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Lessons Learned Conducting Breastfeeding Intervention Research in Two Northern Plains Tribal Communities

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Abstract

Aim: The overall purpose of this article was to describe the challenges and benefits of conducting breastfeeding intervention research with two Native American Tribal communities.
Methods: A focus group with an interpretive approach was used to collect data within this qualitative study as a means of incorporating a complex, holistic, subjective interpretation of the case managers' perceptions and experiences. In addition, researchers' field notes were used. Findings are discussed in relation to Rogers' Diffusion of Innovation Framework.
Results: Themes that emerged during the focus group discussions were related to innovation, relative advantage, complexity, compatibility, trialability, and observability.
Conclusions: Conducting research in Native American Tribal communities was both enriching and challenging. The research protocol needs to be culturally appropriate, and complex components need to be videotaped for review on an ongoing basis. Time constraints of case managers need to be examined prior to development of the research protocol.

Introduction

Of all ethnic groups, Native Americans are at the highest risk for health problems.[1] Because of the high priority of decreasing health disparities in this population, initiating health promotion strategies such as breastfeeding[2] may be important in decreasing the incidence of diabetes, asthma, and sudden infant death syndrome, all of which are highly prevalent in Native Americans.[3–5] Achievement of the Healthy People 2020 goals of increasing the rate of live births that occur in facilities that provide recommended lactation support, reducing formula supplementation, and a worksite lactation support program[6] is more challenging for Native Americans because they initiate breastfeeding less and breastfeed for shorter durations than other ethnic groups.[7–9] A major factor in the disparity in breastfeeding rates is lack of access to recommended obstetrical services such as prenatal classes, baby friendly interventions,[10] and lactation consultant visits in the Tribal communities. To address this problem, the Northern Plains Healthy Start (NPHS) Program initiated home visit case management support for childbearing families. A collaborative research project was initiated based on the existing infrastructure of NPHS with the common goal of increasing breastfeeding duration in Native American women. A feasibility study was conducted in two Tribal communities to examine the culturally appropriateness of using motivational interviewing to decrease ambivalence toward sustained breastfeeding among Native American women. In addition, a protocol for performing breastfeeding test weights and measuring infant immune biomarkers was piloted.

The motivational interviewing intervention site was the Rosebud Tribe, which is located in south central South Dakota in the Great Plains, north of the Nebraska Sandhills. It has large areas of ponderosa pine forest scattered in its grasslands. Deep valleys are defined by steep hills and ravines, often with lakes dotting the deeper valleys. The total land area of the reservation with its trust lands is 1,970,362 square miles. The population is estimated at 29,626 (in 2010).[11] Mothers deliver primarily in a small rural hospital in Mission, SD. The Cheyenne River Tribe was the site selected for the attention intervention group. Mothers deliver at the small Indian Health Service hospital in Eagle Butte, SD. Neither hospital has certified lactation consultants available to mothers. The Cheyenne River Tribe is located in western South Dakota on one of the largest intact grasslands left in the United States. The reservation is home to 8,500 Cheyenne River Sioux Tribal

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members who are spread across the 3 million acre land base, with an average population density of 1–3 persons per square mile and divided into 13 district communities. Each district has its own political representation within the tribe. The median age of people living on this reservation is 25.8 years.[12]

Subjects and Methods

The purpose of this article is to describe the challenges and benefits of conducting an intervention study in collaboration with Native American case managers through focus group findings and researchers' field notes.

Five components of Roger's Diffusion of Innovation theory[13] were selected to frame the discussion. The initial challenge was to determine the perceived *relative advantage* of performing the motivational interviewing intervention to promote sustained breastfeeding for 6 months by the Native American case managers. *Compatibility* of conducting the motivational interviewing intervention in conjunction with the current practices of the Native American case managers' Healthy Start visits is the next key component that will be discussed. In addition, the perceived *complexity* of conducting the research protocol by the Native American case managers and its impact on adoption of the study will be reported. *Trialabilty* of conducting the protocol in conjunction with the Healthy Start visits is the next factor that will be reviewed. Finally, *observability*, or the visibility of the perceived results, of the intervention by the Native American case manager will conclude the discussion.

Rogers' Diffusion of Innovation Model[13] proposes that diffusion is the progression by which an innovation is communicated through particular channels over time among the associates of a social system. Innovation refers to an object, practice, or idea that is perceived as new by an individual. In this study, the innovation was conducting breastfeeding intervention research in two rural, Native American tribal sites with case managers who had little or no research background. The social system refers to the collection of organizations or individuals who are committed to work together in order to accomplish a particular objective and whose structure and function will affect and be affected by the change occurring when accepting the innovation.[13] More specifically, interplay between the social system and the other elements creates a complex and dynamic interaction that directly impacts innovation acceptance. The process of the Tribal approvals of the research project is discussed in another article.[14] Institution review board approval was obtained from the Tribes, the Indian Health Service, and the University of Nebraska.

According to Rogers,[13] an important assisting factor in this acceptance is the extent to which the individuals in a social system share the same or similar interests, also termed homophily, as this creates a more effective pathway for communication.[15] Because increased breastfeeding duration was a common goal shared between the academic researcher and the NPHS Program, homophily seemed to be present. In addition, the five components of the innovation process that were the focus of this article have the potential to influence the adoption of an innovation.

Relative advantage is the perception that a new way of doing things is actually an improvement, whereas *compatibility* is the degree to which the innovation is considered to be compatible with current needs, past experiences, and values of the adopters.[13] Moreover, *complexity* is the perception of one's measurement as to how difficult an innovation is to use or understand. On the other hand, *trialability* is the amount at which an innovation can be attempted and customized based on that particular experience. Rogers's research found that the perceptions of a social system's members regarding the trialability of an innovation are positively correlated with the innovation's rate of adoption.[16] The degree to which the innovation itself or its results are visible to others is termed *observability*. Rogers has reported that the probability of an innovation being adopted is increased when observing others using the specific innovation. In addition, observability also strengthens one's perceived ability to determine whether the innovation actually has a relative advantage over another innovation and whether or not it is adequately uncomplicated to comprehend and implement.[13]

Results and Discussion

Relative advantage

The relative advantage of improving 6-month breastfeeding rates for Native American babies can be demonstrated. Research has shown that the Native American population is at increased risk for several health disparities and diseases. These include, but are not limited to, sudden infant death syndrome, obesity, diabetes mellitus, and asthma. In addition, Native American infants have an infant mortality rate that is twice as high as the white population in the United States.[17] Fortunately, there is evidence relating breastfeeding with an earlier development of the infant immune system and enhancing the immune responses to various pathogens.[2] Infant mortality rates in the United States underwent a 21% reduction in breastfed infants in recent years.[2,18] Another benefit of breastfeeding is a decrease in other health risks for children, such as respiratory tract infections, otitis media, necrotizing enterocolitis, and diarrhea.[2] Moreover, breastfeeding has been shown from various studies to have a protective effect on atopic diseases and asthma.[19]

One of the top priorities of the NPHS Program is to increase breastfeeding initiation and duration to improve the health of mothers and babies. Therefore, the Native American case managers reported that performing the motivational interviewing intervention could possibly help mothers breastfeed longer. They also reported that performing breastfeeding test weights, a component of the research protocol was advantageous because they perceived that mothers had increased confidence in their milk supply when they observed the actual volume that their babies received. The disadvantage of performing the intervention that the Native American case managers shared was the extra time that it took to complete the research paperwork and conduct the intervention during their regularly scheduled Healthy Start visits, which took almost an hour.

Compatibility

Compatibility pertains to the degree in which the topic of sustained breastfeeding and the motivational interviewing intervention are compatible with current needs, values, and past experiences of the Native American population. Therefore, it is crucial that the values and beliefs of the Native American culture (beliefs and barriers to breastfeeding)

among this population are taken into consideration. Cultural factors are known to influence breastfeeding behavior.[9] Dodgson and Struthers[20] found that some Native American women perceived breastfeeding as being associated with necessity and poverty. In the only intervention study found, peer support helped Native American women increase the duration of breastfeeding.[21] Research-based efforts are often challenged by Native Americans' long-standing skepticism of being the subject of research and a mistrust of those conducting the research due to previous exploitation and abuse by the government and various research institutions.[22–24] Historically, results of research in Native American populations have not been shared with the population under study, have frequently disclosed culturally sensitive material, and have portrayed the population under study in a negative, stereotypical manner.[25,26] Furthermore, the historical and generational trauma of the Native American population that has resulted from decades of marginalization, cultural obliteration, and genocide poses another barrier to allowing members from outside of the Tribal population to conduct research activities.[20] Additionally, the research environment is further complicated by modern challenges to participation in research, such as a lack of access to transportation or telephone services, a perceived disrespect of Native American cultural practices by researchers, and the potential for misinterpretation of data by members of a different culture.[27] Finally, research efforts that emphasize western medicine without incorporation of Tribal beliefs and values are frequently perceived by Native Americans as a continuation of acculturation and oppression by the dominant culture.[26] These factors greatly hinder the perception that any benefit may be gained from participating in research activities by various Tribal communities of the Native American population.[28]

The Native American case managers reported that promoting sustained breastfeeding was compatible with their Healthy Start Program mission and that the motivational interview would be culturally compatible if performed by the case managers. They reported that primary barriers to sustained breastfeeding were the lack of access to breastfeeding support and to supplies that help mothers not be embarrassed by leaking breasts.

Complexity

The case managers perceived that the research protocol including the motivational interview intervention was complex, and they reported later that they were hesitant at first to initiate the study with their patients. The history of the research process that this population has encountered in the past may have helped create the perception of complexity. Examples of circumstances that may increase the perceived complexity of the research process include residing in a rural environment, research challenges experienced by the Native American population in the past, and the incorporation of intergenerational trauma and grief.

When assessing the complexity encountered when conducting research with Native Americans, it is important to acknowledge the pertinent history that this population has encountered. For example, this indigenous population has experienced historical trauma, including invasions of culture and land. In addition, they have endured numerous and constant U.S. wars against the Native American people, termination of the Native American culture and language, and forced relocation to specified Indian reservations.[23] As a result, their psychological, economic, political, social, intellectual, spiritual, and physical domains are affected, including their traditional culture beliefs regarding breastfeeding.[29]

Another factor that impacts the complexity of completing the research is the intergenerational/historical grief and trauma described as possessing the burden of centuries of suffering immediately upon being born as a Native American. This trauma and grief are then generated to future generations through the use of parent–child interactions and/or stories.[20] Native Americans may personalize grief as they age and become aware of misdeeds that were executed against other Native Americans in both the deep-rooted and recent past.[20] Unfortunately, this population then begins to distrust strangers,[30] including healthcare providers and researchers,[31] and they feel the need to protect their cultural information from these strangers.[20] In turn, researchers may encounter difficulties while attempting to gather facts and other information regarding the Native American population. After repeated visits to each site, the Native American case managers would begin to share how they felt about the complexity of the research protocol and why they were initially reticent to begin recruiting participants.

Additionally, it is evident that Native Americans have experienced negative research practices in the past. Because of the history of exploitations and abuse by research institutions and the government, there is mistrust between the previously mentioned and the Native American communities.[22] Despite the fact that there is diversity between each individual tribal culture and each tribe may have various health behaviors and/or world views, all tribes share a history of hardships and restrictions. These hardships and restrictions include the loss of land, broken promises, restrictions of shelter and food, the destruction of language and religion, stereotyping, and the burden of government interference.[22] There are several other reasons cited by Native American communities as reasons they hesitate to participate in research studies, such as the following: Lack of access to resources that enable them to participate, such as telephone and transportation; distrust of research personnel; disrespect of cultural practices by researchers; and the results of the study are not shared with the Native American community.[27]

Although community members may have limited, if any, experience with research methodology, it was important to involve the Native American case managers as research staff because of their cultural understanding, acceptance, and community involvement. In order for this to be effective, a thorough training process was conducted. This process included training in basic research skills and research methodology (e.g., informed consent, Collaborative Institutional Training Initiative training, confidentiality issues). Other aspects of training included providing procedure materials and offering the constant availability of support and consultation when needed for guidance and to perfect the research skills.[32] Finally, a demonstration with a mother–baby dyad was completed at both sites. The case managers suggested that a video demonstration to refer to later would have been helpful as well.

Trialability

This particular concept is operationalized as the degree to which an innovation can be attempted and customized based

on a particular experience. The Native American case managers asked that the research protocol be adapted to include teen mothers because the Healthy Start population was predominately younger mothers. Recruitment did increase after this change in protocol was completed; however, the sample size was inadequate to demonstrate any significant relationships. Over the 18-month study duration, only 12 mother–infant dyads were able to participate in the study, with eight at the motivational interviewing intervention site and four at the attention intervention site. In addition, the 2- and 6-week follow-up visits were incomplete because of participants moving or no longer breastfeeding. Therefore follow-up was challenging. The motivational interviewing intervention was planned at one Tribal community and the attention intervention group was performed at a second Tribal community to prevent contamination of the treatment intervention. The motivational interviewing intervention will be described in the following paragraphs.

Motivational interviewing is a patient-centered counseling approach that was originally developed to assist individuals with an alcohol problem in reducing their alcohol consumption.[33–35] This intervention centers on decreasing ambivalence and has been shown to impact resistance to changing behavior and/or attitudes.[36] Foley et al.[36] elaborated on the fact that much of the research that supports the efficacy of motivational interviewing has been performed with the treatment of substance abuse.[37–39] Motivational interviewing has also been utilized to promote behavior change for various health situations, such as exercise program compliance,[40] contraceptive counseling,[41] weight control and diet,[42] promotion of dental care,[43] and education for safe water use.[44] Motivational interviewing has been used effectively to decrease drinking and smoking and to increase self-management with diabetes in Native Americans.[45–47] The use of motivational interviewing to promote sustained breastfeeding is relatively new and has not been attempted with the Native American population. Wilhelm et al.[35] found that using motivational interviewing in a group of rural white mothers demonstrated a trend in sustained breastfeeding, as the mothers in a motivational interviewing group breastfed for a mean of 98 days during the first 6 months, compared with 81 days for the contrast group.

Observability

Observability is defined as the visibility of the results to the research personnel and the participants. The goal was that the case managers would view the motivational interviewing intervention as a new strategy that would demonstrate an improvement in breastfeeding duration. The case managers reported that they perceived that this strategy did help motivate mothers to continue to breastfeed longer. Another component of the protocol was breastfeeding test weights as a form of validation of breastmilk volume. Even though the case managers reported that they felt mothers developed more confidence in their milk supply when they observed the milk volume, they did not consistently perform this procedure because they viewed it as complicated and time consuming.

The description of the sample is displayed in Table 1. Descriptive statistics for outcomes are presented. Intention to breastfeed for 6 months measured at baseline was similar for both groups with a mean of 5.9 1 on a 7-point Likert scale (7 was high) (SD = 0.8) for the motivational interviewing group and 6.3 (SD = 0.5) for the attention group. Baseline breastfeeding self-efficacy was also similar with the motivational interviewing group (mean = 59.8, SD = 7.3, range = 14–70) compared with the attention group (mean = 56.6, SD = 12.8). Mothers in this sample breastfed for more days if they received the motivational interviewing intervention (mean = 142.5, SD = 58) compared with the infant safety attention intervention group (mean = 21.3, SD = 16.5). Of the eight mothers in the motivational interviewing group, five breastfed for 6 months, whereas no mother in the attention group breastfed beyond 1.5 months. Nonparametric Mann–Whitney U tests showed significant group differences for days of breastfeeding ($p = 0.005$) but not for intention to breastfeed for 6 months ($p = 0.407$) or breastfeeding self-efficacy ($p = 0.849$).

Table 1. Characteristics of the Study Population

Variable	*Descriptor*	*%*
Age	< 24 years	50%
Employment	None	56%
Marital	Single	70%
Income	< $10,000	75%
Education	High school completed	70%
Type of delivery	Vaginal	70%
Medications	None	100%
Gestational age	Term	100%
Breastfeeding primary support	Self	64%
Breast problems	Sore nipples	91%

Twelve mother–infant dyads were enrolled.

Infant breastfeeding test weights did demonstrate breastmilk volume and verified sustained breastfeeding in mothers who reported that they were still breastfeeding. The Native American case managers reported that mothers expressed confidence in their milk supply when they visualized the milk volume that they were producing.

Conclusions

In order to succeed while working with Native American communities, it is crucial to assess the relative advantage of the proposed behavior to the Tribal community. Compatibility of the proposed research protocol also includes the cultural appropriateness of the intervention and may require several adaptations during the entire study duration. Another component of compatibility is whether there are time and resources to complete the research project. The complexity of the research protocol must be considered, and providing video demonstrations of the complete procedure will help ensure protocol integrity. Trialability, or the practice and adaptation of the research protocol, are other key factors. Native American case managers performing the research did have suggestions for improvement throughout the entire study. The most encouraging result of the study was that the Native American case managers reported that mothers breastfed longer after experiencing the motivational interviewing intervention. Two case managers breastfed longer with their own children that they delivered while conducting this study. Incorporating honesty, cooperation, and respect

into the relationship, as well as working diligently with the Tribal community leaders to ensure that the community has an equal role and is involved in all stages of the research process, is critical. It is important to ensure that the needs of the community are placed ahead of the research project goals.[48] More importantly, spending time and establishing trust with the prospective Native American community is critical, as this increases cooperation and support by demonstrating a long-term commitment to the Tribal community's health.

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References

1. Jones DS. The persistence of American Indian health disparities. *Am J Public Health* 2006;96:2122–2134.
2. Gartner LM, Morton J, Lawrence RA, et al. Breastfeeding and the use of human milk. *Pediatrics* 2005;115:496–506.
3. Castor ML, Smyser MS, Taualii MM, et al. A nationwide population-based study identifying health disparities between American Indians/Alaska Natives and the general populations living in select urban counties. *Am J Public Health* 2006;96:1478–1484.
4. EagleStaff ML, Klug MG, Burd L. Infant mortality reviews in the Aberdeen Area of the Indian Health Service: Strategies and outcomes. *Public Health Rep* 2006;121:140–148.
5. Chino M, Debruyn L. Building true capacity: Indigenous models for indigenous communities. *Am J Public Health* 2006;96:596–599.
6. U.S. Department of Health and Human Services. Healthy People 2020. www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=26 (accessed April 4, 2011).
7. Kelly YJ, Watt RG, Nazroo JY. Racial/ethnic differences in breastfeeding initiation and continuation in the United Kingdom and comparison with findings in the United States. *Pediatrics* 2006;118:e1428–e1435.
8. McDowell MM, Wang CY, Kennedy-Stephenson J. Breastfeeding in the United States: Findings from the National Health and Nutrition Examination Survey 1999–2006. National Center for Health Statistics Data Briefs, No. 5. 2008. www.cdc.gov/nchs/data/databriefs/db05.htm (accessed May 5, 2011).
9. Dettwyler KA. When to wean: Biological versus cultural perspectives. *Clin Obstet Gynecol* 2004;47:712–723.
10. World Health Organization. 10 Steps to Successful Breastfeeding During World Breastfeeding Week. 2010. www.who.int/pmnch/media/membernews/2010/20100730_who/en/ (accessed March 15, 2011).
11. Rosebud Sioux Tribe. www.rosebudsiouxtribe-nsn.gov/ (accessed November 12, 2010).
12. Kattelmann KK, Conti K, Ren C. The medicine wheel nutrition intervention: a diabetes education study with the Cheyenne River Sioux Tribe. *J Am Diet Assoc* 2009;109:1532–1539.
13. Rogers EM. *Diffusion of Innovations*, 4th ed. The Free Press, New York, 1995.
14. Holkup P, Rodehorst TKC, Wilhelm SL, et al. Research among Tribal communities: Experiences from four academic institutions. *J Transcultural Nurs* 2009;20:164–175.
15. Holkup PA, Tripp-Reimer T, Salois EM, et al. Community-based participatory research: an approach to intervention research with a Native American community. *ANS Adv Nurs Sci* 2004;27:162–175.
16. Lewis GA. Leadership products as innovations in the context of Rogers' diffusion theory [Ph.D. dissertation]. Virginia Polytechnic Institute and State University, Blacksburg, VA, 1997.
17. Centers for Disease Control and Prevention. Injury mortality among American Indian and Alaska Native children and youth—United States, 1989–1998. *MMWR Morb Mortal Wkly Rep* 2003;52:697–701.
18. U.S. Bureau of the Census. State and County Quick Facts.; last revised March 23, 2007. www.quickfacts.census.gov/qfd/states/00000.html (accessed April 24, 2011).
19. Ip S, Chung M, Raman G, et al. Breastfeeding and maternal and infant health outcomes in developed countries. *Evid Rep Technol Assess (Full Rep)* 2007;(153):1–186.
20. Dodgson JE, Struthers R. Traditional breastfeeding practices of the Ojibwe of Northern Minnesota. *Health Care Women Int* 2003;24:49–61.
21. Long DG, Funk-Archuleta MA, Geiger CJ, et al. Peer counselor program increases breastfeeding rates in Utah Native American WIC population. *J Hum Lact* 1995;11:279–284.
22. Mitchell TL, Baker E. Community-building versus career-building research: The challenges, risks, and responsibilities of conducting research with Aboriginal and Native American communities. *J Cancer Educ* 2005;20(1 Suppl):41–46.
23. Tom-Orme L. Research and American Indian/Alaska Native health: A nursing perspective. *J Transcult Nurs* 2006;17:261–265.
24. Ellis JJ, Eagle KA, Kline-Rogers EM, et al. Perceived work performance of patients who experienced an acute coronary syndrome event. *Cardiology* 2005;104:120–126.
25. Salois EM, Holkup PA, Tripp-Reimer T, et al. Research as spiritual covenant. *West J Nurs Res* 2006;28:505–524; discussion 561–563.
26. Whitbeck LB. Some guiding assumptions and a theoretical model for developing culturally specific preventions with Native American people. *J Commun Psychol* 2006;34:183–192.
27. Burhansstipanov L, Christopher S, Schumacher SA. Lessons learned from community-based participatory research in Indian country. *Cancer Control* 2005;12(Suppl 2):70–76.
28. Norton IM, Manson SM. Research in American Indian and Alaska Native communities: navigating the cultural universe of values and process. *J Consult Clin Psychol* 1996;64:856–860.
29. Struthers R, Lowe J. Nursing in the Native American culture and historical trauma. *Issues Ment Health Nurs* 2003;24:257–272.
30. Deloria V. *Custer Died for Your Sins.* Macmillan, New York, 1989.
31. Jo J. The rationing of health care and health disparity for American Indians/Alaskan Natives. In: Smedley BD, Stith AY, Nelson AR, eds. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.* National Academies Press, Washington, DC, 2003, pp. 528–551.

32. Fisher PA, Ball TJ. Tribal participatory research: Mechanisms of a collaborative model. *Am J Commun Psychol* 2003;32:207–216.
33. Project MATCH Research Group. Matching alcoholism treatments to client heterogeneity: Project MATCH post-treatment drinking outcomes. *J Stud Alcohol* 1997;58:7–29.
34. Rollnick S, Mason P, Butler C. *Health Behavior Change: A Guide for Practitioners.* Churchill Livingstone, New York, 2000.
35. Wilhelm S, Stepans MB, Hertzog M, et al. Motivational interviewing to promote sustained breastfeeding. *J Obstet Gynecol Neonatal Nurs* 2006;35:340–348.
36. Foley K, Duran B, Morris P, et al. Using motivational interviewing to promote HIV testing at an American Indian substance abuse treatment facility. *J Psychoactive Drugs* 2005;37:321–329.
37. Handmaker NS, Miller WR, Manicke M. Findings of a pilot study of motivational interviewing with pregnant drinkers. *J Stud Alcohol* 1999;60:285–287.
38. McCambridge J, Strang J. The efficacy of single-session motivational interviewing in reducing drug consumption and perceptions of drug-related risk and harm among young people: Results from a multi-site cluster randomized trial. *Addiction* 2004;99:39–52.
39. Stotts AL, Schmitz JM, Rhoades HM, et al. Motivational interviewing with cocaine-dependent patients: A pilot study. *J Consult Clin Psychol* 2001;69:858–862.
40. Scales R, Miller JH. Motivational techniques for improving compliance with an exercise program: skills for primary care clinicians. *Curr Sports Med Rep* 2003;2:166–172.
41. Petersen R, Payne P, Albright J, et al. Applying motivational interviewing to contraceptive counseling: ESP for clinicians. *Contraception* 2004;69:213–217.
42. Resnicow K, Jackson A, Braithwaite R, et al. Healthy Body/Healthy Spirit: A church-based nutrition and physical activity intervention. *Health Educ Res* 2002;17:562–573.
43. Skaret E, Weinstein P, Kvale G, et al. An intervention program to reduce dental avoidance behaviour among adolescents: A pilot study. *Eur J Paediatr Dent* 2003;4:191–196.
44. Thevos AK, Kaona FA, Siajunza MT, et al. Adoption of safe water behaviors in Zambia: Comparing educational and motivational approaches. *Educ Health (Abingdon)* 2000;13:366–376.
45. Woodall WG, Delaney HD, Kunitz SJ, et al. A randomized trial of a DWI intervention program for first offenders: Intervention outcomes and interactions with antisocial personality disorder among a primarily American-Indian sample. *Alcohol Clin Exp Res* 2007;31:974–987.
46. Calhoun D. Why Change Now? Motivational Interviewing as a Brief Intervention for Type-2 Diabetes Among the Eastern Shoshone and Northern Arapaho [Ph.D. dissertation]. University of Montana, Missoula, 2005.
47. May PA, Miller JH, Goodhart KA, et al. Enhanced case management to prevent fetal alcohol spectrum disorders in Northern Plains communities. *Matern Child Health J* 2008;12:747–759.
48. Christopher S. Recommendations for conducting successful research with Native Americans. *J Cancer Educ* 2005;20(1 Suppl):47–51.

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2. Susan L. Wilhelm, Trina M. Aguirre, Ann E. Koehler, T. Kim Rodehorst. 2015. Evaluating Motivational Interviewing to Promote Breastfeeding by Rural Mexican-American Mothers: the Challenge of Attrition. *Issues in Comprehensive Pediatric Nursing* **38**:1, 7-21. [CrossRef]