INHALANT USE AMONG RURAL NATIVE AMERICAN ADOLESCENTS:
DOES STRESS OR CARING MAKE A DIFFERENCE?

by Lori Carlson, M.S., RN, PNP

This research was prepared in fulfillment of requirements for the M.S. degree with a focus in Adolescent Nursing. The primary author was supported in part by grant #MCJ-279185 from the Maternal and Child Health Bureau.

Substance use is generally considered the most serious health problem facing American Indians (Young, 1986). Recent research indicates that among ethnic minority groups in the United States, Native American youth abuse substances more than most other adolescent groups (Beauvais & Oetting, 1988) and they begin to use substances at an earlier age than other American youth (Beauvais, 1992; Mail, 1993; Okwumabua & Duryea, 1987).

For both Native and non-Native youth, inhalants are often the first illicit drug tried (Edwards & Oetting, 1995). Inhalants are often the first drug of choice for youth because they are cheap and available. The most commonly used inhalants are gasoline, glue, paint, aerosols, solvents, and butane gas.

The purpose of this study was to better understand characteristics of reservation-based Native American youth who use inhalants as well as risk and protective factors that mediate use. Two research questions guided this study:

1) What are age and gender differences in patterns of inhalant use among reservation-based Native American adolescents? and

2) Among Native Americans, what are the characteristics of adolescents who use and who do not use inhalants as described by mood or emotional state, life stress/worry, perceived family connectedness, and perceived caring by others?

This picture of inhalant use among Native American adolescents can enhance intervention strategies targeted for American Indian substance use.

Methods

Data utilized for this secondary analysis were from the Native American Indian Adolescent Health Survey, administered to a non-probability sample of 13,454 students in grades 7-12.

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SPECIAL SYMPOSIUM WITH JUDITH MUSICK
CO-HOSTED BY GSAN

by Elizabeth M. Carlson, B.S.N.

On May 10, GSAN and the other MCH Consortium members co-sponsored a Special Symposium with Judith Musick, clinical psychologist, researcher, and founder of the Ounce of Prevention Fund, a statewide initiative for teen mothers in Illinois. Musick had been the Konopka Lecturer the previous day. At the seminar, participants had the opportunity for more indepth discussion with Musick, focusing on several of her recent articles.

The symposium, co-facilitated by GSAN staff member Elizabeth Carlson and GSAN student Peggy Nerdhall, was attended by several GSAN students, two Adolescent Health Fellows, an MCH student, and a 3rd year medical student.

One of the important elements Musick continued on page 6
Farewell to Tabitha Hanson, M.S., M.P.H., RN, Coordinator of Outreach and Student Support, who will be leaving June 30 to pursue career opportunities working with adolescents in Greater Minnesota.

Farewell also to Melanie Murdoff, student secretary, who filled in while program secretary Mary Beth Aydinalp was on maternity leave.

Congratulations to GSAN student Lori Carlson, M.S., RN, PNP. In June she graduated with a Master's of Science.

Activities of Faculty & Staff

In March, Bearinger was elected to a 3-year commitment to the Board of Directors of the Society for Adolescent Medicine, the first nurse to serve on this interdisciplinary organization's board. As part of this appointment, Bearinger joins S.A.M.'s Financial Committee, which is responsible for the organization's long-term investment strategies.

In May, Bearinger was awarded the Excellence Award from Zeta Chapter, Sigma Theta Tau International Nursing Honor Society. The Excellence Award is presented yearly to a member who demonstrates superior contributions to nursing research, teaching, and leadership beyond the local level.

Elizabeth Carlson, B.S.N.: On April 18, presented her paper, "Demographics of Sexual Orientation Among Native American Adolescents" at the National Conference on Undergraduate Research in Asheville, NC. Carlson also attended the Minnesota Organization on Adolescent Pregnancy Prevention and Parenting (MOAPPP) annual conference April 29-30.

In May, Carlson was inducted into the Zeta Chapter of Sigma Theta Tau International Nursing Honor Society.

In June, she was a recipient of the Ellen T. Fahy Leadership Award in the School of Nursing. This award recognizes outstanding leadership by graduating baccalaureate honors students.

On June 14, Carlson graduated summa cum laude from the University with a Bachelor's of Science in Nursing with a Minor in Women's Studies. She will begin doctoral study in Nursing Science at the University of Washington--Seattle in the Fall.

Tabitha Hanson, M.S., M.P.H., RN: Attended the Society for Adolescent Medicine conference March 20-23 in Washington, DC. Hanson also attended the MOAPPP annual conference April 29.

In May, Hanson presented, "Immunizations: Current Practice and Effective Strategies," to students in an MCH graduate level course in the School of Public Health.

Hanson was appointed Site Facilitator for the CDC Teleconference, "Epidemiology and Prevention of Vaccine-Preventable Disease" for May 31, June 7, 14, and 21 for participating health care professionals in Chisago County.

Renee Sieving, M.S., RNC, PNP: During the Spring, Sieving continued work on her dissertation for her doctorate in Behavioral Epidemiology, and development of the Summer Institute in Adolescent Nursing.

...AND MORE CONGRATULATIONS!

Congratulations also to Elizabeth Carlson, B.S.N., GSAN's Coordinator of Communications and Research Support, and editor of Adolescent Nursing. In June, she graduated summa cum laude with a Bachelor's of Science in Nursing and a Minor in Women's Studies. Carlson will continue working with GSAN through the summer before beginning doctoral study in Nursing Science at the University of Washington--Seattle in the Fall.

And congratulations to Linda Bearinger, Ph.D., M.S., RN, GSAN Program Director. In March, she was elected to a 3 year commitment to the Board of Directors of the Society for Adolescent Medicine. She is the first nurse to serve on this interdisciplinary organization's board. As part of this appointment, Bearinger joins S.A.M.'s Financial Committee, which is responsible for the organization's long-term investment strategies.
**Summer Session Course Offerings in Adolescent Health**

**Summer Institutes/Special Term Offerings**

**Nurs 5970 Advanced Health Assessment and Intervention with Adolescents**
Develop assessment and intervention strategies for working with vulnerable teens. The course will include daily dialogue with community-based clinical and health promotion experts and interaction with adolescent actors to enhance interviewing skills. June 10-14. *Bearinger, Sieving*

**Nurs 5609 The Role of the Advanced Practice Health Care Provider in Child Abuse Prevention and Intervention.**
The goal of this course is to teach primary health care professionals to identify, report, and intervene in child maltreatment cases. Aug. 4-9. For more information call (612) 625-1520. *Leonard, Levitt*

**YoSt 5130 Special Topics: Youth Conflict Resolution Skills.**
Experientially-based class provides practice and development of skills required to effectively manage and resolve conflicts that youth face in families, communities, schools, and work places. Special term: July 26, 27, 29, 31, and August 2, 5, 7. Contact (612) 625-3333 for more information. *Umbreit*

**YoSt 5232 Work with Youth Groups**
Helps practitioners with adolescents increase their knowledge and understanding of adolescent group needs and associations, increase knowledge of group process, and enhance skill in working with groups of adolescents in the community. Special term: June 21, 22, 24. Contact (612) 625-3333 for more information. *Kirkland*

**YoSt 5401 Communicating with Adolescents about Sexuality**
Communicate more effectively with young people on the topics of sexual patterns, variations, roles, power, exploration, sex education. Special term: June 28, 29, July 1. Contact (612) 625-3333 for more information. *Bera*

**EPsy 5900 Sec. 6 Promoting School Participation Among High-Risk Youth: Dropout Prevention and School Engagement Strategies**
Discusses ways to identify high-risk students, design and deliver interventions, monitor student progress, and evaluate program effectiveness. Parent involvement, home-school collaboration, and other intervention strategies will be discussed. June 24, 26, 28. October 28. Contact (612) 625-5815 for more information. *Lia-Hoagberg*

**CPsy 5303 Adolescent Psychology**
Physical, cognitive, and social development during adolescence. Summer Session I only. *Masten*

**CPsy 5334 Children and Youth in Society**
Child development principles relative to social policy decision-making; application of theories and findings to such issues as media influence, mainstreaming, day care, child abuse, and effects of peers. Summer Session II only.

For information regarding course times and registration where not already provided, contact the program office at (612) 624-3938.

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**1996 Minnesota Adolescent Health Report Available**

The Minnesota Department of Health is pleased to announce the publication of the report *Adolescent Health in Minnesota 1996* prepared by the Maternal and Child Health Section of the Division of Family Health.

The report uses a variety of indicators considered to examine the health of our adolescents. The health status indicators considered are substance use, sexual activity, violence, injuries, physical health, mental health and school achievement.

Kate Kalb, former Adolescent Health Coordinator for the Minnesota Department of Health and GSAN Advisory Board member, was one of the lead authors of the report.

To order a copy of the report, call the MDH library at (612) 623-5274. For further information please call the Maternal and Child Health Section at (612) 623-5256.
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attending 200 reservation-based or Bureau of Indian Affairs schools in seven Indian Health Services regions during the academic years 1988 to 1990. The original study was funded primarily by the Indian Health Service with additional support from the Maternal and Child Health Bureau.

The gender distribution of students surveyed was equally divided between males and females, and younger adolescents were overrepresented in the sample, with 43% in grades 7 and 8.

The instrument was a 162 item paper-pencil, forced choice, anonymous questionnaire addressing 10 dimensions of health. It was adapted for use with Native American youth from the Minnesota Adolescent Health Survey (Division of General Pediatrics & Adolescent Health, University of Minnesota).

For this analysis, dimensions of emotional health, relationships with family and other adults, and substance use were examined using selected items as well as combined items.

Data were analyzed using frequency distributions, cross tabulations to examine relationships between constructs, and chi square to test for significance. Significance was determined at p<.01.

Patterns of inhalant use

Inhalant use was reported by 11.1% of the study sample (10.3% males, 11.9% females). Inhalant use was much more common among younger students; 64.3% of "ever users" were age 14 or younger. Use was highest in youth under the age of 13. Age and use were found to be significantly related (p<.0001).

Research indicates that adolescents who have used inhalants in the past month are considered to have more serious levels of inhalant involvement and are at greater risk for involvement in other drug use (Beauvais & Oetting, 1988). In this survey, when inhalant users were asked about their last inhalant high, 27% reported use in the past day, 30% had used in the past week, and 43% had used in the past month. Recent use was also age related: among those most at risk for serious involvement with inhalants (use in the past month), 71.2% were under age 14.

Use was predominantly a peer-associated behavior: 59.5% used with friends, while only 13.5% used alone and 2.7% used with family (24% did not respond).

Mood and Worry as Risk Factors for Inhalant Use

Using survey items related to boredom, bad mood, happiness with personal life, feeling sad, feeling anxious, and feeling tense, emotional stress was identified in a significant minority (23-26%) of respondents. Significant positive correlations were found between inhalant use and the negative mood/emotional states of boredom, sadness, anxiousness, and tension.

Many of the Native American teens surveyed reported worrying "quite a bit" or "very much" about many different aspects of their lives. Comparing the top 10 worries to inhalant use, significant correlations were found between use and the following worries: losing their best friend, their looks, and their family having enough money to "get by." A significant inverse relationship was found between level of worry about "all the drugs and drinking going on around them" and inhalant use; i.e., the less worried the student was, the more likely they were to have used inhalants.

These worries present a picture of the adolescent who wants to be accepted, wants to feel attractive, wants to feel secure, and whose environment is permeated with drugs and drinking.

Family Connectedness and Adult Caring as Protective Factors

Students who perceived little or no caring from family or school were more likely to have ever tried inhalants. The significant relationships found between perceived family and school personnel caring and inhalant use support previous research that identified both family caring and connectedness and other adult caring as important protective factors for substance use as well as other adolescent risk-taking behaviors (Resnick et al., 1993).

Recommendations

Study findings provide supportive evidence for the roles played by mood or emotional state, worry, and caring in either potentiating or mediating inhalant use among Native American adolescents. Prevention efforts that target Native American youth should engage strategies aimed at improving negative affect and body image, fostering meaningful relationships with other adults in an adolescent's life, and bolstering family connections—including family resources.

References


underscored in her discussion was the changing understanding of reasons for teen pregnancy. Previous conceptualizations of teen pregnancy, she felt, included viewing it as a "contraceptive compliance failure," whether through lack of access to contraception, lack of ability to use contraception properly, or even a lack of reinforcement of abstinence and moral teaching. The view has now shifted to a belief throughout much of the world that teen pregnancy is an outcome of fewer life options and perceived opportunities, in combination with low self-esteem, low status, and low self-efficacy.

According to Musick, many programs have concluded that the best contraceptive for teens is a strong, positive sense of self in roles outside of motherhood, and a sense of hope for the future. Over and over, with the most difficult situations and the highest risk teens, the critical element in effective programming is establishing positive, ongoing relationships with the young women, in effect, "providing some of that family connectedness or parenting they are missing from their own families."

Another area of discussion concerned creating programs for young women in cultural communities outside a health care provider's own. She stressed the importance of enlisting key community members for support, ownership, and direction in the program, to enhance cultural sensitivity, and to develop broad community support to underwrite the program efforts. She did not feel, however, that "only African American people should be involved in creating programs aimed at African American teens, for example, because most teens are desperate for that caring, that connectedness, and they seldom feel the separations along cultural or racial lines if the workers are truly interested in them and are sincere in their caring."

As part of that work, Musick also felt that it was useful for people with more political clout or power to move in the arenas where they are most effective. This means those who have political, academic, or funding clout need to establish partnerships with people who have less power in those arenas and more power in the community setting.

Another element she addressed was the types of programmatic evaluation needed for securing funding and for tracking a program's effectiveness. She cautioned against "unrealistic outcome-based evaluations, such as, 'This once-a-week connection with 35 young women will reduce the rate of teen pregnancy in this community of 25,000 by 1% in one year. Is this workable?'"

Given all the factors that affect a young woman's decision to be sexually active, to contracept or not, and to become pregnant or not, it is unrealistic to believe any program will have such an overwhelming influence as to outweigh everything else. Musick also noted large numbers of participants are needed in order to statistically measure program effectiveness. Likewise, Musick pointed out that the cost of a control group may well double the cost of a research project or program. Many times programs need to take a long view, Musick said, and realize that connecting with teens and having a positive effect on their lives is a slow process. Therefore, results should not be expected too soon in a project's timeline.

Educating funders about these issues is an important first strategy, she felt. And, one can demonstrate the usefulness of a program on a microlevel, through providing data about numbers of clients served, their perspectives of the program, and outcomes for them over time. Careful recordkeeping of client contacts demonstrates a program's responsible use of funding, which is a key concern for many granting organizations like the Ounce of Prevention Fund.

Some of the discussion focused on ways that participants were trying to give young women hope and a sense of the future beyond their current lives. Musick spoke of creating mentorship and entrepreneurial projects in the most poverty-stricken communities, to give young women skills that can help them visualize a future other than what is currently within their community.

Other participants spoke of their research or outreach projects through school-based clinics, including the development of clinics for very young teens in the middle school grades with a strong risk prevention component. Participants strategized methods to reach teens for research or intervention in school districts where issues of adolescent sexuality are controversial, and school sites are unavailable for outreach.

Overall, the participants found the symposium facilitated joint problem solving and stimulated research and development strategies for teen pregnancy programs.

Judith Musick received her Ph.D. in child development and educational psychology from Northwestern University, and completed a post-doctoral traineeship in clinical developmental psychology at Northwestern's School of Medicine and Prentice Women's Hospital. She is currently conducting research on leadership and economic development with girls and women living in disadvantaged communities across the country.

Suggested Readings by Judith Musick:


presentations on practice, program descriptions, and teaching methods to enhance nurse clinical practice.

The first presenters, Mary Aruda, M.S.N., RN, C-PNP, and Sharon Thrasher, Ph.D., from Children's Hospital, Boston, described a peer education program aimed at pregnancy prevention and HIV awareness.

They were followed by Joanne Newcombe, B.S.N., M.P.H., RN, and Debi Crowley, B.S.N., M.S.N., RN, of Schneider Children's Hospital in New Hyde Park, New York, who presented an interdisciplinary approach to diabetes management among adolescents using "care maps."

Lois Powell, M.S.N., RN, CS, from St. Vincent's Hospital and Medical Center of New York presented the components of CONNECTIONS, a school-based psychiatric rehabilitation program for adolescents in Harrison, New York.

Finally, GSAN's Renee Sieving, M.S.N., RNC, PNP, and former GSAN staff member Maggie Dexheimer Pharris, M.S., M.P.H., RN, presented an overview of the Adolescent Actors Training Program, developed to teach clinical interviewing and assessment skills.