

Developing Culturally Sensitive HIV/AIDS and Substance Abuse Prevention Curricula for Native American Youth

Julie A. Baldwin, Jon E. Rolf, Jeannette Johnson,
Jeremy Bowers, Christine Benally, Robert T. Trotter, II

ABSTRACT: *In 1990, researchers and health care professionals joined with members of several southwestern Native American communities to form an HIV/AIDS and substance abuse prevention partnership. Culturally sensitive approaches to theory-based interventions were developed into highly replicable, structured, school-based and community-based intervention programs. Process evaluations indicated high levels of program acceptance and fidelity. Outcome evaluations demonstrated significant positive preventive intervention effects among participants. This article reports how NAPPASA school prevention curricula were developed and discusses three critical processes in developing these successful curricula: 1) selection of integrative theory to address the multi-dimensional antecedents of HIV/AIDS and substance abuse among Native Americans, 2) use of ethnographic methodology to obtain intensive input from target groups and community members to ensure cultural and developmental sensitivity in the curriculum, and 3) use of process and outcome evaluations of pilot and field trials to develop an optimal curriculum. (J Sch Health. 1996;66(9):322-327)*

The Native American Prevention Project Against AIDS and Substance Abuse (NAPPASA) was a multi-component, in-school and community-outreach HIV/AIDS, alcohol, and other drug (AOD) abuse prevention program for youth. As described elsewhere,¹ the project was initiated in 1990 with a primary research mission to work collaboratively with Native American and neighboring communities in northern Arizona to plan, develop, implement, and evaluate culturally sensitive AOD preventive interventions linked with HIV/AIDS prevention programs.

NAPPASA created a progression of intensive intervention programs based on Social Action Theory² adapted to social contexts of the rural southwestern United States. To ensure cultural sensitivity, all NAPPASA programs were developed through partnerships with local Native American educational, health, and other community-based organizations. Educational and skill-building processes were structured by theory-based, action-oriented curricula taught with standardized procedures to sequential cohorts of eighth and ninth grade students. Through a series of steps involving formative research and evaluated field trials, NAPPASA's school prevention program evolved into a two-stage intervention involving 48 class sessions with a 24-session eighth grade junior high curriculum (Stage 1) reinforced and extended by the 24-session ninth-grade high school curriculum (Stage 2). The curriculum contains content and procedures to build knowledge, develop and practice social and specific prevention skills, and foster new peer group norms for preventive communication and behavior in the context of Native American health beliefs and values.

Julie A. Baldwin, PhD, Assistant Professor, Dept. of Health, Physical Education, Exercise Science, and Nutrition, NAU Box 15095; Jeremy Bowers, DVM, MPH, degree candidate, Arizona Graduate Program in Public Health, NAU Box 5615; and Robert T. Trotter, II, PhD, Regents Professor, Dept. of Anthropology, NAU Box 15025, Northern Arizona University, Flagstaff, AZ 86011; Jon E. Rolf, PhD, Coordinator, Office of Community Health, Kansas Health Foundation, Distinguished Professor in Community Health, Kansas State University Cooperative Extension Service, 148 Waters Hall, Manhattan, KS 66506; Jeannette Johnson, PhD, Health Education Resources, Inc., P.O. Box 1853, Manhattan, KS 66505; and Christine Benally, BS, Wellness Coordinator, Tuba City High School, P.O. Box 3291, Tuba City, AZ 86045. This article was submitted June 24, 1996, and revised and accepted for publication September 3, 1996.

CURRICULUM DEVELOPMENT

Many difficult steps must be mastered to advance a prevention program from a creative concept to a functional, sustainable project in a host community. As shown in Figure 1, development of the NAPPASA curricula involved five steps: 1) selecting an integrative theoretical model of preventive intervention, 2) obtaining local input from youth and adults in the community, 3) integrating theory with local content and process input into testable intervention packages, 4) implementing field trials, and 5) conducting process and outcome evaluations. The last four steps were repeated in four cycles. Figure 2 summarizes the progression and the cycles of formative and confirmatory research methods applied.

This paper gives particular attention to three processes that were critical in developing the curriculum: 1) selection and application of an integrative theory, 2) use of ethnographic methods, and 3) implementation of successive cycles of formative and outcome evaluations.

Selecting an Integrative Theory

Successful preventive intervention programs must: 1) be relevant to developmental issues of its target groups, 2) address the values, beliefs, and attitudes of the recipients within the contexts of their socio-cultural systems, and 3) promote relevant changes in health behavior of persons in their normal social action contexts.^{3,4} Therefore, NAPPASA developed an intervention approach based on scientific theories of behavior change that integrated both Native American indigenous holistic health belief systems with biomedical views of health and illness.

In 1990, adolescent prevention research literature offered no clear models to adapt for the NAPPASA project. A growing consensus suggested limitations were inherent in using conventional, prevention models such as the Health Belief Model^{5,6} and predominately cognitive approaches such as the Theory of Reasoned Action.⁷ Multi-component approaches based on integrating multiple models of behavior change seemed more promising. For example, in substance abuse prevention research with adolescents, integrative conceptual models supporting

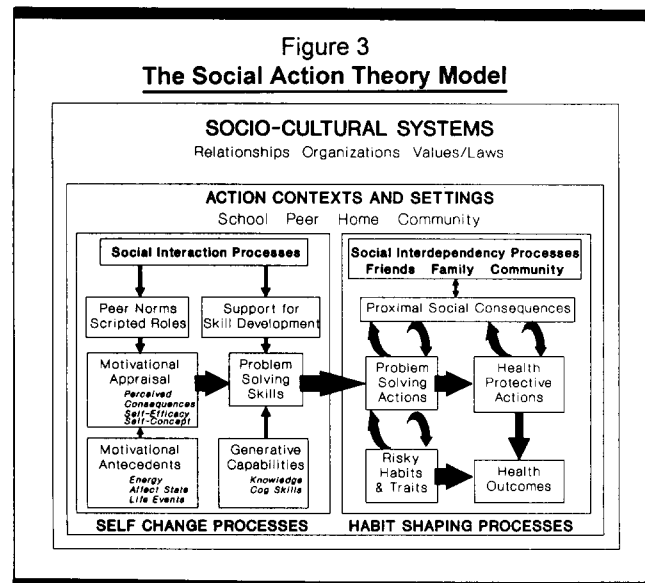
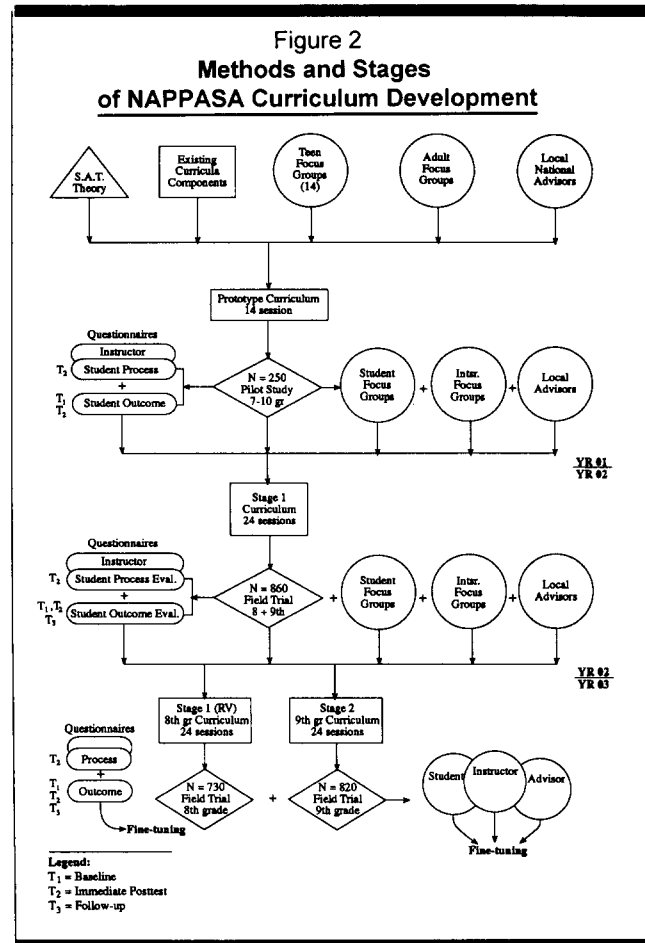
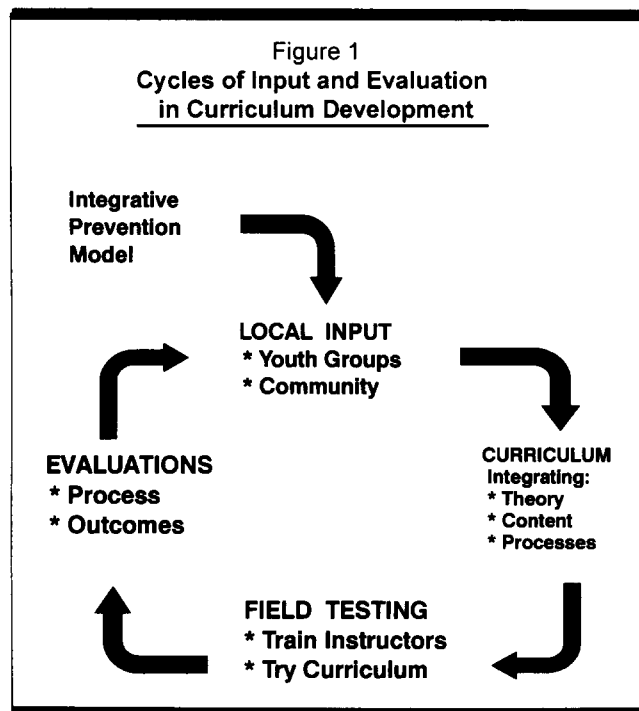
multi-method interventions targeting intrapersonal, interpersonal, and social systems were considered most effective especially when they contained skill-building, modeling, and other components based on Social Learning Theory.⁸⁻¹¹

Similarly, by 1990, few published HIV/AIDS preventive intervention studies addressed U.S. adolescents, and none involved Native American samples. Unlike tobacco, alcohol, and other drug abuse prevention research, relatively little research had been conducted to apply behavioral theory to the problem of educating youth to reduce HIV-related risk behavior.¹² At this time, HIV/AIDS researchers were beginning to recommend that motivation enhancement and social skills training components were necessary to help adolescents learn to negotiate safer behavior and to alter HIV/AIDS risk behavior.¹³ It was not sufficient to use only cognitive interventions emphasizing disease-related knowledge and beliefs of individuals as they exist apart from the adolescent's social world.^{14,15} Fisher and Fisher's¹⁶ review demonstrated the continuing paucity of theoretically based multi-cultural HIV/AIDS prevention studies. Likewise, Dryfoos'¹⁷ analysis of 100 programs successful in reducing high-risk behavior among youth reinforced the need for more AIDS/AOD prevention research using integrative theoretical models and multi-component interventions.

In 1990, one integrative approach to preventive interventions appeared in the newly articulated Social Action Theory conceptual model.² The relevance of social learning theory approaches for preventive interventions with Native American youth had been suggested by mental health research.^{18,19} NAPPASA therefore adapted its intervention plan to conform to the SAT model because it integrated several theories, it addressed multiple change processes, and it addressed different social and cultural contexts. Relationships among the constructs within the SAT model, as adapted by NAPPASA, are outlined in Figure 3.

The NAPPASA research team developed in-class curricular activities targeting skill-building and other self-change

processes as suggested by the left side of Figure 3. These intervention activities addressed antecedent influences to draw attention to the targeted health behavior, supply information about its consequences, and create emotional reactions to those consequences. Curriculum activities that could shape personal and peer perceptions of a protective health behavior's attractiveness, safety, or social acceptability and proximal consequences were designed because the SAT model predicts that such antecedent influences create an impetus for classmates to adopt the targeted self-



protective health behavior. In the SAT model, antecedents influencing intervention activities occur within action contexts. For NAPPASA, the action contexts involved physical classroom settings, perceived social norms of classrooms, and perceived personal states of affective and attentional arousal. Using the SAT prevention model, the NAPPASA curriculum was developed so the relevant consequences of behavior were experienced socially in groups. Such influences included the various "good or bad" consequences students actually experienced or vicariously witnessed from trying health behaviors for themselves.

The SAT intervention model requires that interventions be directed at processes which can modify delivery of positive reinforcers for healthy behavior. The model also encourages the curriculum developer to: 1) seek activities that increase social reinforcement for desired problem-solving and health-protective actions, and 2) avoid curriculum activities generating aversive consequences such as embarrassment, anxiety, and rejection by a liked person. The NAPPASA curriculum gave students opportunities to experience the social consequences of participating in structured role playing and to learn vicariously the consequences experienced by live and videotaped peer models as they engaged in preventive communications or reported about their health-related lifestyles.

Figure 3 also shows how the SAT model requires explicit attention to social system influences and habit-shaping processes. Influences depicted on the right side of Figure 3 indicate the SAT model predicts that a brief preventive intervention program limited to antecedent instruction, modeling, and prompting only may persuade a youth to try a new health practice. However, a sequence of activities providing socially reinforced practice of preventive communication and other skills should promote longer-term adherence to the new health practice eventually making it an acceptable habit. To follow the SAT model, the NAPPASA prevention curricula created sequences of activities which sustained positive, proximal social consequences experienced among classroom and other peer groups, the school staff, and family or community groups. Thus, NAPPASA curriculum developers considered activities, self-change processes, habit-building processes, relationship systems, and organizational structures and systems as appropriate targets and channels for preventive intervention.

Obtaining Community Input

Due to the sensitive nature of topics in the proposed curriculum, ethnographic methods were chosen to gain more in-depth cultural and developmentally relevant information. NAPPASA began intensive formative research and piloting activities in summer 1990 with focus groups and ethnographic interviews. Focus groups provide an effective exploratory tool to identify unknown culture domains, to explore existing knowledge and attitudes held by local people about issues relevant to prevention programming, and to build prevention partnerships between researchers and the community.^{20,21} For NAPPASA, focus groups provided the principal means of obtaining community input in the early stages of curriculum development.

Each group interview addressed four topical areas for program development: AOD, HIV/AIDS, sexual issues, and prevention messages. Focus group questions elicited information from participants not only in terms of knowl-

edge about the topics, but to reveal styles of local discourse, communication barriers, normative beliefs, perceptions of peer pressure, pre-existing beliefs about the extent of AOD and other HIV risk factors among young people in local schools and communities, and feelings of confidence from engaging in specific preventive messages.

Focus Group Findings

Focus groups proved quite helpful at identifying potential areas of comfort or discomfort for local youth and adults when communicating about prevention topics. Focus group data revealed that youth seemed to be engaging in a greater variety of AOD use than adults were aware of and their AOD use frequently led to significantly impaired judgment, black outs, and loss of consciousness. These data also suggested youth held highly differentiated concepts about types, places, social meanings, and locations for AOD use.²² These findings suggested heavy illicit substance use and binge drinking norms were important factors for increasing the risks of sexual transmission of HIV among teens in these rural communities, especially since use of injection drugs appeared very rare.

Based on these findings, the research team addressed AOD use and consequences in the prototype prevention curriculum. In addition, students were required to apply their knowledge about AOD in new contexts including value clarification, cultural models of health beliefs, as well as the effects of AOD use on sexuality and reproductive biology. Students also practiced communication skills during individual and group-based decision-making activities concerning negotiation of safer options to the current norms for sexual intercourse when high or drunk. This intentional integration of biological, social, cultural, and psychological topics into the prototype curriculum represented a response to the communities' interest in creating a Native American holistic approach to NAPPASA's AOD and HIV/AIDS prevention programs.

Another important finding from the focus groups involved a restriction in communication about sexuality (but not AOD) across gender and between adolescents and adults. Cross-gender discussion of topics dealing with sexual activity, pregnancy, contraception, and sexually transmitted diseases were reported as rare. If these topics were discussed at all, adolescents would choose to speak with an older relative of the same gender. The information about limited channels of communication suggested that the curriculum be implemented by a pair of instructors (one male and one female), and that cross-gender role plays about AIDS prevention should be carefully conducted to minimize embarrassment to students. Role-plays were considered necessary to foster development of new norms of cross-gender communication about HIV/AIDS topics.

Information provided by youth and adults from these focus groups made components of the prototype curricula more culturally sensitive. Focus group data enabled the research team to understand primary features of the cultural models involved in the daily lives of the project's Native American host communities.

PROJECT IMPLEMENTATION

Developing the Pilot Curriculum

With data gathered from focus groups, the research team developed a curriculum for pilot-testing. The objective

involved creating a prototype curriculum with 14-consecutive one-hour sessions. Parts from an AOD abuse prevention curriculum called SODAS,²¹ were adapted with permission and included in the original prototype NAPPASA curriculum. The SODAS curriculum was developed with a Social Learning Theory approach to skill-building. The SODAS title is an acronym for a decision-making sequence: Stop, Options, Decide, Act/communicate, and Self-praise. In SODAS, instructors model role-plays or

students view video performances of peers coping with pressure to use alcohol, tobacco, or other drugs. Students are coached to practice identifying and coping with social situations involving use of tobacco and alcohol, to reflect on potential health risks and social problems at hand, to check their personal values to decide on a non-risky but rewarding behavior, to act to implement this decision, and to end with self-praise for their efforts at problem-solving.

In addition to adapting the SODAS elementary school curriculum approach for teen-agers, portions of other HIV/AIDS and STD prevention curricula were adapted for the pilot program.²⁴⁻²⁶ Some content and activities emphasizing Indian ways of AOD education were obtained from the Beauty Way Curriculum, a substance abuse prevention curricula developed by the Navajo Nation. Also brought to the prototype curriculum were Native American stories and legends, and content developed by the research team that drew on traditional teachings and philosophy, and role-playing scenarios derived from the focus group findings.

Training the Instructors

As development of the 14-session curriculum neared completion, NAPPASA staff planned for instructor recruitment and a rigorous training program. The research protocol required both good fidelity in implementation of its prevention curriculum and use of motivated and culturally appropriate interventionists recruited from the host schools and communities. For each classroom, one instructor was hired by the project and paired with one of the school's regular teachers, in male/female teams where possible.

The workshops devoted time to discussing sensitive session topics and cultural issues, and to having instructors practice and coach the role-playing activities. Instructors were informed that monitoring the curriculum implementation would take two forms: self-monitoring by after-class rating forms jointly completed by the instructor pairs, and observational monitoring by project evaluation staff using standard behavioral rating techniques to detect and correct deviations from the standard intervention protocol. As a follow up to the workshop training for instructors, NAPPASA staff also provided "in-service" training at the host school, for teachers, administrators, and, where relevant, dormitory staff.

Conducting the Pilot Study

By September 1990, the pilot intervention was implemented in two combined seventh/eighth grade, four ninth grade, and two 10th grade health/physical education classes by instructor teams. Pre- and post-intervention evaluations were conducted using the American Drug and Alcohol Survey²⁷ and a NAPPASA Health Behavior Questionnaire which assessed knowledge, attitudes, and behavior relevant to HIV/AIDS and AOD prevention skill training.

Expanding the Prototype Curriculum

As depicted in Figure 2, the prototype curriculum again was revised using the formative and confirmatory research methods shown in Figure 1. New information was obtained from post-curriculum focus groups with students and instructors, interviews with students and local advisory groups, and well as data from the pilot pre- and post-intervention evaluation questionnaires. Curricula development

Figure 4
NAPPASA Program Contributors

The research reported here was supported with grant RO1 AA08578 from the NIAAA Prevention Research Branch with additional support by the Dept. Of Maternal and Child health, Johns Hopkins University, School of Public Health. The project was made possible through active participation of the following community schools that contributed their ideas, encouragements, energies, and logistical resources so the prevention curriculum could be developed and evaluated.

Junior High Schools

Dilcon School
Hopi Junior High School
Kayenta Middle School
Leupp Junior High School
Leupp Schools, Inc.
Tuba City Boarding School
Tuba City Junior High School
Winslow Junior High School

Senior High Schools

Flagstaff Bordertown Dormitory
Greyhills High School
Hopi High School
Kayenta High School
Tuba City High School
Winslow High School
Chief Leschi School

Curriculum development support provided by:

Cheryl Alexander, PhD, NAPPASA Co-Director
Fred Beauvais, PhD, Project Consultant
Ella Bighorse, NAPPASA Administrative Assistant
Dennis Bowen, NAPPASA Curriculum Consultant
Delores Brown, NAPPASA Research Assistant
Dia Cha, NAPPASA Graduate Research Assistant
Rose Denetosie, NAPPASA Community Outreach Coordinator
Connie Garcia, NAPPASA Graduate Research Assistant
Annette Hemstreet, NAPPASA Curriculum Consultant
Laura J. Hopkins, NAPPASA Graduate Research Assistant
Maria Jensen, NAPPASA Curriculum Developer
Spero Manson, PhD, Project Consultant
Aimee C. Quijano, NAPPASA Graduate Research Assistant
Gilbert Quintero, NAPPASA Graduate Research Assistant
Charles Secakuku, NAPPASA Graduate Research Assistant
Steven Schinke, PhD, Curriculum Consultant
Shirley Waterhouse, NAPPASA Curriculum Consultant

Video segments produced and edited by:

Troy Reust, NAPPASA Video Consultant
Linda Richards, NAPPASA Video Consultant
Nancy Tongue, MA, NAPPASA Video Health Coordinator
Jay Wheeler, NAPPASA Video Assistant

Other educational, health, and community groups supporting the project include:

NAPPASA Advisory Board
Navajo Nation Division of Health
Navajo Nation AIDS Office
Navajo AIDS Network
Hopi Health Department
Tuba City, Winslow, and Kearns Canyon IHS units and community health boards

focused on eighth and ninth grade students because baseline data showed important developmental changes occurring during the year when students finished junior high school and began senior high school, and unlike eighth and ninth grade students, seventh grade students had problems with the pace of activities and the reading requirements of the pilot curriculum. Students, instructors, local advisors, and consultants also believed the pilot curriculum was useful but should be expanded to be more comprehensive, more reflective of traditional Native American approaches to health, and more visual and action-oriented.

Consequently, project staff and local consultants expanded the prototype curriculum package from 14 to 24 sessions to include the recommended modifications in length, topics, activities, teaching processes, and visual materials. A student manual with activities keyed to the instructor's manual was created. Additional videos were produced locally or adapted with permission from other

sources. This package became the NAPPASA projects' "Stage 1 Curriculum for AIDS, alcohol, and other drug abuse prevention."

Implementing Stage 1 Curriculum Field Trials

After a year of development, the project team began field trials using the 24-session Stage 1 NAPPASA curriculum in schools and communities in northern Arizona. The number of intervention sites was expanded considerably from the local pilot study in two reservation communities. The Stage 1 field trial, conducted during the 1991-1992 academic year, involved active research partnerships with nine schools — three high schools and six junior high schools. Outcome findings from the 1991-1992 field trial were presented elsewhere.^{28,29}

Creating the Stage 2 Curriculum

Outcome and process evaluations obtained with post-test and follow-up student questionnaires, combined with additional focus group discussions and interviews with students, instructors, and advisors, indicated the Stage 1 NAPPASA Curriculum package should be refined for use with eighth grade students, and a new and equally comprehensive Stage 2 Curriculum package be created for ninth grade students. This action provided a two-stage sequence with two 24-class session curricula (eighth plus ninth grade) producing a 48-class session prevention program. Some instructor's scripts were edited to ensure the eighth grade classes could be completed in 45 minutes.

The project team then created a new Stage 2 Curriculum for the NAPPASA ninth grade intervention. The Stage 2 Curriculum contained the same number of sessions (24), spanned a similar range of core topics, and could stand on its own. However, the Stage 2 version for ninth grade students also accommodated and built on the knowledge and skills gained from any participation in the eighth grade NAPPASA Stage 1 Curriculum.

The same curriculum development process was used for the Stage 2 version as with Stage 1 shown in the bottom two rows of Figure 2. Content and sequencing for the Stage 1 and Stage 2 Curriculum sessions are shown in Table 1.

Table 1
Summary of Session Objectives for Eighth/Ninth
Grade NAPPASA Curriculum, 1993-1994

Eighth Grade

Session 1-2	Students will complete baseline survey part 1 and 2
Session 3	Students will be presented with an overview of the program
Session 4	Students will be introduced to concepts of health promotion
Session 5	Students will share knowledge about alcohol and drugs
Session 6	Students will understand substance abuse and its effects
Session 7	Students will be aware of pressure to use alcohol and drugs
Session 8	Students will understand how values affect prevention
Session 9	Students will learn safe ways to communicate their feelings
Session 10	Students will learn what SODAS means and how it is used
Session 11	Students will learn how sexual behavior can influence health
Session 12	Students will discuss the responsibilities of sexual behavior
Session 13	Students will be provided with an overview of sexually transmitted diseases (STDs)
Session 14	Students will learn factual information about AIDS
Session 15	Students will learn the modes of HIV transmission
Session 16	Students will learn guidelines for HIV/AIDS prevention
Session 17	Students will learn the STOP and OPTIONS steps of SODAS
Session 18	Students practice the DECIDE and ACT steps of SODAS
Session 19	Students will understand the value of self-esteem
Session 20-22	Students will rehearse and present role-plays of a locally valid pressure situation using SODAS
Session 23	Students will identify specific targets for support
Session 24	Students will complete the post-evaluation

Ninth Grade

Session 1-2	Students will complete the baseline survey part 1-2
Session 3	Students will be introduced to the curriculum
Session 4	Students will clarify personal and cultural values
Session 5	Students will review SODAS steps
Session 6	Students will learn effective communication skills
Session 7	Students will understand how self-esteem influences decisions
Session 8	Students will identify risky behaviors among teens
Session 9-10	Students will understand how AOD affects the family
Session 11	Students will understand how AOD use can put them at risk for contracting HIV/AIDS
Session 12	Students will practice SODAS by doing a role-play
Session 13-14	Students will understand the consequences of their decisions about sexual intercourse
Session 15	Students will acquire information on sexually transmitted diseases
Session 16	Students will practice SODAS scenarios in groups
Session 17	Students will understand the impact of the AIDS epidemic
Session 18	Students will discuss AIDS issues around women
Session 19	Students will learn aspects of HIV/AIDS treatment
Session 20	Students will visualize their future with a positive focus
Session 21-22	Students will present their skills before the class
Session 23-24	Students will complete the post-evaluation and critique curriculum

PROJECT IMPLICATIONS

The NAPPASA project demonstrated that multi-component preventive intervention curricula based on Social Action Theory are adaptable to Native American reservation and border town environments. Further, linkage of HIV/AIDS with AOD prevention themes provides a powerful means to motivate communities to take preventive action about the invisible threat of the HIV/AIDS epidemic since AOD abuse problems have already caused much local suffering. Future analyses will look more closely at factors which not only predict positive responses to the curriculum, but can predict behavior change at longer time follow-up.

Some observations can be made about the benefits of designing a prevention project with extensive formative research activities including use of qualitative ethnographic methods to enhance the cultural fit of proposed programs. The NAPPASA project's use of repeated cycles for gathering community input to integrate theory and local culture into the programming was important. The process not only

produced better health education materials, but it proved essential in generating and sustaining community support. Similarly, enhancing the curriculum with print materials and videos produced for the project provided a better means of introducing positive role models into classroom activities. Likewise, producing these materials in the rural host communities also stimulated community participation and interest about local health problems and preventive options. ■

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ERRATUM -- On page 223 of the August 1996 *Journal of School Health* (Volume 66, Number 6), Table 2 incorrectly listed frequency of cigarette smoking among those age 20 and older as 0.9%. The correct figure is 60.9%, as reflected in the text.

Statement of Purpose

The *Journal of School Health*, an official publication of the American School Health Association, publishes material related to health promotion in school settings. *Journal readership* includes administrators, educators, nurses, physicians, dentists, dental hygienists, psychologists, counselors, social workers, nutritionists, dietitians, and other health professionals. These individuals work cooperatively with parents and the community to achieve the common goal of providing children and adolescents with the programs, services, and environment necessary to promote health and to improve learning.

Contributed manuscripts are considered for publication in the following categories: general articles, research papers, commentaries, teaching techniques, and health service applications. Primary consideration is given to manuscripts related to the health of children and adolescents, and to the health of employees, in public and private pre-schools and child day care centers, kindergartens, elementary schools, middle level schools, and senior high schools. Manuscripts related to college-age young adults will be considered if the topic has implications for health programs in preschools through grade 12. Relevant international manuscripts also will be considered.

Prior to submitting a manuscript, prospective authors should review the most recent "Guidelines for Authors." The guidelines are printed periodically in the *Journal*; copies also may be obtained from the *Journal* office, P.O. Box 708, Kent, OH 44240.
