AMERICAN INDIAN CULTURE AND RESEARCH JOURNAL 29:3 (2005) 59–79

Evaluation of a Lay Health Adviser Training for a Community-Based Participatory Research Project in a Native American Community

VANESSA M. WATTS, SUZANNE CHRISTOPHER, JANA L. STREITZ, ALMA KNOWS HIS GUN MCCORMICK

The overall cancer mortality rate for American Indians is lower than the U.S. all-races rate.[1] However, American Indians experience significantly higher mortality rates for some cancers, and incidence and mortality rates are increasing over time for many cancers.[2]

The Messengers for Health project, on the Apsáalooke Reservation, is located in southeastern Montana and is focused on cervical cancer. In the United States the mortality rate for Native women with cervical cancer is 1.35 times higher than the women-of-all-races rate.[3] Cervical cancer mortality rates are the highest for Northern Plains Indian women, compared to rates for American Indians across all regions of the United States.[4] Researchers conclude that the data regarding Native American cancer rates are incomplete; there are great regional variations in Native American cancer rates, so prevalence data from a single group cannot be generalized to the population as a whole; and cancer rates for Native Americans look lower than they really are.[5]

Messengers for Health is a community-based participatory research (CBPR) project with the objectives of decreasing cervical cancer screening barriers, increasing knowledge regarding screening and prevention of cervical cancer, and increasing the proportion of women receiving Pap tests among Apsáalooke (Crow Indian) women eighteen years old and older. These objectives will be assessed with preintervention and postintervention

Vanessa M. Watts is a doctoral student in the Department of Society, Human Development, and Health at Harvard University. Suzanne Christopher is an associate professor in the Department of Health and Human Development at Montana State University. Jana L. Streitz is a health education specialist with the Montana Department of Public Health and Human Services. Alma Knows His Gun McCormick is the project coordinator for the Messengers for Health project at Montana State University.

surveys and secondary data from the Indian Health Service (IHS). In 2001 and 2002 we conducted a preintervention survey with a random sample of 101 Apsáalooke women. The goal of the survey interviews was to gather accurate and comprehensive information to guide the development of a culturally competent community-driven intervention.[6] We found that 37 percent of women had not received a Pap test in the previous year, 34 percent had not heard of a test to check for cervical cancer, and 71 percent reported not having read or heard anything about cervical cancer in the past year.

Community-based participatory research directly involves community members and community-based service providers as partners in the research process.[7] By using the knowledge and insights of community members, researchers are able to do a better job of identifying ways to solve public health problems.[8] Community-based participatory research is especially important in Native American communities, where egregious research practices have led some communities and individuals to be wary of researchers.[9] Collaborative work between Montana State University staff and Apsáalooke community members began in 1996; we received initial funding in 2001.

Messengers for Health uses a lay health advisor (LHA) approach. Social support and social network theories provide the underpinnings for LHA programs,[10] which rely on individuals who are recognized as natural helpers in their community instead of on individuals recruited into a program by a general advertisement or solely because they live in a targeted community.[11] Individuals who are regarded as natural helpers provide care, advice, information, and support during times of need.[12] By enlisting these individuals, LHA programs differ from programs using other theoretical approaches because they generate behavioral and social change by using existing social ties and social networks.[13]

Previous LHA studies have defined what LHAs are and what they do in the community;[14] described LHA recruitment;[15] defined and documented outreach activities;[16] examined LHA activities from the perspective of community members they have reached;[17] and evaluated outcomes from the programs.[18] The purpose of this article is to report the methods and results of a process evaluation of LHA training for a cervical health project. We also provide evaluation information on the advisers' perceptions of other LHAs involved in the project and their ideas on what the project could do to be more supportive. The need for process evaluation of this type has been documented,[19] and the study reported here is one component of this project's overall evaluation effort. The authors were unable to locate articles that reported results of an evaluation of LHA training, and we hope to fill the gap with this study.

Process evaluations usually focus on program activities and are an essential component of health education programs. These evaluations provide quality assurance, help program directors modify future training programs, and make available practical and useful answers to questions that cannot be answered by outcome evaluation alone.[20] Although there is a plethora of published information on intervention outcomes, there currently exists a "dearth of conceptual underpinnings and methodologies for conducting

process evaluations."[21] This article is intended to be useful to programs working with Native American communities and individuals, to interventions that use community members for outreach and/or education, or to any program interested in using process evaluation.

TRAINING WORKSHOP

The training workshop took place at the Little Big Horn Tribal College in Crow Agency, Montana, 24–25 July 2002. Project staff developed a training manual by adding to, deleting from, and adapting training materials from LHA and Native American health programs. These programs included Save Our Sisters;[22] Path to Understanding Cancer, from the Alaska Native Health Board; Tribal Efforts against Lead project;[23] Tribal Outreach Strategies from the Centers for Disease Control and Prevention; and the Minority Cancer Prevention Program from the Arizona Cancer Center.

The goals of our training were to provide Messengers (the LHAs) with knowledge about cervical health, skills to plan and carry out cervical health outreach activities, information about other health issues affecting Native women, and the opportunity to come together with others desiring to help all Apsáalooke women become healthier. We based training content and delivery on five assumptions: (1) that since the women were identified as those whom others turn to for support and advice, they would feel comfortable talking with women about personal health topics; (2) that we had picked natural helpers to be Messengers; (3) that the women needed factual information on cervical cancer and Pap tests; (4) that the training would be most effective if it was guided by theories of adult education,[24] Freirian pedagogy,[25] and Native American teaching and learning;[26] and (5) that the training and subsequent program would be more successful if the women bonded with each other.

Two American Indian students, two faculty members, and the project coordinator, who is Apsáalooke, facilitated the training workshops. A female IHS physician provided the training component on cervical health.

METHODS

Interview Guide

Project staff, a community advisory board, and consultants with expertise in LHA interventions and Native American women's health developed a sixteen-question semistructured interview guide specifically for this evaluation study. Our interview guide contained the interview introduction, list of questions, and question probes. The interviews covered eight topic areas: (1) general perceptions of the training, (2) improvements in training, (3) new skills provided through the training, (4) topics and information for future training sessions, (5) perceptions of other Messengers, (6) how the project could be more supportive, (7) ideas or contacts for future outreach gained through the training, and (8) perceptions of the presenters.

This specific interview guide and semistructured interview method were used for several reasons. First, we were unable to locate an existing guide to evaluate lay health adviser training in a Native American community. Second, we wanted detailed, contextual information in the words of the Messengers. We would not have been able to obtain this type of rich information using a quantitative survey instrument.[27] The method and guide facilitated an in-depth exploration of the usefulness and appropriateness of the training from the perspective of the Messengers. Third, Native researchers have stated that open-ended interviews are a more culturally appropriate method for interviewing Native people compared to a closed-ended question format.[28]

Data Collection

The first author conducted all twenty-four of the interviews after receiving training on conducting semistructured interviews from an experienced interviewer-instructor. Training focused on interviewing methods including preparing for interviews, asking questions, probing, maintaining neutrality, techniques for maintaining confidentiality, handling participant questions or concerns, and providing feedback.

Interviews were tape-recorded and conducted in the women's homes or at a convenient meeting place near their homes on or near the Apsáalooke Reservation from January to March 2003. Additional meeting places included restaurants, Little Big Horn College, and a public school. Before each interview the interviewer gave an overview of the study's purpose and asked for permission to tape-record. We agreed to keep the respondents' names anonymous.

Data Analysis

All twenty-four interviews were transcribed verbatim. NVivo, a computer software program for text-based analysis, was used for analysis. Inductive analysis was conducted based on methods described by Strauss and Corbin,[29] Patton,[30] and Bogdan and Bicklen.[31] We conducted cross-case and individual analysis; themes and patterns were then identified in the data.[32] To facilitate this process, the first and third author read through hard copies of the transcripts to obtain a general understanding of the data.

Second, these two authors independently conducted open coding,[33] also called content analysis.[34] They read the transcripts and decided on labels for the phenomena identified. Coding was conducted inductively, meaning that themes emerged from the data during analysis versus themes being decided prior to data analysis.[35] Coding was focused on the respondent's answers to the eighteen open-ended questions. Third, the two coders and the second author convened to discuss the results of the coding. Transcripts were reviewed, and a discussion on how and why responses were coded ensued. Discussion continued until consensus was reached on the code for each response. The last step entailed combining some codes that were deemed to be theoretically similar.

RESULTS

The Messengers are all women, range in age from mid-thirties to mid-sixties, and come from all areas of the reservation. They represent different tribal clans, have differing educational backgrounds, and are involved in many kinds of cultural and community activities. They work in many locations around the reservation, including schools, tribal offices, the Bureau of Indian Affairs office, Little Big Horn College, IHS, the tribal housing office, the Head Start program, and their homes.

Interviews lasted an average of forty-five minutes. We first asked the Messengers which training session(s) they attended; nineteen women attended both days, one woman attended only the first day, and four women attended only the second day.

General Perception of Training Sessions

To gain a general perception of the training sessions we asked (a) how they felt about the length of training, (b) how they would describe the training to a friend, and (c) what they liked most about the training. Regarding amount and length of training they received, most felt that it was a lot of material to cover in two days.

Women said they would describe the training as interesting, not boring. We incorporated role playing, ice breakers, and other interactive methods to enhance the training effectiveness. According to one Messenger the sessions were both fun and informative: "The ladies that came were real discreet. They explained everything to a T and at the same time they had a lot of jokes and everything to kind of go along with it. Kind of keep everything exciting."

When asked what they liked the most about the training, several Messengers mentioned the snacks and food. While most people would enjoy having snacks at a meeting, we believe there is a deeper meaning to these comments. Providing food is a traditional way of welcoming someone and revealing one's generosity and is an important part of the Apsáalooke culture. When a person comes to a home for a visit or to a gathering, it is considered impolite even to ask if he or she is hungry. Visitors are just served a plate of food. This giving of substance happens at clan meetings, after going into the sweat lodge, and at any time where people come together.

The Messengers also liked the fact that the meetings were open, meaning that everyone was involved in sharing and learning from each other. They enjoyed receiving new information.

One Messenger expressed the general sense of enthusiasm: "There was a lot of pamphlets given out and then a lot of the people that were there they had interactions and the people that were giving us the training they were real helpful is what I liked about it. It was like you were in a sitting room and it was free, and even though there was quite a few women there we kind of all blended in together."

During the training we worked to foster the feeling that we were all a community of teachers and learners. One Messenger liked working with different women during the training: "I like involvement, sharing, getting up

and doing things with each other and talking with each other and what we didn't know we could learn from another one and they learn from us and like we are exchanging ideas. There are different ways of talking to people. There was a lot of different women and she would have us switch [discussion partners]."

During the training we gave each Messenger a canvas tote bag on which was printed "Messengers for Health on the Apsáalooke Reservation." We handed out a variety of cloth paints, and the women decorated their bags. This was consistent with handwork that is practiced by some Apsáalooke people and was mentioned as a positive attribute of the training.

Improvements

We asked two questions to explore how the training could be improved. Comments included opening the training to the public, covering additional health topics, including a doctor for the whole training time, providing more time for questions, and recruiting more Messengers.

Some said there was nothing to improve or that they had no ideas of what to improve. Several people suggested specific improvements in the training methods, such as having more handouts or more hands-on work. Messengers had a desire to become more knowledgeable so they could pass this knowledge on to others during their outreach. Several Messengers stated their interest in hearing more speakers, specifically doctors, other health professionals, or women who experienced abnormal Pap tests: "Have more speakers, various speakers, ladies that experienced, went through the abnormalities. Have different speakers from the IHS. That lady doctor was good but she didn't spend enough time or really get into details, didn't have much time. I thought she was coming back but of course their time is . . . maybe even a nurse could come in."

In response to the question on improvements, one Messenger mentioned the responsiveness of the project coordinator, the fourth author of this paper: "I think Alma is doing an excellent job. You know we can talk to her and I notice that they had us fill out a list of what we should talk about at those meetings and after the two meetings I noticed that she made an effort to get some of the subjects on each meeting after that and then she would bring people in so I think she is doing an excellent job."

New Skills Provided through Training Sessions

We next asked what new skills the participants gained from the training. The new skill most often mentioned was that they learned how to talk to women about personal health issues.

Messengers discussed learning important information about Human Papillomavirus (HPV) and herpes, different diseases, cervical cancer and women's anatomy, and the difference between a Pap test and a pelvic exam. A goal of the training was to provide knowledge and skills for Messengers to carry out cervical health outreach. Considerable time was spent in the training talking about how to conduct one-on-one and group outreach.

Many Messengers commented on their increased ability to communicate cervical health information. "I think that I was more comfortable because I knew more after. I was more prepared to give answers to people if they had something private to say. I think I was more knowledgeable, helping educate somebody, [with] information about the cancer."

The following Messenger refers to barriers to cancer screening that the program works to overcome. In traditional Apsáalooke culture, it was not acceptable to talk openly about personal health issues or body parts. In Apsáalooke culture it is appropriate for women to dress modestly and to avoid revealing their body in a disrespectful manner. It is not usually appropriate to talk openly about female anatomy. The exception is when it is approached with humor, which is another important attribute of Apsáalooke culture. Some women may talk about body parts or sex in a joking manner when no men are present. This Messenger felt free to talk about personal health issues after the program staff brought them out into the open: "They're real open and not ashamed to say things. On the whole, the Crows are raised to not [be] outspoken, our ancestors, so that was different. Like talking about Pap smears, STDs, the uterus. When [the trainers] talked about it then we are free to talk about it."

During training the project coordinator talked openly about Apsáalooke cultural traditions around discussing personal health issues. She emphasized the importance of talking about these things in order for Apsáalooke tribal members to be healthy and proposed that talking about personal health issues can be done in a culturally appropriate manner. The Messengers role-played, talking with other women about cervical health in a style that would be comfortable to them while relaying important health information.

Topics and Information for Future Trainings

We asked the Messengers on what topics they wanted more training and what topics they would like discussed in more detail. One common response was that the Messengers wanted more training in effective communication skills. Other answers included more information about other health issues and more contact with health professionals. Messengers were also interested in obtaining more thorough health statistics regarding Apsáalooke women and learning to speak the Apsáalooke language. The women also stated that they wanted more hand-outs and more advertisement and promotion of the project, while others were interested in hearing survivor stories and receiving encouragement from staff. Finally, the women wanted more Messengers, more work with terminology and anatomy, and more contact with IHS personnel. Additionally, women wanted to see movies with Apsáalooke people in them and wanted information on making appointments and ways to reassure people.

Several Messengers wanted to hear how other Messengers approach community women about the topic of cervical health. This Messenger relays the request to hear from other Messengers and describes a culturally respectful way to bring up personal health information (in a subtle manner) and that to be very direct with this information can be seen as offensive:

> I think more training and practicing and listening to [how] all the women approach [other women is necessary] because [to] a lot of Crow women, it is almost disrespectful to bring that up and to be able to bring it up in a subtle way is the only way. Especially the older women because if you sit and visit with them a little bit if you just say "have you ever had a pelvic exam" it really throws them off. They get offended. You got to be real careful. Have everyone talk about their different ideas [on] how they approach [women].

Messengers felt they needed more training in ways to talk with teenagers about the sensitive subject of women's health. In Apsáalooke culture one's clan, immediate family, and extended family are very close, and these ties are extremely important. For example, a cousin is tantamount to one's brother or sister, a niece is analogous to one's daughter, an aunt is analogous to one's mother. If the Apsáalooke word for *niece* is translated into English, it is translated as *daughter*. Most, if not all Messengers have close ties with teenagers; these Messengers were interested in exploring ways to reach these teens. One Messenger put it this way: "How to really approach the teenagers because that was my tough spot. But women around my age . . . we're okay to talk to and older women because I talked to my mother about this and it went okay."

Another Messenger mentioned that it would be helpful to have a refresher course on the general information they were exposed to at the training: "Actually I wouldn't mind doing it again just to get [a] refresher or maybe you could add a little more in there as far as, I don't know, just a refresher. What we went over, because that was like last year, and it would be nice."

Perceptions of Other Messengers

We asked the Messengers how they felt about the other women who were chosen as Messengers and how they felt about the group as a whole. Messengers were selected by asking community members for names of women that other women turn to for support and advice. Women also nominated themselves to be Messengers. The Messengers considered their colleagues to have been well chosen. They expressed positive feelings about individual group members, as well as about the group. One of the Messengers pointed out that the other Messengers possess the attributes of natural helpers. They give freely to other women and are open and helpful to others: "I think they are [a] real nice group. There are a lot of go-getters, real enthused, and I feel comfortable with all the ones that are working together because everybody just kind of comes together and opens up and just gives their input on it and the things that we don't quite understand. They are all willing to give a helping hand to each other, help each other through this, in learning the things that we need and the proper learning in order to give it to somebody else."

When asked how they felt about the other Messengers, some said that they liked to hear from the more outspoken members, while others would rather

have heard about outreach experiences from all of the women, especially the quieter ones.

In the Apsáalooke culture, it is important to be respectful of other people. This includes not dominating conversation or being pushy. In Apsáalooke, the term *iisátchuche* is literally translated as "bold/hard face." Someone acting this way is being blunt, being too bold, and therefore is disrespectful of others. This cultural way may translate into some Messengers not speaking during the training or in the monthly meetings.

Several women mentioned their appreciation of the fact that all of the Messengers are Apsáalooke women, often women they had seen before but did not know. They appreciated the chance to meet and form relationships with women from other Apsáalooke communities. The reservation covers 2.25 million acres; from Pryor to Wyola, for example, is about 110 miles.

Making the Project More Supportive

When asked about what else the project could do to be more supportive, several Messengers wanted to share at the meetings and to hear other Messengers' experiences. They suggested making time at meetings for people to talk about their activities. Some women wanted more training in effective communication skills, and others suggested developing outreach strategies that would reach more women. Messengers appreciated being involved in the research process, including the interviews reported here: "Like you are doing now, get input from everyone. That way you have an idea because not everyone sees things the same way."

This Messenger reported that she receives support from other Messengers, from the project coordinator (Alma), and from the staff at the university in Bozeman. She described her outreach strategy and those of other Messengers, which uses a culturally appropriate method of talking about personal health issues by using an indirect approach:

> Well, I know that I can call Alma anytime, and if someone is not around I could call one of the other Messengers. So, I think that we are supportive of one another already. So if I see one of the other ladies [Messengers], we ask how we are doing; maybe they have a different approach than I do. How I start out [is by] telling the [women in the community] what I am doing—if they ask me what I am doing then I will tell them about this really cool project with Alma and that kind of opens it up to just kind of go into it, just sneak it in the conversation. Then [I say] "what about you?" There is a lot of different reactions that I get from different women. I really like hearing survivor stories and how they encourage me and what we are doing is important. From Bozeman, if I need anything I know that I can call Alma and she will get it. If I need extra information, I can rely on getting an answer, and I know I won't be refused.

Messengers' Perceptions of Presenters

We asked the Messengers for any comments about the presenters, who included project staff and a white female IHS physician. Messengers liked that the presenters were available throughout the training, and many specifically stated that they liked the doctor, although some felt the doctor went too fast or wasn't at the training long enough. Along with other Messengers, this woman expressed an interest in hearing from different doctors. Project staff have informally heard many stories of negative interactions between community members and IHS medical providers. This Messenger relays the importance of meeting "friendly" doctors so that she will feel comfortable referring women to specific providers: "I think they should bring in different doctors at the meetings instead of that one, because she is probably not the only one who does those pelvic [exams] and Pap smears. So, as Crow women we can mention the doctors' name and say this one seems real friendly."

Finally, we asked for anything else they wanted to share with us. Many conveyed their satisfaction in being a Messenger. One Messenger put it this way: "I am honored to be selected."

Limitations

The interviewer was in her mid-twenties, younger than all of the respondents, and although she is Apsáalooke, she did not grow up in the reservation community. These interviewer attributes may have influenced information the Messengers shared. Obtaining all twenty-four interviews took longer than anticipated. The interviewer lived in Bozeman, several hours from the reservation, making it difficult to coordinate meeting times.

Several months elapsed between the training and the interviews, so the interviewer had to refresh some women's memory about the training. After this reminder, they were able to answer the questions.

Messengers' program participation level, past experiences, and education may have influenced their responses. A few attended only one day of the two-day training. However, all Messengers received the training materials for both days, and the project coordinator met with those who missed some of the training to answer any questions about the materials. Also, Messengers who regularly attended monthly meetings had their knowledge base reinforced and were better acquainted with project staff. Messengers who live in the more remote areas of the reservation had difficulty making it to monthly meetings, especially in the winter. To help compensate for this, monthly newsletters that provide education and reinforcement were sent to all Messengers.

Furthermore, the Messengers are a heterogeneous group of women with a variety of experiences. They represent different educational levels and employment situations. Some Messengers are community health representatives or work in community health clinics and this may have affected their responses. For example, they might have known about cervical health and thus were less interested in the training; or because they are already interested

in health topics, they may have been more motivated to focus on the information in the training sessions.

IMPLICATIONS

We will discuss four implications or lessons we learned from this evaluation. These lessons can be applied to programs working with Native American communities and individuals, to interventions that use community members for outreach and/or education, or to any program interested in using process evaluation. The four lessons are to (1) incorporate culture into training programs; (2) assess the best method of delivery for these programs; (3) involve community members in the research process; and (4) elucidate training goals and assumptions and use process evaluation to assess outcomes.

The first implication is to incorporate culture into training programs.[36] The call for culturally appropriate and culturally based programs is ubiquitous in the literature today as we now understand that these types of programs are necessary for lasting and impactful change.[37] Lessons learned from other cancer screening programs for Native American women have emphasized the need for culturally appropriate educational methods, which include using local people and Native language.[38]

We incorporated culture into our training workshop in several ways, and the Messengers commented positively on these aspects of the training. We shared an evening meal, which was mentioned as a positive part of the training and is a culturally appropriate way to bring the group together.

The physical space was designed to be aesthetically and culturally welcoming.[39] We held the training at the Little Big Horn College, a setting that is familiar to the women. We organized the training room so that the Messengers sat in a semicircle instead of in a typical classroom configuration of rows. This seating arrangement was similar to how Strickland, Squeoch, and Chrisman conducted training in their cervical cancer prevention program with Yakama Indian women.[40] Messengers commented that this arrangement of physical space was comfortable and helpful to their learning.

Many Messengers expressed feelings of contentment regarding the delivery style of the training. Similar to Strickland et al., our trainers acted as facilitators in group education as opposed to following the Western model in which the teacher is the expert and dictates the learning process. Yakama women appreciated this teaching style, as did the Messengers in this evaluation.

Regarding the learning styles of American Indians, it is important not to stereotype when trying to establish a specific "Indian style" of learning because such a style does not exist. However, according to research, one of the most effective types of learning styles to utilize with American Indians is the "observe and imitate style."[41] We employed this style in our training by providing information, then role playing, and finally discussing the topics.

Further research has indicated that the visual approach is used by many American Indian groups to understand the world.[42] We have also heard this from Apsáalooke community members. This strategy of learning was engaged in a number of ways: by placing posters with cervical health facts around the

room, by using pictures in the training material, by passing out instruments that are used during a Pap test, and by using reproductive system and cervical cancer models and diagrams. The Messengers also commented positively on these aspects of the training.

Last, Apsáalooke culture was embedded in the training in the way we discussed personal health issues and in the way we encouraged Messengers to conduct cervical health outreach. Traditionally, personal health issues are not discussed openly, yet the success of our intervention depended on the Messengers' talking with other women about cervical health. Our training and future program would have failed if we had trained the Messengers to talk with women in a culturally inappropriate manner. The Messengers made many comments about this issue.

The second implication or lesson learned is to assess the best method of delivery for training programs. This implication ties closely with the first implication, as the best method of delivery includes attention to culture. As mentioned above, Messengers provided positive feedback regarding the training's delivery style. We assumed the training would be best received if we included practices of adult learning, Freirian pedagogy, and Native American learning styles.

Regarding adult education and Freirian pedagogy principles, a respect for dialogue was incorporated, and we invited participation from the Messengers throughout the training session. We listened to and then built on the Messengers' experiences and knowledge base. This is also consonant with recommendations for using traditional Indian knowledge in public health programs.[43]

Another principle from adult education and Freire that we included was respect, for the learners' context and situation.[44] Because the training was co-developed by Apsáalooke and other Native women, the women's cultural context was infused throughout the training. Other parts of the training that were intended to foster respect included opening and closing the training with prayer and encouraging the Messengers to decorate their cloth bags in a traditional manner. Another important cultural value we tried to encourage was the merriment that comes about when Indian women get together.

The third implication or lesson learned is the importance of involving community members in the research process. There is a long history of exploitation of Native Americans in the name of science.[45] Native Americans may be reluctant to take part in research studies for several legitimate reasons.

Many past research programs in Native American communities have made the error of not listening to and following up on what community members say is important to them. Oftentimes, Native Americans have experienced research being done "to," "on," or "about" them rather than with them.[46] Native people do not want to be "guinea pigs" or part of studies that focus solely on the community's problems and not their strengths[47] or studies that do not share results with the community.[48] Lantz et al. found that using a participatory process increased the satisfaction of the tribal representatives and program staff with cervical cancer screening programs for Native American women.[49]

Messengers commented on the support they received from the project coordinator and staff in Bozeman. Many had suggestions on how to improve future trainings and meetings. They appreciated that we were listening and acting on their comments, and we have continued to solicit and act on their feedback. For example, we incorporated comments and suggestions from the interviews into the monthly Messengers' meetings. These meetings are used to provide additional educational information, share outreach experiences, plan events, and give feedback on the program to project staff and determine the direction of the program. During the interviews Messengers requested more contact with IHS physicians and other health professionals and suggested topics for future training. In response, we have had four IHS physicians, several health educators, and a dietician provide information about anatomy and terminology, men's health, breast health, sexually transmitted diseases (STDs), nutrition, and cancer. Messengers asked for cancer survivors to come to the meetings to tell their stories, and we followed through on this request.

Based on the interviews, we incorporated an important change in the way the monthly meetings were conducted: we added a sharing circle, in which an object is passed around and the woman with the object has the right to talk. Sharing circles or talking circles are a culturally appropriate method for conferring information.[50] Talking circles were traditionally used in Indian communities to discuss important issues.[51] Topics discussed in our talking circles have included obstacles to outreach, outreach successes, and ways to improve the program. This format ensured that all Messengers had an uninterrupted opportunity to talk, an important point raised in the interviews.

We also used input from the interviews in another two-day training in July of 2003, at Little Big Horn College. We acted on suggestions from the interviews to provide additional training on topics such as making appointments and communication skills for outreach. We also provided a refresher of the basic information from the first training. In the interviews Messengers specifically asked for Apsáalooke Reservation health statistics, which we included in the 2003 training manual.

In the interviews Messengers mentioned being uncomfortable talking with teens about personal health issues. During the summer of 2003 we had a Native American high school student work with the project. She presented information and led a discussion on the topic at the July 2003 training. The Messengers informally shared with us that they were very grateful for her presentation and that because of it they felt more comfortable discussing personal health issues with teenagers.

The Messengers asked for a few changes we did not make. One suggestion was to recruit high school girls to be Messengers. This idea is still being explored. Second, we did not have the resources to provide language classes for the two women who didn't fluently speak the Apsáalooke language, although it was mentioned at one meeting that the local tribal college provides these classes. Many Apsáalooke women speak their native language as their first language and prefer to talk in this language about personal topics. We used information from this process evaluation to make midcourse

adjustments to better reach our outcome objectives by changing, building on, and emphasizing specific aspects of the program.

The final implication or lesson learned is to elucidate training goals and assumptions and use process evaluation to assess outcomes. In addition to assessing outcomes, researchers and planners strongly advocate using process evaluation to identify program strengths and determine areas for improvement while a program is operating. Process evaluation enables program staff to better understand the reasons specific outcome evaluation results were achieved.[52]

Our training goals were to provide Messengers (the LHAs) with knowledge about cervical health, skills to plan and carry out cervical health outreach activities, information about other health issues affecting Native women, and the opportunity to come together with others who want to help all Apsáalooke women become healthier. We met some of these goals, and the Messengers commented on each goal. Messengers stated that their knowledge of cervical health increased and that they learned outreach techniques. The goal of providing information about other health issues was not reached because we ran out of time to cover additional issues in the training. To meet this goal, we have covered health topics of interest to the Messengers in our monthly meetings. Messengers commented that they enjoyed the chance to be part of the group, to have the opportunity to attend meetings with the other women, and to learn from each other.

Our assumptions were that women would feel comfortable talking with other women about personal health topics, that we had picked natural helpers to be Messengers, that the women needed factual information on cervical cancer and Pap tests, that the training would be most effective if guided by certain theories, and that the training and program would be more successful if the women felt comfortable with each other.

We assumed that since the women were identified as those whom others turn to for support and advice, they would feel comfortable talking with women about personal health topics. We reached this assumption from reading about LHAs and the roles they serve in their communities.[53] This assumption was not true, and it could have been a fatal error in our program if we had not gathered this process information because the main role of a Messenger is to talk with women about cervical health. In the training, we taught cervical health knowledge by providing them with information and then having them practice talking about the new information with other Messengers. When asked what new skills they gained from the training, the answer given most often was learning to talk to women about personal health issues. When the women were asked what they wanted more training on, the most common response was communication skills. We underestimated how sensitive it is in the Apsáalooke culture to talk with women about personal health topics and have spent a lot of time since the first training on this topic.

We assumed that the women recruited to be Messengers were natural helpers or women that other women turn to for support and advice. We learned from the Messengers' comments that this was a valid assumption. When asked how they felt about the other women, Messengers volunteered that the others were well chosen and are women who give freely to others.

We also assumed that they needed information on cervical cancer. We conducted pre-training and post-training cervical health knowledge assessments to measure changes due to the training. The assessment consisted of twenty-two items and the Messengers answered yes, no, or don't know to each item. The assessment was given immediately before the first training session and immediately after the second training session. Example items included "the Pap test checks for cancer of the cervix," "family history is a risk factor for cervical cancer (it is hereditary)," "there are things a woman can do to prevent cervical cancer," and "HPV is a major cause of cervical cancer." We measured internal consistency reliability using Cronbach's alpha, and the assessment tool at pretest was found to be acceptable with an alpha of .82. So that the Messengers would be comfortable completing the survey, we did not gather identifying information on the pre- and post-test. Thus, we could not conduct a paired *t*-test. A two-tailed one-sample *t*-test showed a significant increase in scores from pretest (M = 13.2, SD = 3.53) to post-test (M = 19.1, SD = 1.58; $t[20] = 17.12$, $p < .000$). The assumption that the Messengers needed cervical health information was correct.

We assumed that the training would be most effective if it was guided by theories of adult education, Freirian pedagogy, and Native American teaching and learning. We have indicated above that this was indeed true.

Our last assumption was that the training would be more effective if the women felt comfortable with each other. We assumed this because there are cultural traditions and restrictions regarding talking about personal health issues, and we believed that the Messengers would need to feel comfortable with each other in order to talk openly about difficult topics. Messengers indicated that one of the most satisfying aspects of the training was the opportunity to spend time with and form new and deeper relationships with other Apsáalooke women. At subsequent trainings and meetings we had the Messengers pair off with different women for discussions and provided time for informal interactions. Although we schedule our monthly meetings from 5:30 to 6:30 p.m., it is not uncommon for women to stay past 7:30 p.m. talking and sharing.

DISCUSSION

When conducting process evaluations, using open-ended interviews compared to closed-ended surveys allows program staff to gain a more comprehensive understanding of the issue at hand and is a more culturally appropriate method when working with Native Americans. This evaluation is a part of the process evaluation for the Messengers for Health program. Process evaluation assesses important components of programs throughout implementation, instead of focusing solely on outcome measures after the project is complete. Process evaluation can be used to explain program activities and to help ascertain the fidelity of a study;[54] process evaluation can also illuminate ways to improve the design of the project and the way data are assessed.[55] Process evaluation of lay health adviser programs is strongly recommended,[56] and evaluations are most helpful when they provide specific answers to questions that cannot be answered through outcome evaluation.[57] This evaluation

enabled us to make program adjustments that should make the Messengers' activities more effective in the Apsáalooke community. It also provided lessons applicable to programs working with Native American communities and individuals, to interventions that use community members for outreach and/or education, or to any program interested in using process evaluation. These lessons are to incorporate culture into training programs; assess the best method of delivery for these training programs; involve community members in the research process; and elucidate training goals and assumptions and use process evaluation to assess outcomes.

NOTES

The support of the American Cancer Society (Margaret Ann Wise Grant TURSG-01-193-01-PBP) is acknowledged with gratitude.

1. David Espey, Roberta E. Paisano, and Nathaniel Cobb, "Regional Patterns and Trends in Cancer Mortality among American Indians and Alaska Natives, 1990–2001," *Cancer* 103 (2005): 1045–53.

2. Ibid., 1045.

3. Ibid.

4. Ibid.

5. Ibid.; David Espey, Roberta E. Paisano, and Nathaniel Cobb, "Cancer Mortality among American Indians and Alaska Natives—United States, 1994–1998," *Morbidity and Mortality Weekly Report* 52 (2003):704–7; David Espey, Roberta E. Paisano, and Nathaniel Cobb, *Cancer Mortality among American Indians and Alaska Natives: Regional Differences, 1994–1998* (Rockville, MD: Indian Health Service, 2003); Judith S. Kaur, "Native American Cancer Survivors: Agents for Change," in *Preventing and Controlling Cancer in North America: A Cross-Cultural Perspective*, ed. Diane Weiner (Westport, CT: Praeger, 1999); Thomas M. Becker, James Bettles, Jodi Lapidus, Joseph Campo, Christopher J. Johnson, Donald Shipley, and L. D. Robertson, "Improving Cancer Incidence Estimates for American Indians and Alaska Natives in the Pacific Northwest," *American Journal of Public Health* 92 (2002): 1469–70; Les B. Whitbeck, Barbara J. McMorris, Dan R. Hoyt, Jerry D. Stubben, and Teresa D. LaFromboise, "Perceived Discrimination, Traditional Practices, and Depressive Symptoms among American Indians in the Upper Midwest," *Journal of Health and Social Behavior* 43 (2002): 400–418; Martin C. Mahoney and Arthur M. Michalek, "Cancer Control Research among American Indians and Alaska Natives: A Paradigm for Research Needs in the Next Millennium," *American Indian Culture and Research Journal* 22 (1998): 155–69; Martin C. Mahoney and Arthur M. Michalek, "The Health Status of American Indians and Alaska Natives: 2. Lessons for Cancer Educators," *Journal of Cancer Education* 14 (1999): 23–27; Linda Burhansstipanov and Connie Dresser, *Native American Monograph no 1: Documentation of the Cancer Research Needs of American Indians and Alaska Natives* (Bethesda, MD: National Cancer Institute, 1994); Linda Burhansstipanov, James W. Hampton, and Martha J. Tenney, "American Indian and Alaska Native Cancer Data Issues," *American Indian Culture and Research Journal* 23 (1999): 217–41; James Hampton, "Cancer in Indian Country—Keynote Address," *Alaska Medicine* 35 (1993): 245–47; Marjorie Kagawa-Singer, "Socioeconomic and Cultural Influences on Cancer Care of Women," *Seminars in Oncology Nursing* 11

(1995): 109–19; Tierney L. Norsted and Emily White, Cancer Incidence among Native Americans of Western Washington," *International Journal of Epidemiology* 18 (1989): 22–27; Nathaniel Cobb, "Epidemiologic Patterns of Cancer," in *Primary Care of Native American Patients: Diagnosis, Therapy, and Epidemiology*, ed. James M. Galloway, Bruce W. Goldberg, and Joseph S. Alpert, 165–74 (Boston: Butterworth-Heinemann 1999); Melissa R. Partin, Stephen J. Rith-Najarian, Jonathan S. Slater, Jane E. Korn, Nathaniel Cobb, and John T. Soler, "Improving Cancer Incidence Estimates for American Indians in Minnesota," *American Journal of Public Health* 89 (1999): 1673–77; Linda Burhansstipanov, James W. Hampton, and Charles L. Wiggins, "Issues in Cancer Data and Surveillance for American Indian and Alaska Native Populations," *Journal of Registry Management* 26 (1999): 153–57; Linda Burhansstipanov, James W. Hampton, and Martha J. Tenney, "Cancer among American Indians and Alaska Natives: Trouble with Numbers," in *Medicine Ways: Disease, Health, and Survival among Native Americans*, ed. Clifford E. Trafzer and Diane Weiner (Walnut Creek, CA: AltaMira Press, 2001); Judith Swan and Brenda K. Edwards, "Cancer Rates among American Indians and Alaska Natives," *Cancer* 98 (2003): 1262–72; Claudia Sanchez Glover and Felicia Schanche Hodge, eds., *Native Outreach: A Report to American Indian, Alaska Native, and Native Hawaiian Communities* (Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 1999); Floyd Frost, Victoria Taylor, and Elizabeth Fries, "Racial Misclassification of Native Americans in a Surveillance, Epidemiology, and End Results Cancer Registry," *Journal of the National Cancer Institute* 84 (1992): 957–62.

6. More information on survey development, results, and training of interviewers can be found in Suzanne Christopher, Linda Burhansstipanov, and Alma Knows His Gun McCormick, "Using a CBPR Approach to Develop an Interviewer Training Manual with Members of the Apsáalooke Nation," in *Methods in Community-Based Participatory Research for Health*, ed. Barbara A. Israel, Eugenia Eng, Amy J. Schultz, and Edith A. Parker, 128–45 (San Francisco: Jossey-Bass, 2005); Adina Smith, Suzanne Christopher, and Alma Knows His Gun McCormick, "Development and Implementation of a Culturally Sensitive Cervical Health Survey: A Community-Based Participatory Approach," *Women and Health* 40 (2004): 67–86.

7. Carol L. McAllister, Beth L. Green, Martha Ann Terry, Vivian Herman, and Laurie Mulvey, "Parents, Practitioners, and Researchers: Community-Based Participatory Research with Early Head Start," *American Journal of Public Health* 93 (2003): 1672–79; Alice Ammerman, Giselle Corbie-Smith, Diane Marie M. St. George, Chanetta Washington, Beneta Weathers, and Bethany Jackson-Christian, "Research Expectations among African American Church Leaders in the PRAISE! Project: A Randomized Trial Guided by Community-Based Participatory Research," *American Journal of Public Health* 93 (2003): 1720–27.

8. Meredith Minkler and Nina Wallerstein, eds., *Community-Based Participatory Research for Health* (San Francisco: Jossey-Bass, 2003).

9. Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples* (London: Zed Books, 1999); Suzanne Christopher, "Recommendations for Conducting Successful Research with Native Americans," *Journal of Cancer Education* 20 (2005): 47–51.

10. Sheldon Cohen and S. Leonard Syme, eds., *Issues in the Study and Application of Social Support* (Orlando, FL: Academic Press, 1985); Barbara A. Israel, "Social

Networks and Social Support: Implications for Natural Helper and Community Level Interventions," *Health Education Quarterly* 12 (1985): 65–80; Catherine A. Heaney and Barbara A. Israel, "Social Networks and Social Support in Health Education," in *Health Behavior and Health Education*, ed. Karen Glanz, Frances Marcus Lewis, and Barbara K. Rimer (San Francisco: Jossey-Bass, 1997).

11. Eugenia Eng, Edith Parker, and Christina Harlan, "Lay Health Intervention Strategies: A Continuum from Natural Helping to Paraprofessional Helping," *Health Education and Behavior* 24 (1997): 413–17.

12. Eugenia Eng and R. Young, "Lay Health Advisors as Community Change Agents," *Family and Community Health* 104 (1992): 24–40.

13. Nancy Beam and Irene Tessaro, "The Lay Health Advisor Model in Theory and Practice: An Example of an Agency-Based Program," *Family and Community Medicine* 17 (1994): 70–79.

14. Eugenia Eng, "The Save Our Sisters Project: A Social Network Strategy for Reaching Rural Black Women," *Cancer* 72 (1993): 1071–77; Eugenia Eng and John Hatch, "Networking between Agencies and Black Churches: The Lay Health Advisor Model," *Religion and Prevention in Mental Health* (1991): 123–46.

15. Connie Blumenthal, Eugenia Eng, and Jim Thomas, "STEP Sisters, Sex, and STDs: A Process Evaluation of Recruitment of Lay Health Advisors," *American Journal of Health Promotion* 14 (1999): 4–6.

16. Michelle Crozier Kegler, Rachel Stern, Sally Whitecrow-Ollis, and Lorraine Halinka Malcoe, "Assessing Lay Health Advisor Activity in an Intervention to Prevent Lead Poisoning in Native American Children," *Health Promotion Practice* 4 (2003): 189–96; Mary Altpeter, Jo Ann L. Earp, Caroline Bishop, and Eugenia Eng, "Lay Health Advisor Activity Levels: Definitions from the Field," *Health Education and Behavior* 26 (1999): 495–512; Eugenia Eng and Jacqueline Smith, "Natural Helping Functions of Lay Health Advisors in Breast Cancer Education," *Breast Cancer Research and Treatment* 34 (1995): 23–29; Jo Anne L. Earp and Valerie L. Flax, "What Lay Health Advisors Do: An Evaluation of Advisors' Activities," *Cancer Practice* 7 (1999): 16–21; Chris McQuiston and Jacquelyn H. Flaskerud, "If They Don't Ask about Condoms, I Just Tell Them: A Descriptive Case Study of Latino Lay Health Advisors' Helping Activities," *Health Education and Behavior* 30 (2003): 79–96.

17. Amy J. Schulz, Barbara A. Israel, Adam B. Becker, and Rose M. Hollis, "It's a 24-Hour Thing . . . a Living-for-Each-Other Concept: Identity, Networks, and Community in an Urban Village Health Worker Project," *Health Education and Behavior* 24 (1997): 465–80.

18. James C. Thomas, Eugenia Eng, Michele Clark, Jadis Robinson, and Connie Blumenthal, "Lay Health Advisors: Sexually Transmitted Disease Prevention through Community Involvement," *American Journal of Public Health* 88 (1998): 1252–53; E. Watkins, C. Harlan, Eugenia Eng, S. Gansey, D. Gehan, and K. Larson, "Assessing the Effectiveness of Lay Health Advisors with Migrant Farm Workers," *Family and Community Health* 16 (1994): 72–87.

19. Caroline Bishop, Jo Anne Earp, Eugenia Eng, and Kathy S. Lynch, "Implementing a Natural Helper Lay Health Advisor Program: Lessons Learned from Unplanned Events," *Health Promotion Practice* 3 (2002): 233–44.

20. Centers for Disease Control and Prevention, "Framework for Program Evaluation in Public Health," *Morbidity and Mortality Weekly Reports* 48 (1999): 1–40; Barbara A.

Israel, K. Michael Cummings, Mark B. Dignan, Catherine A. Heaney, Daniel P. Perales, Bruce G. Simons-Morton, and Marc A. Zimmerman, "Evaluation of Health Education Programs: Current Assessment and Future Directions," *Health Education Quarterly* (1995): 364–89; Louise E. Cunningham, Robert Michielutte, Mark Dignan, Penny Sharp, and Jeanne Boxley, "The Value of Process Evaluation in a Community-Based Cancer Control Program," *Evaluation and Program Planning* 23 (2000): 13–25; Mark B. Dignan, Robert Michielutte, Penny C. Sharp, Larry D. Young, and L. Ann Daniels, "Use of Process Evaluation to Guide Health Education in Forsyth County's Project to Prevent Cervical Cancer," *Public Health Reports* 106 (1991): 73–77; Allan Steckler and Laura Linnan, eds., *Process Evaluation for Public Health Interventions and Research* (San Francisco: Jossey-Bass, 2002); Claire I. Viadro, Jo Anne L. Earp, and Mary Altpeter, "Designing a Process Evaluation for a Comprehensive Breast Cancer Screening Intervention: Challenges and Opportunities," *Evaluation and Program Planning* 20 (1997): 237–49.

21. Barbara A. Israel, foreword to *Process Evaluation for Public Health Interventions and Research*, ed. Allan Steckler and Laura Linnan (San Francisco: Jossey-Bass, 2002).

22. Eng, "The Save Our Sisters Project," 1071.

23. Kegler et al., "Assessing Lay Health Advisor Activity in an Intervention to Prevent Lead Poisoning in Native American Children," 189.

24. Jane Vella, "A Spirited Epistemology: Honoring the Adult Learner as Subject," *New Directions for Adult and Continuing Education* 85 (2000): 7–16.

25. Paulo Freire, *Pedagogy of the Oppressed* (New York: Continuum, 1970); Nina Wallerstein, Victoria Sanchez-Merki, and Lily Dow, "Freirian Praxis in Health Education and Community Organizing: A Case Study of an Adolescent Prevention Program," in *Community Organizing and Community Building for Health*, ed. Meredith Minkler, 195–214 (New Brunswick, N.J.: Rutgers University Press, 1997).

26. Steven L. Henry and Floy C. Pepper, "Cognitive, Social, and Cultural Effects on Indian Learning Style: Classroom Implications," *Journal of Educational Issues of Language Minority Students* 7 (1990): 85–97; Karen Swisher and Donna Deyhle, "The Styles of Learning Are Different, but the Teaching Is Just the Same: Suggestions for Teachers of American Indian Youth," *Journal of American Indian Education* special issue (August 1989): 1–13.

27. Robert C. Bogdan and Sari Knopp Biklen, *Qualitative Research for Education: An Introduction to Theory and Methods* (Boston: Allyn and Bacon, 1992); Janice M. Morse, ed., *Critical Issues in Qualitative Research Methods* (Thousand Oaks, CA: Sage, 1994); Norman K. Denzin and Yvonna S. Lincoln, eds., *Handbook of Qualitative Research* (Thousand Oaks, CA: Sage, 1994).

28. Patricia Longley Cochran and Alyson L. Geller, "The Melting Ice Cellar: What Native Traditional Knowledge Is Teaching Us about Global Warming and Environmental Change," *American Journal of Public Health* 92 (2002): 1404–9.

29. Anselm Strauss and Juliet Corbin, *Basics of Qualitative Research: Grounded Theory Procedures and Techniques* (Newbury Park, CA: Sage, 1990); A. Strauss and J. Corbin, "Grounded Theory Methodology: An Overview," in Denzin and Lincoln, *Handbook of Qualitative Research.*

30. Michael Q. Patton, *How to Use Qualitative Methods in Evaluation* (Newbury Park, CA: Sage, 1987); Michael Q. Patton, *Qualitative Research and Evaluation Methods*, 3rd ed. (Thousand Oaks, CA: Sage, 2002).

31. Bogdan and Biklen, *Qualitative Research for Education.*

32. A. M. Huberman and M. B. Miles, "Data Management and Analysis Methods," in Denzin and Lincoln, *Handbook of Qualitative Research.*

33. Strauss and Corbin, *Basics of Qualitative Research.*

34. Patton, *How to use Qualitative Methods in Evaluation*; Michael Q. Patton, *Qualitative Evaluation and Research Methods*, 2nd ed. (Newbury Park, CA: Sage, 1990).

35. Patton, *How to use Qualitative Methods in Evaluation.*

36. Rob Simmons, Elizabeth Bennett, Mei Ling Schwartz, Denise Tung Sharify, and Etta Short, "Health Education and Cultural Diversity in the Health Care Setting: Tips for the Practitioner," *Health Promotion Practice* 3 (2002): 8–11.

37. Simmons et al., "Health Education and Cultural Diversity in the Health Care Setting," 8; Gerado Marín, Linda Burhansstipanov, Cathleen M. Connell, Andrea C. Gielen, Deborah Helitzer-Allen, Kate Lorig, Donald E. Morisky, Martha Tenney, and Stephen Thomas, "A Research Agenda for Health Education among Underserved Populations," *Health Education Quarterly* 22 (1995): 346–63; Linda Burhansstipanov, "Native American Community-Based Cancer Projects: Theory versus Reality," *Cancer Control: Journal of the Moffitt Cancer Center* 6 (1999): 620–26; David R. Williams, "Racial/Ethnic Variations in Women's Health: The Social Embeddedness of Health," *American Journal of Public Health* 92 (2002): 588–97.

38. Paula M. Lantz, Carlyn E. Orians, Edward Liebow, Jennie R. Joe, Linda Burhansstipanov, Julie Erb, and Kathryn Kenyon, "Implementing Women's Cancer Screening Programs in American Indian and Alaska Native Populations," *Health Care for Women International* 24 (2003): 674–96.

39. Jeffrey A. Orr, "Learning from Native Adult Education," *New Directions for Adult and Continuing Education* 85 (2002): 59–66.

40. See June C. Strickland, Marion Dick Squeoch, and Noel J. Chrisman, "Health Promotion in Cervical Cancer Prevention among the Yakama Indian Women of the Wa'Shat Longhouse," *Journal of Transcultural Nursing* 10 (1999): 190–96.

41. Henry and Pepper, "Cognitive, Social, and Cultural Effects on Indian Learning Style," 85.

42. Swisher and Deyhle, "The Styles of Learning Are Different, but the Teaching Is Just the Same," 1.

43. Cochran and Geller, "The Melting Ice Cellar."

44. Vella, "A Spirited Epistemology," 7.

45. Smith, *Decolonizing Methodologies*; Barbara Deloria, Kristen Foehner, and Sam Scinta, eds., *Spirit and Reason: The Vine Deloria, Jr. Reader* (Golden, CO: Fulcrum, 1999).

46. William L. Freeman, "Research in Rural Native Communities," in *Conducting Research in the Practice Setting*, ed. Martin J. Bass, Earl V. Dunn, Peter G. Norton, and Moira Stewart (Newbury Park, CA: Sage, 1993); Christopher, "Recommendations for Conducting Successful Research with Native Americans," 47.

47. Hilary N. Weaver, "Assessing the Needs of Native American Communities: A Northeastern Example," *Evaluation and Program Planning* 22 (1999): 155–61; Joseph E. Trimble, "The Sojourner in the American Indian Community: Methodological Issues and Concerns," *Journal of Social Issues* 33 (1977): 159–74; Vine Deloria Jr., "Commentary: Research, Redskins, and Reality," *American Indian Quarterly* 15 (1991): 457–68; Teresa D. LaFromboise and Barbara S. Plake, "Toward Meeting the Research Needs of American Indians," *Harvard Educational Review* 53 (1983): 45–51; Paul Boyer, "The Model Scholar," *Tribal College: Journal of American Indian Higher Education* 4 (1993): 20–22.

48. Burhansstipanov, "Native American Community-Based Cancer Projects," 620.

49 Lantz et al., "Implementing Women's Cancer Screening Programs in American Indian and Alaska Native Populations," 674.

50. Felicia Schanche Hodge, Larri Fredericks, and Beverly Rodriguez, "American Indian Women's Talking Circle: A Cervical Cancer Screening and Prevention Project," *American Cancer Society* 78, supp. (1996): 1592–97; Cochran and Geller, "The Melting Ice Cellar," 1404.

51. Shauna S. Roberts, "Talking Circles Ease Burden of Diabetes for Native Americans," *Diabetes Forecast* 57 (2004): 23.

52. Allan Steckler, "The Use of Qualitative Evaluation Methods to Test Internal Validity," *Evaluation and the Health Professions* 12 (1989): 115–33; Steckler and Linnan, *Process Evaluation for Public Health Interventions and Research.*

53. Kegler et al., "Assessing Lay Health Advisor Activity in an Intervention to Prevent Lead Poisoning in Native American Children"; McQuiston and Flaskerud, "If They Don't Ask about Condoms, I Just Tell Them," 79.

54. Sarah A. McGraw, Elaine J. Stone, Stavroula K. Osganian, John P. Elder, Cheryl L. Perry, Carolyn C. Johnson, Guy S. Parcel, Larry S. Webber, and Russell V. Luepker, "Design of Process Evaluation within the Child and Adolescent Trial for Cardiovascular Health (CATCH)," *Health Education Quarterly*, supp. 2 (1994): S5–S26; Israel et al., "Evaluation of Health Education Programs: Current Assessment and Future Directions."

55. Steckler and Linnan, *Process Evaluation for Public Health Interventions and Research.*

56. Marilyn Rodney, Carla Clasen, Gloria Goldman, Ronald Markert, and Donna Deane, "Three Evaluation Methods of a Community Health Advocate Program," *Journal of Community Health* 23 (1998): 371–81; Schulz et al., "It's a 24-hour Thing . . . a Living-for-Each-Other Concept," 465; Bishop et al., "Implementing a Natural Helper Lay Health Advisor Program," 233.

57. One of the purposes process evaluation may serve is to "develop, prioritize, 'customize' and when necessary modify specific" activities (Viadro, Earp, and Altpeter, "Designing a Process Evaluation for a Comprehensive Breast Cancer Screening Intervention," 248).