this article.) The school, as acting guardian, gave permission for students to participate in the evaluation activities and in the program. Additional steps were put in place to ensure that students, as minors, understood the informed consent/assent process and agreed to participate. The protocols and forms were approved by a national IRB. Girls were gathered in small groups, and BLING staff members explained the program goals and objectives and the consent process. A total of 115 girls agreed to complete the assents and continue with the survey. One girl declined the survey, but was invited to attend program teachings.

The form was read aloud and time was given for questions and explanation. Survey questions were also read aloud to minimize problems with low literacy levels and slow reading, and to ensure all students completed the survey within the allowed timeframe. Students were free to read ahead and work at their own pace. The majority of the 330 questions were closed-ended; choices were true/false or a selection across a 5-point Likert scale. A refreshment break was scheduled midway to avert survey fatigue. At the conclusion of the survey, participants received a $10 incentive (Wal-Mart gift card).

All surveys were coded with a unique identifier and the key maintained by the local evaluator in a separate location to ensure confidentiality. Hard copies were stored at the BLING program offices in a locked file cabinet. Data were entered into the national database managed by GEARS, Inc. and downloaded into SPSS statistical software for analysis. During analysis, data were collapsed into ordinal scales to better describe outcomes. The information reflects frequencies rather than statistical significance; thus, power was not a reporting factor.

RESULTS

A total of 115 girls completed the baseline instrument. Participants were not required to answer every item; for each section of the instrument, the number of respondents is noted. Lack of response to some items may indicate that girls felt uncomfortable reporting, perhaps due to their high risk in those areas. However, to avoid reporting risks higher than could be documented, non-responses were not included in analyses.

Participant Demographics

The ages of participants were: 13 (9%); 14 (14%); 15 (17%); 16 (30%); 17 (20%); 18 (6%); and 19+ (4%). Twelve percent (n = 14) predominantly speak a language other than English; 31% (n = 35) speak English and another language equally; and 57% (n = 65) speak only English. Within the most recent six months, 21% (n = 24) had moved to a new neighborhood and 7% (n = 8) had moved to a new place in their current neighborhood. Seventeen percent (n = 20) reported having no adult to talk to about problems and 15% (n = 17) never talk to an adult about things they are doing or thinking.

School Experiences

Participants were in the 7th through 11th grades, with the greatest percentage in the 8th grade. See Table 1 for more information.

Table 1
Participants' School Experiences (n = 111)

Grade in School					
	7	8	9	10	11
Percent (Number)	11% (13)	31% (35)	20% (23)	12% (14)	23% (26)
Scholastic Grade (n = 111)					
	Mostly A	Mostly B	Mostly C	Mostly D	Mostly F
Percent (Number)	10% (11)	39% (43)	32% (36)	7% (8)	12% (13)
School Enjoyment (n = 115)					
	Most of the time		Seldom or Never		
Percent (Number)	48% (55)		19% (22)		
School Importance (n = 115)					
	Very important		Not at all important		
Percent (Number)	51% (59)		0% (0)		

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Table 1, Continued
Participants' School Experiences (n = 111)

	Dropping Out (n = 112)	
	Had dropped out previously	Had not dropped out
Percent (Number)	24% (28)	76% (84)
	Under 15 years	15 years or older
Percent (Number)*	14% (4)	86% (24)

* Age range of those who dropped out of school was 13-20 years

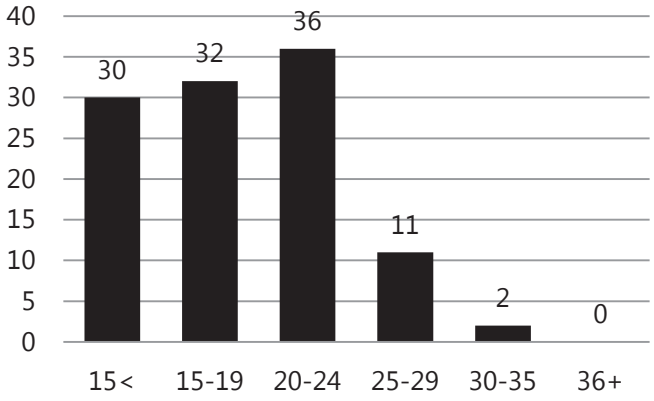
Neighborhood Environment Scale (N = 115)

The Neighborhood Environment Scale (Crum et al., 1996) asked participants 17 questions about the safety and viability of their home neighborhood. Included with this set of questions were 6 items from the Exposure to Gangs Survey (Dahlberg et al, 1998). Response categories were true/false, and responses were sorted into two tables to report on positive and negative aspects. Negative responses reflected the presence of drugs, violence, homelessness, and gangs. Positive responses reflected accessible recreation spaces, sense of safety when walking alone, and caring neighbors. Overall answers were split—51% and 49%, respectively— indicating that at least half the girls felt unsafe in their home communities.

Problem Solving (N = 111)

As noted earlier, the national evaluator developed an 11-item scale to assess problem-solving abilities in middle school youth. Examples of questions in this scale are: "I think about different things I could do before I do anything." "I try to listen to the other person even if I do not agree with him or her." "I usually wait until the problem goes away by itself, instead of trying to solve it." Participants responded on a 5-point scale of *All of the time* to *Never*. Answers were tallied for each participant. Possible total scores ranged from 0 to 44. Lower scores indicated less problem-solving ability, and higher scores indicated greater ability. For ease of description, the scores were further categorized by range: <15, 15-19, 20-24, 25-29, 30-35, and 36+. All of the responses in this study were at or below the middle of the range, indicating a need for improved critical-thinking and problem-solving skills in the population (see Figure 1).

Figure 1
Problem Solving



Adolescent Femininity Ideology Scales (AFIS), Inauthentic Self in Relationship Subscale (N = 113)

Nine questions from this subscale (Tolman & Proche, 2000) measured the ability of participants to be authentic in expressing thoughts and feelings towards others and mutually in close relationships. Examples of questions include "I worry I make others feel bad if I am successful," and "I tell friends what I honestly think, even if it is an unpopular idea." The 5-point scale choices were *Strongly agree* to *Strongly disagree*. Values were totaled for each participant. Possible response totals were 0 to 36, with higher numbers indicating a greater level of ability. Again, for ease of description, responses were categorized as low (0-12), middle (13-24), and high (25-36). The majority of girls (66, or 58%) were in the middle range. Twenty-two girls (20%) scored in the upper third and 25 (22%) fell in the bottom third.

Another eight questions assessed self-perceptions about body image. Examples of questions included "I often wish my body were different," "I think a girl has to be thin to be beautiful," and "On the whole, I am satisfied with myself." The 5-point scale choices were *Strongly agree* to *Strongly disagree*. Values were totaled for each participant and possible response totals ranged from 0 to 32. Responses were categorized as least objectified (0-11), moderately objectified (12-24), and most objectified (25-32). A total of 109 participants completed all of the questions, and responses indicated that about half of the girls (51%, n = 56) had a moderate to low perception of body image, 39% (n = 42) had a moderate to high perception of body image, and 10% (n = 11) had a high perception of body image.

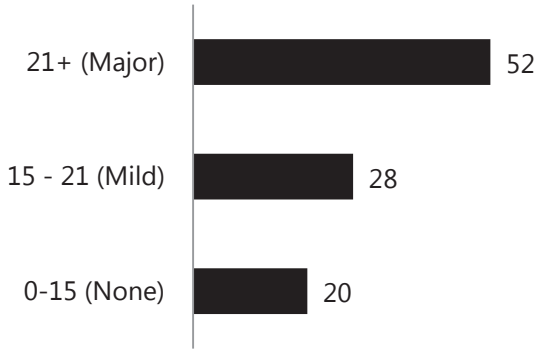
Rosenberg Self-Esteem Scale (N = 115)

Ten questions from the Rosenberg Self-Esteem Scale (Rosenberg, 1979) measured self-satisfaction and self-worth. The 5-point scale choices were *Strongly agree* to *Strongly disagree*. Values were totaled for each participant, and possible scores ranged from 1 to 40. Scores ranging from 15-25 on this scale were considered within a normal range, while scores below 15 suggested low self-esteem. In our group, about two-thirds (67%; n = 77) fell within good to high ranges for self-esteem, while the remaining third (35%; n = 38) were at the low end of the spectrum.

Center for Epidemiologic Studies Depression Scale for Children (CES-DC;N = 109)

Participants completed 20 questions from the CES-DC (Fendrich et al., 1990) about their moods, behaviors, and feelings during the preceding week. Respondents' choices on a 4-point scale were *Not at all* to *A lot*. Values were totaled for each participant. The standard rule for interpreting the findings was that a score of 15 or less indicated normality and no depression, a score of 15-21 indicated mild to moderate depression for which individuals should seek help, and a score over 21 indicated the possibility of major depression for which individuals should seek out a psychologist as soon as possible. Eighteen percent of participants (n = 20) had scores indicating no or low levels of depression, 26% (n = 28) demonstrated mild levels of depression, and 47% (n = 52) had a score of 21 or higher, indicating that almost half of participants were at risk for major depression (see Figure 2).

Figure 2
CES Depression Scale



Intentions for Safer Sex Scale (N = 115)

Six questions from this scale (Lux & Petosa, 1994) gauged the intention to practice safe sex; examples include "I will make sure a condom is used when I have sex," "I will only have one sexual relationship at a time," and "I do not plan on having sex until I am at least eighteen years old." The 5-point response choices ranged from *Strongly agree* to *Strongly disagree*. When responses were tallied, 85% (n = 98) indicated an intention to use condoms during sex (mean score

was 4.52). While intent for condom use was high, responses for abstaining or delaying sex were lower; 36% (n = 41) planned to delay sex until marriage (mean of 3.15). Responses from 32% (n = 37) of participants indicated intent to engage in sexual activity before marriage; 32% (n = 37) were "neutral" in their response to this item, suggesting a reluctance to answer the question.

Attitudes Towards Gangs (N = 104)

A 9-item scale (Nadel et al., 1996) measured attitudes towards gangs. Examples of questions in this scale include "I think you are safer and have protection if you are in a gang," "My friends would think less of me if I join a gang" and "Some people in my family belong to a gang, or used to belong to a gang." Respondents chose from a 5-point ascending scale from *Strongly disagree* to *Strongly agree*. Values were totaled for each participant. The possible responses ranged from 0 (low support for gangs) to 36 (high support for gangs). Responses were further divided into categories showing level of support: low (0-12), moderate (13-24), and high (25-36). The majority (59%; n = 61) were not supportive of gangs. The remaining 41% (n = 43) indicated, at most, a mild interest in and support of gangs. None reported a high level of support for gangs.

Acceptance of Couple Violence (N = 109)

On an 11-item scale measuring acceptance of couple violence (Dahlberg et al., 1998), questions included, "A girl who makes her boyfriend jealous on purpose deserves to be hit," and "There are times when violence between dating partners is okay." The 5-point response categories were *Strongly disagree* to *Strongly agree*. Values were totaled for each participant, and the range of responses was 0 to 44. For ease of description, responses were further divided into four categories of tolerance for couple violence: none to low (0-10), low to some (11 to 21), some to moderate (22-32), and high (33-44). The majority of respondents indicated no to low tolerance (55%, n = 60), while 26% (n = 28) showed low to some tolerance, and 19% (n = 21) reported some to moderate tolerance.

Conflict Tactics

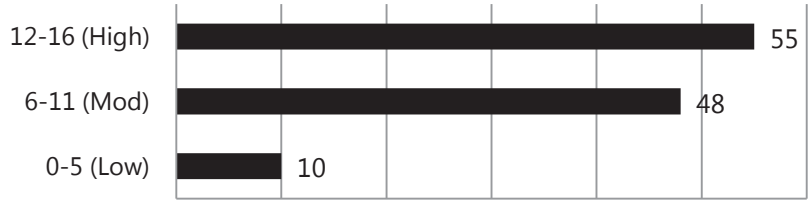
This scale was taken from the Original Conflict Tactics Scale (Straus et al., 1996) and was used to assess reasoning, verbal aggression, and minor and severe violence in relationships. The items were broken down into four sections: Reason (6 items), Verbal Aggression (4 items), Violence in Relations (8 items), and Violent Behavior. Response options for the first three scales were on a 5-point scale, ranging from *All of the time* to *Never*. Responses for the fourth scale were unique to each question.

Reasoning Scale (N = 109) included questions about ability to discuss issues calmly, the practice of seeking information and additional input about issues, and the practice of seeking outside help. An example of "good reasoning" would be bringing in outside help in settling disagreements.

Values were totaled for each participant, and the possible totals ranged from 0 to 24. Actual responses were divided into low reasoning skills (1-8), moderate reasoning skills (9-16), and high reasoning skills (17-24). The majority of responses were low (69%, n = 75), then moderate (41%, n = 34). None of the participants scored above the middle of the range for reasoning.

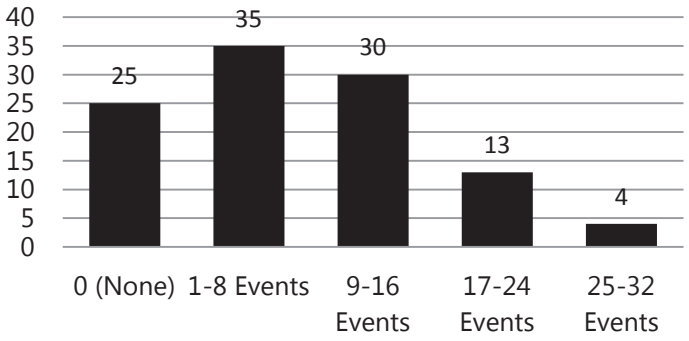
Verbal Aggression (N = 113) sought responses about how participants were able to handle problems through communication or negotiation. Responses were measured using a 5-point scale with choices from *All of the time* to *Never*. The total for possible responses ranged from 0 to 16. Responses were tallied and categorized as low (0-5), moderate (6-11), and high (12-16), with low scores indicating less verbal aggression and higher scores indicating more verbal aggression. Nine percent (n = 10) of respondents were in the lowest range, while 49% (n=55) of respondents were in the highest range, indicating they had frequently insulted or sworn, threatened, or said spiteful things (see Figure 3).

Figure 3
Verbal Aggression



Violent Responses to Solve Relationship Problems (N = 107) used eight measures to identify history of using violence and aggressive behaviors to solve problems in relationships. Such behaviors include throwing things, pushing/shoving, hitting, beating, or choking. Response options were on a 5-point scale, with choices ranging from *All of the time* to *Never*. Individual responses were tallied and further categorized as: 0 events, 1-8 events, 9-16 events, 17-24 events, and 25-32 events. Twenty-three percent (n = 25) reported no events, 33% (n = 35) reported 1 to 8 events, 28% (n = 30) reported 9 to 16 events, 12 % (n = 13) reported 17 to 24 events, and 4% (n = 4) reported 25 to 32 events (see Figure 4).

Figure 4
Violent Response



Violent Behavior (N = 113) was measured on self-reported responses for activities within the past 30 days. The questions included "How many times were you in a physical fight?" "The last time you were in a fight, with whom did you fight?" "How many times were you in a physical fight in which you were injured and had to be treated by a doctor or nurse?" and "How many times were you in a fight on school property?" Sixty-four percent (n = 74) reported a history of physical fighting, usually with a friend or someone they knew. In the most recent 30 days, 3.5% (n = 4) had been in a physical fight.

Self-Reported Delinquency—Rochester Youth Development Study (N = 114)

This 36-item scale (Thornberrry & Krohn, 2000) with yes/no response categories measures behaviors within the most recent 30 days. Examples of questions include "Run away from home," "Been loud or rowdy in a public place where somebody complained and you got in trouble," "Damaged, destroyed or marked up somebody else's property on purpose," and "Been involved in a gang or posse fight." Thirty-five percent (n = 39) of the girls reported no delinquent behavior; 22% (n = 25) reported one event; 14% reported 2 to 3 events; 15% (n = 17) reported 4 to 6 events; and 14% (n = 16) reported 7 to 24 events. The most common delinquent behaviors were skipping class (34%, n = 39), rowdiness in a public place (27%, n = 31), and selling marijuana (24%, n = 27).

Sexual Behavior (N = 76)

Questions regarding sexual initiation and behavior were taken from the National Study for Family Health (Lepkowski et al., 2006). Questions included "Have you ever had sex?" "How old were you the first time sex happened?" and "How many sex partners have you had?" Respondents selected from a range of answers that were relevant to the specific question. Seventy-six of the 115 respondents had experienced sex (66%). Age at first sexual experience ranged from 6 to 19 years, and the mean was 16.5 years. There was a marked change in behaviors from ages 11-12, when

four girls reported sex (5%), to age 13, when 15 girls reported sex (20%). For girls age 14, it was 28% (n = 21); age 15, 25% (n = 19); age 16, 15% (n = 11); 7% (n = 5) reported first sex between the ages of 17 and 19. Sexual activity included vaginal, anal, and oral sex, and typically referred to heterosexual sex (94%), although 1% reported sex with girls only, and 5% reported bisexuality. The number of reported sex partners ranged from 1 to 9, and 61% reported multiple partners. Partners were usually 2-3 years older than the girl. Forty-two girls had had sex within 30 days of the pre-test. Of these, 19 (45%) reported always using a condom, 9 (21%) reported using a condom almost all of the time, 17% (n = 7) reported using a condom sometimes, and 17% (n = 7) reported almost never using a condom.

Sixty-nine percent (n = 55) *wanted* to have sex the first time it happened. Another 11% (n = 9) did it to please someone else. Twenty percent (n = 16) were pressured or forced into the act; the partner forcing sex was a usually a friend/boyfriend (38%, n = 6); friend of the family, (19%, n = 3); or other relative (12%, n = 2). Five girls (31%) preferred not to answer.

Victimization in Dating Relationships (N = 91)

Dating victimization was measured on a 20-item scale, with response choices of *Never*, *1 to 3 times*, *4 to 9 times*, and *10 or more times* (Foshee et al., 1996). The types of behaviors and number of responses are shown in Table 2 below. Of the 115 respondents, 81% (n = 91) had been in a dating relationship. Of these, 70% (n = 64) had experienced dating violence. Twenty percent (n = 13) reported verbal abuse alone, with 80% (n = 51) reporting physical and/or emotional abuse. The number experiencing multiple victimization events (more than one category and more than one time) was 25% (n = 23). Eleven percent (n = 7) reported that their partner forced them to have sex.

Table 2
Dating Violence (N = 91)

Violent Behaviors	Never	1-3 times	4-9 times	10+ times	No answer
1. Scratched me	75 (82.4%)	10 (11.0%)	0 (0.0%)	2 (2.2%)	4 (4.4%)
2. Slapped me	72 (79.1%)	13 (14.3%)	1 (1.1%)	1 (1.1%)	4 (4.4%)
3. Physically twisted my arm	71 (78.0%)	12 (13.2%)	3 (3.3%)	1 (1.1%)	4 (4.4%)
4. Slammed me or held me against a wall	75 (82.4%)	8 (8.8%)	2 (2.2%)	1 (1.1%)	4 (4.4%)
5. Kicked me	75 (82.4%)	9 (9.9%)	2 (2.2%)	1 (1.1%)	4 (4.4%)
6. Bent my fingers	74 (81.3%)	8 (8.8%)	4 (4.4%)	1 (1.1%)	4 (4.4%)

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Table 2, Continued
Dating Violence (N = 91)

Violent Behaviors	Never	1-3 times	4-9 times	10+ times	No answer
7. Bit me	63 (69.2%)	20 (22.0%)	2 (2.2%)	2 (2.2%)	4 (4.4%)
8. Tried to choke me	82 (90.1%)	3 (3.3%)	2 (2.2%)	0 (0.0%)	4 (4.4%)
9. Pushed, grabbed, or shoved me	65 (71.4%)	12 (13.2%)	3 (3.3%)	7 (7.7%)	4 (4.4%)
10. Dumped me out of a car	83 (91.2%)	4 (4.4%)	0 (0.0%)	0 (0.0%)	4 (4.4%)
11. Threw something at me that hit me	74 (81.3%)	10 (11.0%)	3 (3.3%)	0 (0.0%)	4 (4.4%)
12. Forced me to have sex	80 (87.9%)	5 (5.5%)	2 (2.2%)	0 (0.0%)	4 (4.4%)
13. Forced me to do other sexual things that I did not want to do	81 (89.0%)	4 (4.4%)	2 (2.2%)	0 (0.0%)	4 (4.4%)
14. Burned me	86 (94.5%)	0 (0.0%)	1 (1.1%)	0 (0.0%)	4 (4.4%)
15. Hit me with a fist	65 (71.4%)	15 (16.5%)	6 (6.6%)	4 (4.4%)	1 (1.1%)
16. Hit me with something hard besides a fist	68 (74.7%)	11 (12.1%)	8 (8.8%)	3 (3.3%)	1 (1.1%)
17. Beat me up	72 (79.1%)	14 (15.4%)	2 (2.2%)	2 (2.2%)	1 (1.1%)
18. Assaulted me with a knife or gun	84 (92.3%)	2 (2.2%)	3 (3.3%)	1 (1.1%)	1 (1.1%)
19. Said mean or hurtful things that made me feel bad about myself	55 (60.4%)	14 (15.4%)	7 (7.7%)	14 (15.4%)	1 (1.1%)
20. Yelled or screamed at me	50 (54.9%)	25 (27.5%)	4 (4.4%)	11 (12.1%)	1 (1.1%)

Relational Aggression, Gender, and Social-psychological Adjustment (N=113)

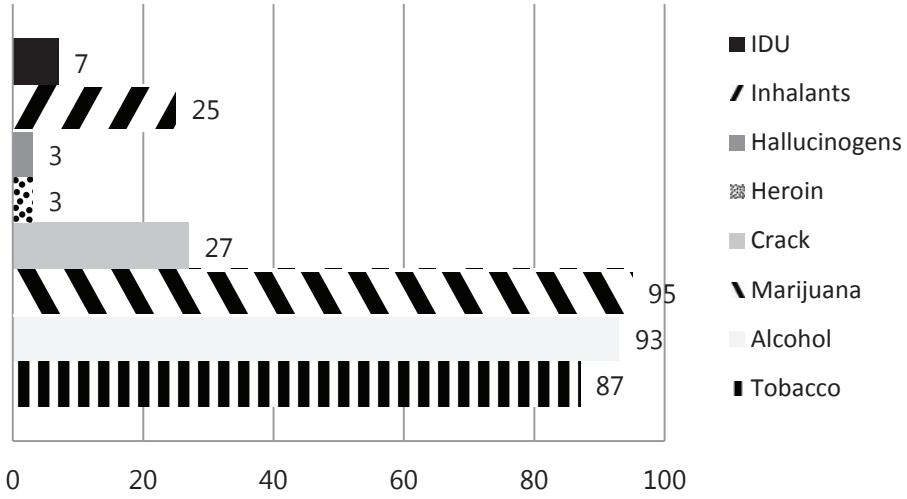
Six questions measured relational aggression (Crick & Gropter, 1995). Response choices were a 5-point scale from *All of the time* to *Never*. Examples of questions included "Some kids tell lies about a classmate so that the other kids won't like the classmate anymore. How often do you do this?" and "Some kids try to keep certain people from being in their group when it is time to play or do an activity. How often do you do this?" The number and percent of responses were consistent across all domains; approximately 64% (n = 72) reported never engaging in these

activities, 14% (n = 16) almost never engaging in the activities, 13% (n = 15) sometimes engaging, 3.5% (n = 4) engaging most of the time, and 5% (n = 6) engaging all of the time. Approximately 9% of adolescents (n ~10) consistently reported maligning behavior.

Alcohol, Tobacco, and Other Drugs

The assessment also measured experiences with alcohol, tobacco, and other drugs and age at first use, using a 7-item scale developed for SAMHSA and used in the 2009 National Survey of Drug Use and Health. Respondents were asked questions such as "Have you ever tried marijuana?" Response categories were *Yes* and *No*. A follow-up question then asked for age at first use. The results indicated that 83% (n = 95) of the participants had ever tried marijuana, 81% (n = 93) had ever tried alcohol, and 76% (n = 87) had ever smoked a cigarette. The age at first use ranged from 7 to 18 years and, for all, the most vulnerable years were the young teens—12, 13, and 14. While not in the majority, 23% (n = 27) had tried crack cocaine, 22% (n = 25) had used inhalants, 6% (n = 7) reported injection drug use (IDU), and 3% (n = 3) had tried heroin or a hallucinogen. For these drugs, age at first use was slightly older—14, 15, and 16 (see Figure 5).

Figure 5
Number of Girls Engaging in Drug Use by Choice of Drugs



DISCUSSION

AI residential boarding schools represent a microcosm of adolescent AI/AN behaviors occurring on reservations and tribal lands throughout the United States. Students bring their lived experiences with them when they come to a residential boarding school, both good and bad. If they are dealing with problems on their reservations or in their home communities, such as substance abuse, dating violence, depression, and anger, those same issues follow them to school.

While BLING participants may not be representative of all AI/AN girls, they do reasonably represent a segment of the population at extreme risk for lifelong problems associated with poor decision-making skills, low self-esteem, high levels of depression, moderate academic accomplishments, and risky sexual behaviors. Many come from households that are less acculturated to mainstream America, as evidenced by the relatively low rate of English-only speakers (57% compared to 80% in the general population; U.S. Census Bureau, 2007). Half of the students live in unsafe neighborhoods, and safety issues may be a factor when parents determine to send children as young as 10 years old away to a residential school. Twenty-eight percent of the girls had moved in the past year, compared to 12.5% of the general population, indicating higher household instability and a migratory living pattern (U.S. Census Bureau, 2011).

Housing instability is also in keeping with the 25% of adolescents enrolled at the school who are technically homeless. The school is not in session year-round. Prior to winter and summer academic breaks, school officials identify caretakers for students at risk for homelessness. However, for too many, these caregivers are distant or extended family members with limited resources, living space, and invested interest. Frequently, students end up rotating among relatives— "couch surfing"—until school resumes. For them, school housing provides the most stable and secure shelter. The weeks prior to pending breaks are frequently a time of "acting out" as some students deal with worries about returning to an unstable or unsafe environment.

Academic performance was a concern for the approximately 19% of respondents who were making D's or F's at the beginning of the school year. Twenty-four percent had dropped out at least once and had returned to school a second time in an effort to complete their education. A significant percent of girls making D's and F's were those returning for a second try. While the specific reasons for dropping out are unknown, based on observations during the past several years, girls must leave school if they are pregnant, as the school cannot accommodate infants, and they often leave because they are needed at home to provide childcare for siblings or financial assistance.

In the baseline assessment, 26% of participants evidenced mild depression and another 47% had a possibility of major depression. Native females at high risk for depression are also at higher risk for substance use, anxiety disorders, and poverty (National Alliance on Mental Illness, 2009; Fleming, King, & Andrade, 1998). Untreated depression increases the likelihood of risky sexual

behaviors, unplanned pregnancies, and sexually transmitted infections. Untreated depression is the number-one cause of suicide, the third leading cause of death among teenagers in the general population, and the second leading cause of death in AI/AN youth ages 15-24 years (Indian Health Service, 2011).

Research about mental illness within the AI/AN population has been restricted due to small sample sizes, limited funding, and racial misclassification; however, available research suggests that approximately 21% of the total AI/AN population is impacted (Duran et al., 2004). At three times the rate for the general AI/AN population, the BLING findings indicate the acute need for behavioral health services for AI/AN adolescents, as well as for further research on adolescent AI/AN mental well-being.

Girls in the study have also been exposed to a considerable amount of violence, both as perpetrator and as victim. Seventy-seven percent resorted to physically aggressive responses to problems or issues, and 49% report verbally aggressive behaviors. A little over one-third admit to either being a bully or being a victim of bullying, and about 10% consistently use shunning and exclusionary tactics to intimidate or control others. Multiple studies have documented the association between substance use, poor academic achievement, mental health problems, and bullying (Gini & Pozzoli, 2009; Nansel et al., 2001). Relationally aggressive girls have more social and emotional problems and experience more loneliness, depression, negative self-perceptions, and peer rejection than others. Those who are victims of relationally aggressive behaviors also experience adjustment problems and report more depression, anxiety, and emotional distress than their peers (Crick, Casas, & Mosher, 1997). The high rates of relational aggressiveness found in this study further reflect the vulnerability of the girls and their risks for ongoing health concerns, and illustrate the negative effects of poor-to-nonexistent critical-thinking and problem-solving skills on interpersonal relationships.

Eighty-one percent of the girls have been in a dating relationship; of these, 70% have experienced some form of abuse in their relationships, compared to the national average of 20% (Foshe et al., 1996; SAMHSA, 2002). A majority of the girls (65%) in this sample were sexually active, compared to 46% in the general U.S. population for adolescent girls (CDC, 2010). In addition to the concern over sexually transmitted infections and unwanted pregnancies, risky sexual behaviors (e.g., multiple partners; early age of first sex) are potential predictors of, or risk markers for, dating violence (Suellentrop & Flanigan, 2002). In fact, 14% of the girls have experienced forced sex. Research from the CDC (2006) shows that those who are victims of dating violence are more likely to attempt suicide and engage in dangerous binge drinking activities, are more susceptible to drug use, are at risk for mental health problems (especially if the violence is emotional or psychological in nature), and are more likely to have additional health problems later in life. Those who are

involved in dating violence, either as victims or as perpetrators, are likely to continue their habits in the future, which can make it difficult to break the cycle of dating violence, as well as prevent those involved from developing healthy relationships (CDC, 2006).

Nationally, morbidity and mortality rates related to violence perpetration are staggering. The violent crime rate for AIs is two to three times greater than the national average (Bachman, Zaykowski, Kallmyer, Poteyeva, & Lanier, 2008; Perry, 2004; Wakeling, Jorgensen, Michaelson, & Begay, 2001), and violence among youth (data are available for those as young as age 12) is rapidly escalating in AI communities (Perry, 2004; Wakeling et al., 2001). From 1976 to 1999, 7 in 10 AI juvenile murder victims were killed by another AI, and AI women were victimized by violence at a rate three and a half times greater than the national average (Perry, 2004). In several counties with substantial parcels of tribal lands, the rates of murder against AI women were more than ten times the national average (Bachman et al., 2008), and AIs were twice as likely to experience a rape/sexual assault compared to all races (5 per 1,000 persons age 12 years or older vs. 2 per 1,000, respectively; Perry, 2004). Our results suggest that the participants in this sample are at considerable risk of violence, as either perpetrator or victim.

CONCLUSION

The recurring theme throughout this study was the importance of mental health to the overall well-being of this sample of female AI/AN boarding-school students, particularly as a protective factor against suicide, substance abuse, and the consequences of risky sexual behaviors. Critical-thinking skills, necessary to live a healthy and productive life, were sorely lacking, which may be linked to the mental health findings. Results point to the need to ramp up programming to develop critical-thinking and coping skills. The general demarcation age for the initiation of risk-taking and health-threatening behaviors was 13 years, indicating the importance of introducing preventive measures and protective factors during pre-teen years.

Violence in relationships has reached epidemic proportions, and prevention efforts should focus on developing interventions that work with both males and females to build positive communication and relationship skills. With more decision-making tools, students could rely less on violent solutions to problems and life events. Due to the size and scope of the problem, creative solutions should be piloted to determine the most effective use of resources rendering the greatest level of service.

Although this study was limited in that it contains a small sample size, was done in one school, and included girls only, it highlights critical issues facing AI/AN communities. Furthermore, it

invokes the need for further research and a call to other communities with AI/AN youth to investigate and incorporate adequate behavioral health programming and support services that address the life-threatening issues resulting from the lack thereof.

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ACKNOWLEDGEMENTS

This initiative is funded through the Office on Women's Health as an HIV/AIDS Prevention Program for Female Youth at Greater Risk for Juvenile Delinquency, Grant Number MPPWH090025.