

CONTEXTUALIZING CBPR; KEY PRINCIPLES OF CBPR MEET THE INDIGENOUS RESEARCH CONTEXT¹

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ABSTRACT

This paper addresses two questions about the use of Community-based Participatory Research (CBPR) approaches with tribal communities. First, how do “gold standard” CBPR principles hold up when applied to Native American communities and what additional contextual information is necessary to understand and work with these principles in this setting? Second, what additional principles or recommendations are helpful for researchers interested in conducting research using a CBPR approach with tribal communities? We studied a variety of literature sources on CBPR and Native health research to answer these questions. We are unaware of any publications that contextualize CBPR principles for working with specific populations. This information has direct application for conducting research with tribal communities, and confirms the importance of using CBPR approaches in this setting.

1. **Acknowledgements:** The support of the National Center on Minority Health and Health Disparities (P20MD002317) and American Cancer Society (RSG-01-193-05-CPPB) are acknowledged with gratitude. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Center on Minority Health and Health Disparities or the National Institutes of Health or the American Cancer Society.

INTRODUCTION

The relationship between Native Americans and non-Natives in the United States has been fraught with mistrust, violence, and broken promises. Tribes have been subject to centuries of decisions that affected their health and welfare without the benefit of equal participation in the decision-making process (Burhansstipanov and Hollow, 2001; Jorgensen, 1996; Roubideaux, 2002; Shelton, 2004). Native Americans have been subject to religious, personal, and political agendas and policies based on observations and opinions of decision makers who neglected the importance of the Indian perspective (Burhansstipanov and Hollow, 2001; Jorgensen, 1996; Kunitz, 1996; Roubideaux, 2002; Shelton, 2004). During the early colonization of the US, Native Americans were subject to the doctrines of discovery and conquest by invading countries. Under these doctrines, the death of Natives through disease was viewed as a divine sign that the colonial conquest of the new land was just (Jones, 2006). Later, as the newly formed US government attempted to satisfy its citizens' need for more land, these doctrines made the conquest and decimation of Native people an acceptable method of gaining this land and other resources (Shelton, 2004). During the years of treaty making, from the late 1700s through 1877, Native American participation continued to be diminished through confusing and vague language, poor or no interpretation to Native languages, manipulation of tribal members who did not represent tribal interests, and government policies intent on gaining land and resources (Shelton, 2004). The loss of Native voices throughout US-tribal history has been a contributor to many of the difficulties faced by tribal nations, including the health disparities facing tribal communities today (Teufel, 1996; Wallerstein and Duran, 2006). This history of neglect, exploitation, and deceit has created a legacy of mistrust of outside interference in tribal affairs.

This elevated level of distrust for outside interference in tribal affairs has created an unfortunate dilemma for both tribal members and academic researchers who have a genuine interest in improving tribal health and welfare (Ambler, 1997; Belcourt-Dittloff and Stewart, 2000; Christopher, 2005; Cook, 2006; Freeman, 1993; Moran, 2001; Roubideaux and Dixon, 2001; Trimble, 1977). Although tribes have been using government policies and legislation to gradually gain back some control of their healthcare and economic programs since the 1970s (Kunitz, 1996; Shelton, 2004), most tribes do not have the financial or human resources to address the health disparities that face their people and threaten their future (Burhansstipanov et al.,

1999; Chino and DeBruyn, 2006; Jumper-Thurman et al., 2001; Olsen and Frank-Stromborg, 1993; Roubideaux and Dixon, 2001). For many tribes, addressing health issues is urgent (Chino and DeBruyn, 2006), and will affect their future as sovereign nations (Crazy Bull, 1997a). In order to withstand future policy shifts that may include a return to termination strategies by the federal government, tribes need to have a healthy membership and economic base (Fisher and Ball, 2003).

Unfortunately, health-related research with Native American groups has followed a path of outside policy and agenda similar to the tribal-federal government relationship (Cook, 2006; Davis and Reid, 1999; Wax, 1991). For decades, tribes have been the subjects of numerous studies conducted by outside researchers. Some used tribes as subjects in research projects not in the tribes' best interest (Boyer, 1993; Macaulay et al., 1998a), promised benefits and never returned (Deloria, 1991; Roubideaux and Dixon, 2001; Weaver, 1997, 1999a), showed little or no respect for tribal culture or beliefs (Crazy Bull, 1997a; Letiecq and Bailey, 2004), or used culturally insensitive western-based research philosophies instead of indigenous research philosophies and methods (Chino and DeBruyn, 2006; Crazy Bull, 1997a). These negative encounters have left many tribes wary of outsiders who want to conduct research within their reservation or among their members. Since the 1970s, tribes have increasingly asserted their authority over outside entities and are now demanding to be equal partners in decisions that affect their communities. There must be a concerted effort to create true partnerships between tribal members and researchers, all of whom have valuable knowledge, resources, and the desire to improve the health and economic status of Native Americans (Lillie-Blanton and Roubideaux, 2005; Roubideaux and Dixon, 2001). The challenge is to find ways to overcome past negative experiences to establish tribal and research partnerships that can address these issues.

Over the past few decades, two sets of recommendations for conducting research have been simultaneously published. One set contains recommendations for research among Native Americans and the other provides recommendations and key principles for conducting research using community-based participatory research (CBPR) approaches. CBPR has been touted as a tool for reducing health disparities among many minority groups, including Native Americans (Macaulay et al., 1998a). However, we are unaware of any attempts to compare and contrast recommendations for CBPR and recommendations for conducting research among Native Americans (or other specific groups) or of any attempts to contextualize recommenda-

tions for CBPR through a Native American (or other) lens. This has direct application for anyone conducting research with tribal communities as all recommendations for research with tribes state the importance of using community-based approaches in order to succeed.

This paper addresses two questions. First, how do the “gold standard” principles for conducting research using a CBPR approach hold up when applied to working with Native American communities and what additional contextual information is necessary to understand and work with these principles in this setting? Second, what additional principles or recommendations are helpful for researchers interested in conducting research using a CBPR approach with tribal communities? We studied a variety of literature sources on CBPR and Native health research to answer these questions.

METHODS

We began with an extensive literature search for principles and recommendations for conducting CBPR research and research with Native American communities. We then compared the recommendations for similarities and differences and provided context for key CBPR principles. To better understand the basis for the differences in recommendations, we extended our literature search to include federal-tribal government relationships, Indian health policy, and tribal experiences with research.

RESULTS

Our review of CBPR literature produced a large list of recommended and key principles. The principles most frequently found in the literature, and those on which we will focus, were eight initially described by Israel and colleagues in 1998 (Israel et al., 1998).

1. Recognizes community as a unit of identity.
2. Builds on strengths and resources of the community.
3. Facilitates collaborative partnerships in all phases of the research.
4. Integrates knowledge and action for mutual benefit of all partners.
5. Promotes a co-learning and empowering process that attends to social inequalities.
6. Involves a cyclical and iterative process.
7. Addresses health from both positive and ecological perspectives.
8. Disseminates findings and knowledge gained to all partners.

In our review of recommended practices for research among Native American communities, we found similar recommendations to the eight

principles for CBPR listed above. However, the recommendations often had a different context, terminology, and additional history than the CBPR literature. The contextualized version of the eight principles appears below. Our experiences are from working with rural Native American reservation communities in Montana. Principles and recommendations for working with other rural communities or with urban Indian communities may be different.

1. RECOGNIZES COMMUNITY AS A UNIT OF IDENTITY

Community-based approaches to research attempt to identify and to work with existing communities of identity, and/or to strengthen a sense of community through collective engagement. (Israel et al., 1998, p. 178)

Although there is great variation in degree of assimilation, level of education, and other factors within tribal communities, there are underlying experiences and indigenous helping systems that bind communities into a unit of identity (Burhansstipanov, 1998b; Dignan et al., 1993; Fisher and Ball, 2003; Gotay et al., 2000; Voss et al., 1999; Wax, 1991; Weaver, 1999b). Shared experiences of colonization, discrimination, historical trauma, traditions, religion, and family ties are powerful means of identification for many Native American people (Belcourt-Dittloff and Stewart, 2000; Burhansstipanov and Hollow, 2001; Olson, 1999; Weaver, 1997). Tribal members all have to live in a bicultural world where institutions and systems of the majority culture dominate (Waziyatawin and Yellow Bird, 2005). This understanding of community perspective is important in providing appropriate and compatible research protocols (Burhansstipanov et al., 2001; Burhansstipanov et al., 2006; Carter et al., 1997; Davis and Cunningham-Sabo, 1999; Letiecq and Bailey, 2004; Weaver, 1997, 1999a; Wright et al., 1997).

2. BUILDS ON STRENGTHS AND RESOURCES OF THE COMMUNITY

Community-based research seeks to build on strengths, resources, and relationships that exist within communities of identity. (Israel et al., 1998, p. 178)

Much of the literature on recommendations for research among Native American communities points out that past research has often focused on deficits and problems in communities (Ambler, 1997); in order to be successful, researchers must build on community strengths and resources (Burhansstipanov et al., 2001; Carter et al., 1997; Christopher et al., 2005; Red Horse et al., 1989; Weaver, 1999b). Although obscured by the slant of past publications, Native communities have a wealth of resources that can be utilized for successful research endeavours including the use of culture

and traditions as effective methods for addressing tribal health issues (Voss et al., 1999; Weaver, 1999a, 1999b).

For some tribes, research and community-based programs may be an important avenue for revitalizing tribal traditional beliefs and practices (Weaver, 1999a). This desire to reestablish cultural knowledge and practices may be as, or more, important to communities than the proposed research question (Crazy Bull, 1997a). Community members are valuable resources for bridging the gap between the research process and the practical application of intervention and research results (Beardi and Donnelly, 1999; Carter et al., 1997; Letiecq and Bailey, 2004; Weaver, 1999a). Ethnocentric assumptions (Ambler, 1997; Davis and Reid, 1999) by non-Natives have led to stereotypes of Native Americans as unintelligent, uncooperative, or unable to understand health issues (Ambler, 1997; Mihesuah, 1993). These views can be changed by gaining insight into historical and contemporary issues unique to the tribal communities as mentioned under recommendation one (Davis and Reid, 1999; Freeman, 1993). Issues and information that outside researchers find important may not be acknowledged by tribes because the content or protocols do not fit with social systems and norms of the communities (Crazy Bull, 1997a; Gotay et al., 2000). Simply put, Native Americans may think differently, not out of ignorance, but out of their own life experiences and perceptions (Burhansstipanov, 1999; Crazy Bull, 1997b; Voss et al., 1999). Researchers must be careful not to repeat past mistakes by portraying themselves as experts on tribal history, culture, language, or health (Deloria, 1991). Tribes are no longer willing to let outsiders pretend to be the caretakers of tribal culture and knowledge (Mihesuah, 1993). Successful researchers will acknowledge the expertise of tribal members, regardless of their level of formal education, and be willing to be a learner in the research process (Beardi and Donnelly, 1999; Strickland, 2006).

3. FACILITATES COLLABORATIVE PARTNERSHIPS IN ALL PHASES OF THE RESEARCH

[CBPR approaches involve] a collaborative partnership in which all parties participate as equal members and share control over all phases of the research process" (Israel et al., 1998, pp. 178-179).

Partnering with Native communities in all phases of research is a common recommendation for successful work with tribal nations. Most articles mention involvement at each stage of planning, development, implementation, and dissemination of results (Christopher, 2005; Davis and Reid, 1999; Kagawa-Singer, 1995; Letiecq and Bailey, 2004; Macaulay et al., 1998b;

Moran, 2001; Weaver, 1999a; Wright et al., 1997). Researchers familiar with CBPR principles will recognize that many of the conditions that tribes place on approval of projects are based on this principle, even though many tribal partners have never heard of or used the term community-based participatory research. Tribes have been the subjects of paternalistic, institutional research practices for many years, and have not been satisfied with the unequal outcomes (Boyer, 1993; Burhansstipanov et al., 2006). Experiences with “helicopter research,” where outside researchers flew in to the reservation for a short time period, gathered data, and then flew away without further contact left many tribes angry and distrustful of outside intruders into their communities. Many of these studies produced culturally insensitive and statistically invalid results that were published without review or consent from the tribes (Boyer, 1993; Crazy Bull, 1997a; Weaver, 1997). As a result, any research imposed from outside may create distrust and hinder participation and cooperation from tribal members (Ambler, 1997; Moran, 2001; Weaver, 1997). It is no longer acceptable to plan or conduct research without first partnering with tribes (Freeman, 1993; Trimble, 1977). Community and university partners working equally in every aspect of the research process establishes trust; ownership of project goals will create a more successful and satisfying research experience for all partners. Partnering will also help the researcher avoid potential mistakes in interpretation of data and results and culturally inappropriate actions and interventions (Olson, 1999; Solomon and Gottlieb, 1999; Weaver, 1997). Finally, involvement of community members throughout the research process builds on the strengths to continue improvements in health after the funded project ends (Deloria, 1991; Moran, 2001; Weaver, 1997).

4. INTEGRATES KNOWLEDGE AND ACTION FOR MUTUAL BENEFIT OF ALL PARTNERS

Community-based research seeks to build a broad body of knowledge related to health and well-being while also integrating that knowledge with community and social change efforts that address the concerns of the communities involved (Israel et al., 1998, p. 179).

This recommendation exists in the literature on successful research with tribal nations and is due to past experiences of tribal communities not benefiting from data gathering or needs assessments conducted by researchers (Macauley et al., 1998b). Another result of this experience is that many tribes will no longer participate in research that is not directly beneficial to their communities. Although many tribes are interested in research,

most are dealing with more imminent issues such as poverty and poor health outcomes in their communities. Tribes have dealt with a long history of policy barriers and budget constraints that affect their ability to receive and provide the best health care to their people (Burhansstipanov et al., 1999; Freeman, 1993). They are looking for immediate assistance to improve these conditions (Chino and DeBruyn, 2006; Fisher and Ball, 2003), which requires a balance between the amount of research data produced and the tangible benefits that projects provide to communities (Deloria, 1991; Freeman, 1993; Harris, 1998).

Another issue among many tribes today is the preservation of traditional culture and language (Crazy Bull, 1997a). This may seem less important than the health and poverty that most tribes are dealing with, but to many tribes, it is tied to their identity and future (Weaver, 1999a). Inclusion of tribal cultural beliefs and indigenous ways of knowing in research studies is an important consideration and a potential benefit to the community.

5. PROMOTES A CO-LEARNING AND EMPOWERING PROCESS THAT ATTENDS TO SOCIAL INEQUALITIES

[There is an emphasis on] sharing information, decision-making, power, resources, and support among members of the partnership. (Israel et al., 1998, p. 179).

Co-learning has also been described as an important and necessary component of research among Native American communities (Beardi and Donnelly, 1999; Burhansstipanov et al., 2006; Davis and Reid, 1999; Moran, 2001; Weaver, 1997). Researchers must be willing to put themselves in the role of learner, accept new viewpoints, and give up their position as the sole expert in the partnership. Additionally, the researcher must provide education and training for community members to allow them to make informed decisions in the partnership, and to ensure that community members have the opportunity to participate in all aspects of the research process. Tribes are looking for opportunities to regain control over their destinies. Researchers have the unique opportunity to provide resources, training, and experiences for tribal members that may be useful in developing the necessary networks and skills to conduct successful health research through these partnerships and beyond. Similarly, tribal partners have the opportunity to provide researchers with an understanding and appreciation of Native ways of knowing, indigenous methodologies (Weaver, 1997) and tribal sovereignty as well as sociopolitical dimensions of American Indian health (Chino and DeBruyn, 2006).

6. INVOLVES A CYCLICAL AND ITERATIVE PROCESS

Community-based research involves a cyclical, iterative process that includes partnership development and maintenance, community assessment, problem definition, development of research methodology, data collection and analysis, interpretation of data, determination of action and policy implications, dissemination of results, action taking (as appropriate), specification of learnings, and establishment of mechanisms for sustainability. (Israel et al. 1998, p. 180)

The related recommendation for conducting successful research with tribal communities is to maintain direct and extended involvement with the community and not to rush the process (Burhansstipanov et al., 2006; Christopher, 2005; Christopher et al., 2005; Moran, 2001). This involvement is time-consuming and a necessary step in the development of trust relationships; communities may test the sincerity and integrity of outside researchers before true cooperation and participation occur (Christopher et al., 2005; Crazy Bull, 1997a; Freeman, 1993; Moran, 2001; Weaver, 1997, 1999a). Dialogue may not always be valued by the researcher, however talking and sharing experiences are of great importance to most tribal communities (Leticq and Bailey, 2004; Wright et al., 1997). Each voice in the community is considered important and, at times, consensus is required for important decisions. This may mean revisiting issues several times, giving community members time to contemplate and seek advice before giving an answer (Wax, 1991). Research timelines may be extended because of tribal celebrations, ceremonies, or funerals (Strickland, 2006; Weaver, 1999b; Wright et al., 1997). Understanding these issues, allowing flexibility of timelines, and extended dialogue before requesting decisions will be important to the success or failure of a project (Freeman, 1993; Leticq and Bailey, 2004; Moran, 2001; Wax, 1991; Weaver, 1997). Each tribal community has a unique culture, and direct extended involvement is critical to the development of trust relationships. Outside researchers must be willing to demonstrate their commitment to the project, but more importantly, to the community. This means that they are willing to stick it out through rough times and difficulties, even if the original grant funding runs out (Moran, 2001; Strickland, 2006). The practice of committing for the long run is developed as a ninth principle by Israel in a later publication (Israel et al., 2005).

7. ADDRESSES HEALTH FROM POSITIVE AND ECOLOGICAL PERSPECTIVES

Community-based research addresses the concept of health from a positive model that emphasizes physical, mental, and social well-being... It also emphasizes an ecological model of health that encompasses biomedical, social,

economic, cultural, historical, and political factors as determinants of health and disease. (Israel et al., 1998, p. 180)

Principle two mentions that much research conducted in tribal communities used a negative lens; recommendations on successful research with Native communities include changing this history by focusing on assets and positive aspects of the community (Burhansstipanov, 1999; Christopher, 2005). Regarding ecological perspectives, researchers in tribal communities may find that they must address ecological, sociological, and cultural issues to make true progress (Dignan et al., 1993; Wax, 1991; Wright et al., 1997). The partners need to identify and address barriers within the system and communities and empower the necessary changes to improve the health and welfare of tribal communities (Burhansstipanov, 1998b; Moran, 2001; Olson, 1999; Weaver, 1999c). Researchers cannot circumvent the conditions of poverty and despair found on many reservations. Nor can they ignore the extent to which past and current policies; forced acculturation, racism, and discrimination; and the battle for sovereignty and self-determination affect the quality of health and well-being of tribal members (Burhansstipanov et al., 1999; Dupuis and Ritenbaugh, 2007; Olson, 1999; Wax, 1991; Wright et al., 1997). It is important for researchers to understand the context in which these communities are making decisions about their health and welfare. Native research methodologies may emphasize intuitive, spiritual, and personal knowledge (Crazy Bull, 1997a). For many Native Americans, healing must take place in both body and spirit, often involving the entire tribe or community rather than the individual (Hodge and Casken, 1999). Culturally appropriate research should thus incorporate methods that acknowledge tribal culture, history, and worldviews (Weaver, 1999b).

8. DISSEMINATES FINDINGS AND KNOWLEDGE GAINED TO ALL PARTNERS

Community-based research seeks to disseminate findings and knowledge gained to all partners involved, in language that is understandable and respectful, and “where ownership of knowledge is acknowledged” (Israel et al. 1998, p. 180)

One of the main concerns of tribal communities about research has been the lack of information returned to the communities after researchers leave. For years, community members participated in studies, without seeing results or experiencing benefits (Weaver, 1999a). This practice is no longer acceptable in research with Native American communities and has resulted in communities becoming resistant to research.

Information dissemination to communities assures them that their voices have been heard and utilized (Beardi and Donnelly, 1999; Macaulay et al., 1998b; Smith et al., 2004; Weaver, 1997, 1999a) and that the researcher remains committed to the partnership. Distribution of information should occur through relevant community channels (Weaver, 1997) and in appropriate languages (Beardi and Donnelly, 1999; Wax, 1991). Time should be scheduled to allow discussion of results in communities. Agreements should be developed that state who owns the data and results, who controls what will be released, and how results will be presented. This ensures that information is not misinterpreted or culturally sensitive information is not published as has occurred in the past (Crazy Bull, 1997a).

In addition to the principles put forth by Israel and colleagues (1998), considered the key principles for conducting research using CBPR approaches, we found some recommendations specific to research among Native American communities. These recommendations are additional considerations for researchers who are interested in using a CBPR approach with tribal communities.

1. Acknowledge historical experience with research and with health issues and work to overcome the negative image of research.
2. Recognize tribal sovereignty.
3. Differentiate between tribal and community membership.
4. Understand tribal diversity and its implications.
5. Plan for extended timelines.
6. Recognize key gatekeepers.
7. Prepare for leadership turnover.
8. Interpret data within the cultural context.
9. Utilize indigenous ways of knowing

1. ACKNOWLEDGE HISTORICAL EXPERIENCE WITH RESEARCH AND HEALTH ISSUES AND WORK TO OVERCOME THE NEGATIVE IMAGE OF RESEARCH

One of the first hurdles non-Native researchers face is the legacy of past research and practices that affected the health of tribal community members. As Waziyatawin (2005a) stated, “our bodies clearly have not benefited from colonization.” Decades of exploitation have left many tribes resistant to research and an interest in health by non-Natives can look suspicious when viewed with a historical lens. While public health researchers are not

the anthropology and archeology researchers who took sacred artifacts and human remains without approval, Native American community members may not differentiate between these academic specialties (Riding In, 2005).

To protect their members from outside research, some tribes have placed stringent restrictions on research within their communities (Crazy Bull, 1997a; Davis and Reid, 1999; Freeman, 1993; Weaver, 1997). In addition, tribes are increasingly taking more control of the decision-making and process of the research projects on reservations and with tribal groups. Many tribes have established protocols and codes of research for projects conducted within their tribal jurisdictions (Christopher, 2005; Crazy Bull, 1997a; Davis and Reid, 1999; Freeman, 1993; Strickland, 2006; Trimble, 1977; Wax, 1991). Some tribes have committees to oversee all research activities; the committees have the authority to approve or disapprove any project activity (Fisher and Ball, 2003; Letiecq and Bailey, 2004). These oversight committees are charged with protecting tribal interests and intellectual property by ensuring cultural appropriateness and adherence to tribal legal codes and policies (Fisher and Ball, 2003). These control mechanisms are in addition to academic and other IRB protocols. Researchers who wish to conduct research involving Native American communities may find extensive procedures for approval and increased tribal expectation regarding tribal government and community involvement (Davis and Reid, 1999; Fisher and Ball, 2003; Hodge et al., 1996; Mihesuah, 1993; Norton and Manson, 1996; Strickland, 2006; Trimble, 1977; Weaver, 1997). Interaction with tribal IRBs may continue past the approval process as individual IRB members take action to ensure the project's success (Manson et al., 2004).

The Navajo tribe has adopted its own IRB to screen prospective research and ensure the protection of its members from inappropriate research practices. In 2007, the Canadian Institutes of Health Research published the CIHR Guidelines for Health Research Involving Aboriginal People (Canadian Institutes of Health Research, 2007). The guidelines were prepared to "assist researchers and institutions in carrying out ethical and culturally competent research involving Aboriginal people." Any researchers who receive funding by CIHR are obliged to abide by the guidelines, which include many of the points brought out in this article.

The best course of action is for researchers to take the time to rebuild trust and communication with the tribe; use CBPR techniques to determine the research question in collaboration with the tribal community; and submit a joint proposal for approval. Closely following the CBPR principles above will help in establishing the levels of trust and collaboration neces-

sary for a successful partnership. It falls on the researcher to establish positive research experiences that will encourage future collaborations between tribes and outside researchers. We have found it helpful to discuss past research practices openly with community members.

2. RECOGNIZE TRIBAL SOVEREIGNTY

Most tribes in the US are federally recognized, with the right to govern their own members and control most activities on their own reservations (Freeman, 1993). They have established government-to-government relationships with the federal and some state governments. This means that researchers deal directly with the tribal government to work on the reservation and with tribal members. Tribes have the power to exclude outsiders from conducting research or business within their tribal lands (Crazy Bull, 1997a; Davis and Reid, 1999; Trimble, 1977). Their sovereignty also gives them the authority to create their own research approval policies (Freeman, 1993; Strickland, 2006). Tribes have fought hard for more control of their own affairs and have gained much power in these areas. The main thing tribes lack is financial resources. This can be an important aspect of agreeing to partner with outside researchers. It is important to remember that the tribe's first priority will be the preservation and improvement of their people. Researchers should understand and respect tribal sovereignty as a unique community position of empowerment. One project using a CBPR approach with a tribal community found that their project was more closely associated with a community-directed approach than a shared community-academic approach. They stated that this was "consistent with indigenous people's right to self-determination" and perhaps the more equitable approach when doing CBPR in tribal communities (Cargo et al., 2008).

3. DIFFERENTIATE BETWEEN TRIBAL AND COMMUNITY MEMBERSHIP

Principle one put forth by Israel (1998) is to see the community as the unit of identity. Among Native Americans, there are many similar experiences, values, and histories that bind them together into communities. However, because Native Americans are the only race or ethnic group in the United States that must prove their membership through enrollment, defining who is a member of a tribal community is more complicated than for other minority groups (Freeman, 1993; Norton and Manson, 1996; Trimble, 1977; Wax, 1991; Yellow Bird, 2005). Tribal governments establish their requirements for membership in the tribe, but the Census Bureau, federal and

state agencies and programs, and state governments may have different criteria. Within the communities, cultural values and traditions may accept or reject some individuals based on moral or cultural standards and norms (Dempsey and Gesse, 1995; Red Horse et al., 1989; Weiner, 1993). These differences become important when researchers wish to use census or tribal enrollment data, or when they begin to approach community members for participation and leadership roles in projects. Community members may self-identify as tribal members but it is also important that they are seen by other members of the community as appropriate representatives (Olson, 1999; Wallerstein and Duran, 2006; Weaver, 1999c; Weiner, 1993). In our experience working with a rural reservation, we found that having a Community Advisory Board made up of respected and knowledgeable community members is a very good way to learn who the tribe trusts to represent them.

4. UNDERSTAND TRIBAL DIVERSITY AND ITS IMPLICATIONS

The literature on recommendations for working successfully with tribal communities includes the importance of becoming familiar with the common values, ideas, and practices important for the specific group with whom researchers partner (Davis and Reid, 1999; Hodge and Casken, 1999; Marín et al., 1995; Michielutte et al., 1994; Smith et al., 2004; Wax, 1991; Wright et al., 1997). There are over 500 federally recognized tribes in the United States, each with its own unique cultural identity. This tremendous diversity makes it difficult to generalize across tribes, and necessitates individual attention to tribe-specific characteristics, strengths, and resources (Salsberg et al., 2008). Belief systems, access to care, and cultural norms are also vastly different among tribes (Burhansstipanov and Hollow, 2001; Cochran and Geller, 2002; Crazy Bull, 1997a; Davis and Reid, 1999; Dempsey and Gesse, 1995; Fisher and Ball, 2003; Hodge and Casken, 1999; Michielutte et al., 1994; Red Horse et al., 1989; Roubideaux et al., 2000; Solomon and Gottlieb, 2001; Weaver, 1999b, 1999c; Weiner, 1993). What is effective with one tribe or region is not necessarily appropriate for another (Christopher et al., 2005a; Marín et al., 1995; Moran, 2001; Smith et al., 2004; Trimble, 1977). There is no substitute for taking the time to become familiar with the specific tribal groups with whom researchers wish to partner (Wax, 1991). It should also be said that even within a tribe, families, communities, and individuals may have different levels of acculturation and participation in traditional tribal culture (Olson, 1999; Weiner, 1993). Most tribes today are essentially bicultural, retaining their traditional beliefs and accepting the

dominant white culture in many areas of their lives (Hodge and Casken, 1999). From a practical stance, the great diversity present among and within tribes means more work to create culturally appropriate materials. Levels of language survival range from loss of a language to languages that are spoken by all generations, including children (Wazyatawin, 2005b). Language differences must be dealt with at the local level and intervention materials developed in partnership between researchers and local tribal members for appropriate content and comprehension.

5. PLAN FOR EXTENDED TIMELINES

For several reasons, timelines are often extended by months when working with Native communities. First, tribes are becoming more assertive in review and approval protocols for research conducted within their lands and among their people (Crazy Bull, 1997a; Davis and Reid, 1999; Freeman, 1993; Strickland, 2006; Trimble, 1977; Wallerstein and Duran, 2006; Wax, 1991). This can mean that, before proposals are submitted for formal approval, a researcher must spend weeks, months, or years establishing a level of trust that will accommodate the close partnership needed to do CBPR projects. Understanding and respect for the timing of local activities (harvest, holidays, seasons) is important for project planning (Beardi and Donnelly, 1999; Strickland, 2006) and need to be included in projected timelines for tribal/community participation. Researchers can expect attendance at community meetings to fluctuate due to ceremonies, celebrations, or harvest. These considerations must apply to each step of planning, development, implementation, data gathering and analysis, dissemination of results, and evaluation of the project to ensure full community participation.

6. RECOGNIZE KEY GATEKEEPERS

Recognizing key gatekeepers within tribal communities is very important for the success of research projects (Beardi and Donnelly, 1999; Olsen, 1993; Weaver, 1997, 1999a, 1999c). Gatekeepers may be tribal Elders, respected community members, or tribal government officials. More importantly, they influence others, have contacts within the tribe, and are able to maintain communications when turnover within the tribal government and health care systems occur (Burhansstipanov et al., 2006; Letiecq and Bailey, 2004; Strickland, 2006). Many researchers have discovered that without good support, their projects do not survive a tribal election or turnover in leadership within the tribe. Establishing trusting relationships with key members of the tribe ensures greater levels of participation of community

members, and may provide the needed support in times of political turnover (Weaver, 1999a). It is recommended that these gatekeepers be hired to work as partners with academic staff (Burhansstipanov et al., 2006; Fisher and Ball, 2003; Letiecq and Bailey, 2004; Moran, 2001). In addition to providing entrée into the community, these gatekeepers are vital resources for culturally appropriate protocol during each phase of the project. Many CBPR projects take place in communities with community-based organizations (CBOs). CBOs are either nonexistent or in small numbers in most reservation communities (Burhansstipanov et al., 2006). This makes gatekeepers all the more vital in research success.

7. PREPARE FOR LEADERSHIP TURNOVER

Some tribes choose to re-elect tribal government officials annually, others less frequently. However, any change in tribal government may change research priorities. Tribal leaders may have very different attitudes, experiences, and trust levels for outside research within their communities. It is recommended that research partnerships acquire legal documentation of approval such as a tribal resolution, tribal health, or Indian Health Service approval that will identify the research as a community project independent of the political leadership (Burhansstipanov et al., 2006; Christopher, 2005; Wallerstein and Duran, 2006). This may limit the disruption of research projects as leaderships change. There is no real guarantee, however, that projects will survive these changes without some setbacks. The high turnover rate among health care workers and administrators in many Indian Health facilities may also affect the success of implementation and continuity of care for research participants and partners. Development of strong relationships and open communication within the tribal and health care communities and across family groups can reduce the impact of these turnovers on research projects (Strickland, 2006).

8. INTERPRET DATA WITHIN THE CULTURAL CONTEXT

Including community members in data analysis and interpretation may not be a natural process for most researchers. With tribal communities, however, it is important that data be analyzed within the context of the local community. Tribal norms, mores, belief systems, and ways of knowing may be very different from those of academic researchers (Mihesuah, 1993; Moran, 2001) or Native researchers from another tribe. Accurate interpretation of data must include historical and social considerations as well as language and cultural understanding (Dupuis and Ritenbaugh, 2007; Weaver,

1997). In addition, community members must have a say in what information is appropriate to release to others, and what data could be detrimental to the tribe if released (Wax, 1991). Their position of sovereignty gives tribes the right to deny publication of any or all data that is considered sacred or culturally inappropriate (Fisher and Ball, 2003; Freeman, 1993; Mihesuah, 1993; Strickland, 2006). Partnerships between community members and academic researchers in the data collection and analysis steps may prevent loss of data in this manner.

9. UTILIZE INDIGENOUS WAYS OF KNOWING

Tribal or indigenous ways of knowing and learning are valuable resources in creating effective, culturally appropriate, interventions and programs (Banner et al., 1995; Beardi and Donnelly, 1999; Cajete, 2000; Cochran and Geller, 2002; Cochran et al., 2008; Weaver, 1999a; Wright et al., 1997). Each tribe has its own unique spiritual and philosophical beliefs and values, and may also have a significant variation in belief systems within the tribe. Incorporating indigenous methodologies into research projects may increase community participation and result in more appropriate and accurate assessment and interventions. Application of indigenous methods may avoid repetition of past research mistakes that have resulted in resentment, anger, and negative views of researchers (Weaver, 1997). Disinterest in understanding indigenous ways of knowing caused Levy-Bruhl in 1926 to state that Indigenous peoples had simple and artless logical reasoning processes and unintelligible mentalities (Levy-Bruhl, 1986). An important consideration in utilizing indigenous methods is that they are most often oral and can be learned only through development of trust relationships with members of the community.

DISCUSSION

We first presented Israel and colleagues' (1998) eight principles with specific information on the context and application of these principles in tribal communities. The principles are often repeated as the "gold standard" for conducting research using CBPR approaches and are similar to some published recommendations for research with Native American communities. However, differences in context and application are vital to understand and increase the likelihood of success with CBPR approaches in Native American communities. If researchers uncritically adhere to CBPR principles without understanding the Native American context, the research may not be as successful as it could be.

In addition to those recommendations, we presented another eight recommendations specific to conducting successful research with Native Americans. This is not an exhaustive list of recommendations for partnering with Native American communities, but it gives an idea of the level of commitment required for projects and the context to be taken into consideration. It may seem that there is too much emphasis on control of research by the tribes; however, a look at some past experiences of outside research on reservations makes these efforts more understandable to non-Native researchers.

There is a long and sometimes unflattering history of research relationships between Native communities and academic and government institutions. Native American communities and individuals have been used as research subjects for decades with little benefit for the Native people who were involved. The health disparities faced by Native American communities today are still worse than the mainstream population despite numerous research studies (Jones, 2006). Promised benefits of many projects have gone unfulfilled, and tribes have become disenchanted with the concept of research perpetuated by those who were more interested in the data and their own notoriety than in helping Native communities deal with the burdens brought on by these disparities. Tribes have begun to assert their rights as sovereign nations and have taken the stand that the protection of their people must be above the needs of the researcher. This is not to say that tribes do not see the importance of relevant research that will bring benefits to their people. Tribal leaders are cognizant of the importance of addressing health and other issues within their tribes; however, they have taken the steps to ensure the type of research conducted in the past is no longer accepted or tolerated.

The basic principles of CBPR address many of the concerns that tribal leaders and community members have about allowing research among their people. We are unaware of other publications that compare and contrast recommendations for CBPR approaches and recommendations for conducting research with tribal communities. We believe it is necessary to go beyond the CBPR recommendations to conduct research that is successful, relevant, and changes health disparities. Researchers who take the time to develop these partnerships and understand the importance of the tribal contributions will have more successful research experiences, and be important bridge-builders for future research among Native American communities.

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