CULTURAL PERCEPTIONS OF AMERICAN INDIAN WOMEN IN SOUTHCENTRAL MONTANA REGARDING PRE-DIABETIC EDUCATION

by

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A thesis submitted in partial fulfillment
of the requirements for the degree

of

Masters of Nursing

in

Family Nurse Practitioner

MONTANA STATE UNIVERSITY
Bozeman, Montana

June, 2008

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of a thesis submitted by

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This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citation, bibliographic style, and consistency, and is ready for submission to the Division of Graduate Education.

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Lori Ann Hartford

June 2008

DEDICATION

This thesis is dedicated to my loving family members; husband: Orie Dosdall, children: Joliene and Rick Lindholm and to my extended family. They have stood by me during this journey to becoming a Family Nurse Practitioner with patience, love and support.

The thesis is also a tribute to Kathy Hall, BSN, RN, PA-C and Sue Asbell, BSN, RN, MS, FNP who have been role models to me throughout my career as an BSN, RN in Public Health here in Billings Montana with the Yellowstone City County Health Department. Thanks also to the entire team who have worked with me at the Healthcare for the Homeless Program, their encouragement lead me to further my education.

The National Healthcare for the Homeless Clinician's Network is also to be thanked, as they all taught me how to truly understand consensus making, a skill I will use the rest of my career.

Many thanks to Dr. Christina Sieloff, my teacher, my colleague, my friend for her strength and support during those times that I thought I just couldn't finish; and also special thanks to Carolyn Wenger MN, RN who has taught me grace under pressure throughout the many years we have been friends. Thanks are also due to Debbie Peterson, MN, RN who assisted me in completing this project.

And last, but by no means least, thanks to all my Crow friends who have taught me much about their culture over the years I have learned so much from all of you being so kind and gracious to share your stories with me.

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ABSTRACT

Treatment of prediabetes includes education which provides the prediabetic person with information to help them make lifestyle modification choices regarding their nutrition, exercise and weight control; in order that they control their illness and delay or prevent the development of diabetes. American Indians have a high incidence of both prediabetes and diabetes as a group compared to other ethnic groups in the U.S. There is a lack of data in the literature about what American Indians from the Crow Tribe in Montana consider to be cultural information that they feel should be included in education for pre-diabetics. This qualitative ethno-nursing study was conducted through one-on-one interviews with six American Indian women of the Crow Tribe over a period of months to determine what they defined as culturally important for the health care provider to know when teaching about prediabetes. The data from these interviews were then analyzed using qualitative software by Ethnograph ®, and four primary themes were found. These themes were: extended family and elders, spirituality and traditions, culturally specific foods and activities and a feeling of inevitability of developing diabetes. As cultural competency is an area that is included in all schools of nursing and some schools of medicine, it is important that health care providers have an awareness of cultural specific health information. All the informants in this study reported that they felt more respected when their health care provider brought up the topic of how their culture affects their health habits, as well as how important to them it is that the health care provider be open to learning about the specifics of their culture.

CHAPTER 1

INTRODUCTION

Diabetes is a common illness treated in all adult primary care settings. The prevalence of diabetes among American Indians is higher than among the general population of the United States (Centers for Disease Control and Prevention, 2003). It is also reported that prediabetes (PD) progresses to Type 2 Diabetes Mellitus (T2DM) over time (Resnick et al., 2003). According to Rosenstock, (2007) intervention by the health care team while the person is in the PD state, particularly regarding lifestyle changes, is critical to the success of either delaying or preventing the onset of T2DM.

As cited in by United States (U.S.) Office of Minority Health, Department of Health and Human Services (Horner, 2004), the ability of the health care provider to be culturally competent is a major factor in decreasing health care disparities among racial or ethnic minority groups. As cultural competency and sensitivity is a crucial factor in reducing health care disparities, knowing what cultural aspects are important to American Indian women of the Crow tribe when providing health education regarding PD is a crucial aspect of provision of best practices to this group. This study investigated cultural perceptions of a small group American Indian women of the Crow tribe who have PD, using the ethnonursing process.

Purpose

There are no studies, defining culturally appropriate PD education for Montana Crow women located in the current literature. Communication misunderstandings can frequently occur when a lack of cultural knowledge is present between non-American Indian health care providers and American Indian patients. These misunderstandings can decrease the effectiveness of the health education efforts of the nurse practitioner or other health care providers and the ability of the patient to manage their illness as best they can. However, the provider who is culturally competent will understand and appreciate family and group relationships within a culture and appreciate that they are defined differently culture by culture. The purpose of this qualitative ethnonursing research study was to learn and define cultural themes important for non-American Indian health care providers to be sensitive to when providing lifestyle modifying health education regarding PD to Crow women.

Background

Nurses, as well as advance practice registered nurses have, traditionally, been providers of health care education to people regarding health, disease and wellness, which includes education regarding diabetes prevention. Health Education is one way in which nurses provide care. The act of caring, according to Leininger (1989):

> "refers to the direct (or indirect) nurturant and skillful activities, processes and decisions related to assisting people in such a manner that reflects behavioral attributes which are empathetic, supportive, compassionate, protective, succorant, educational, and others dependent upon the needs, problems, values, and goals of the individual or group being assisted" (p. 4).

Culturally appropriate health education or caring is a core aspect of Leininger's theory (1995):

> "The goal of the theory was to provide culturally congruent nursing care in order to improve or offer a different kind of nursing care service of people of diverse or similar cultures" (p. 72).

Definitions of Prediabetes, a Historical Perspective

Reaven (1988) described a constellation of risk factors in insulin-resistant people associated with increased cardiovascular disease that he named Syndrome X. This syndrome has since been described by others as Insulin-Resistant Syndrome, Metabolic Syndrome X or Pre-diabetes. This has lead to much confusion among both patients and health care providers about not only what to call the condition(s) but, more importantly, what the definition of each is, and how to treat or not treat the problem.

In the 1960's, the term pre-diabetes was only used to describe pregnancy induced hyperglycemia or those with a high risk for diabetes due to a strong family history (Alberti, 2007). The term pre-diabetes was abolished by the World Health Organization in 1980 and redefined in 1988 by Reaven as Metabolic Syndrome X as mentioned above. However, the Secretary of the U. S. Department of Health and Human Services re-coined the term prediabetes in 2002 (Rosenstock, 2007) in a warning to the American public about the risks of prediabetes as a precursor to T2DM.

In 2005, impaired fasting glucose (IFG), or impaired glucose tolerance (IGT), came to be the newest definitions of PD according to Rosenstock (2007). The currently accepted definition, according to information in the Indian Health Service Treatment Guidelines for Adults with Prediabetes (2006, pp3-4) relates that PD can be diagnosed

using either the IGT or the IFG, which are classifications of impaired glucose homeostasis. When a patient undergoes a 2-hour oral glucose tolerance test (OGTT) using a 75 Gram oral glucose dose given in a fasting state and the plasma glucose range is 140-199 mg/dl; the PD classification is impaired glucose tolerance (IGT; ICD-9 code 790.22). When a patient has a fasting (8 hour) plasma glucose (FPG) level of 100-125 mg/dl, the classification of PD is impaired fasting glucose (IFG; ICD-9 code 790.21).

This guideline recommends using the FPG as it is simple and the patient can also be tested for fasting lipids with the same blood draw. The diagnosis of Metabolic Syndrome includes more than just an impaired glucose homeostasis. Elevated fasting lipids (triglycerides) and low HDL levels, along with elevated systolic (≥ 130mm Hg) blood pressure, waist circumference greater than 40 inches for men or 35 inches for women and a FPG ≥100 mg/dl are all required for a diagnosis of Dysmetabolic Syndrome X (ICD-9 code 277.7)

Significance

The significance of this study is that, by providing culturally appropriate health education to American Indian Crow women, the long term complications of diabetes may be delayed or avoided by delaying or preventing the occurrence of diabetes mellitus type 2 (T2DM); through lifestyle modifications which control their blood sugars through diet, exercise and weight control. According to the American Medical Student Association (AMSA, 2006), the “generalist physician can expect more than 40% of their patients to be from minority cultures”. The reader should note that the term healthcare provider

infers inclusion of advance practice registered nurses, physicians, physician assistants and other health educators throughout this thesis.

As was described above by Leininger (1989), a holistic approach to nursing leads the care of the patient towards a trans-cultural approach. As information is added to the body of knowledge available to nurses and nurse practitioners regarding the cultural aspects of PD care, the nurse must establish a plan of care that is unique to the individuals' needs and inclusive of cultural information. In this manner, the patient has the best chance of controlling her blood sugars and delay or prevent the onset of T2DM. The health care provider can then be an advocate, a patient educator, a helper, a supporter, and a source of information to her/his realm of practice when she/he is aware of cultural aspects to include to provide the best care to the American Indian patient with prediabetes.

Also of significance is that the overall cost to the patient and to the overall health care system will be lowered when American Indians, a group already pre-disposed to T2DM can prevent or delay the onset of this disease through culturally appropriate care when the person is in the PD phase. Atherosclerotic cardiovascular disease (CVD) is one of the most frequent causes of illness or disability among older adults in the US (Burke & Laramie, 2004). Preventing or delaying the onset of T2DM will improve the health outcomes of persons with PD.

Benefits of Educational Interventions

It is estimated that over 300 million people worldwide have impaired glucose tolerance, a precursor to T2DM (Alberti, 2007). According to the a study by Tuomilehto,

et al, (2001), people who have prediabetes, due to having an abnormal glucose tolerance test and being overweight, can cut their risk in half of progressing to T2DM when they eat a low-fat, high fiber diet, lose weight and get more exercise. The American Diabetes Association (ADA) recommends that persons, who have pre-diabetes, alter their lifestyle by increasing their exercise and making changes in their diet. The ADA makes their recommendations based on the results of the Diabetes Prevention Program study, (Knowler, et al., 2002), and the ADA Position Statement (2002) titled "The Prevention or Delay of Type 2 Diabetes".

Data has shown that early intervention and education regarding diet, exercise and weight control can have a positive result on the outcomes of people with T2DM, in relation to a reduction of complications of atherosclerotic cardiovascular disease (Szapary, Hark, & Burke, 2002). Therefore; if a health care provider can assist a person with PD to prevent or delay the onset of T2MD that persons' long term risk for atherosclerotic cardiovascular disease is that much lower.

Prediabetes Care Guidelines

It is reported in the Indian Health Service (IHS) 'Guideline for care of adults with PD and/or Metabolic Syndrome (MetS) in clinical settings' (2006) that "the prevalence of PD and MetS in American Indian and Alaska Native adult populations approaches 30 %" (p. 2). This report also stated that "recent clinical trials have demonstrated that *progression to diabetes in such high-risk individuals can be averted through behavioral lifestyle interventions*" (p. 2). Within this evidenced based clinical guideline, the number

one goal of the recommended care for American Indians with PD or MetS is to prevent T2DM through:

1. Nutritional counseling, which includes moderate (7-10%) weight loss, reduction in calorie and modification of fat intake, patient self-monitoring of food intake and education regarding health food choices, healthy food preparation and psychology of eating habits,
2. Exercise guidelines, which include regular physical activity; 30 minutes, 5-7 days per week, progressing from low to vigorous activity as tolerated;
3. Medication, this decision is an individualized decision between the patient and the health care provider; and
4. Depression screening and treatment (pp. 5-8).

Statement of Problem/Research Question

There is not sufficient current relevant research information available to assist family nurse practitioners in the provision of care regarding culturally appropriate, early intervention education with Crow American Indian women in South-Central Montana who have pre-diabetes. Therefore, the research question for this research is: What are the culturally appropriate issues that should be included in lifestyle modification education, related to prediabetes, as defined by American Indian Women in south-central Montana who self-identify as prediabetic?

Conceptual Framework

Madeleine Leininger is a nursing theorist whose theory and related research method most closely fit this study. She pioneered a new nursing theory in the 1960's called the theory of 'Culture Care Diversity and Universality' (Leininger, 1989). The core of this theory is that "care is the essence of nursing and the distinct, unifying and essential phenomenon of nursing" (p.36). Leininger (1995) relates that her theory's center purpose was to "discover, document, interpret, and explain the phenomenon of culture care as a synthesized construct", and that the goal of the theory was to " provide culturally congruent nursing care in order to improve or offer a different kind of nursing care service to people of diverse or similar cultures" (p.72)

Leininger's' (1996) theory lead her develop a conceptual model of nursing care with which to discover what care means to people of different cultures which she called the "Sunrise Model". This model gives the researchers and practicing nurses a tool to use when investigating or caring for people from a culture differing than their own. Transcultural nursing became a field unto itself in 1989 when the first Journal of Transcultural Nursing was published. Since then it has become an accepted nursing theory and model in both the undergraduate and graduate education of nurses. During the development and refinement of Dr. Leininger's theory and research model, she and others who conducted qualitative research regarding cultural refined what they called the ethnonursing research method. They defined this research as a qualitative method of gathering data that is "grounded and inductively derived from the people's holistic lived

experiences, beliefs, values and practices (Leininger, 1996, p. 75).The ethnonursing method was used as the foundation for this study.

Definitions

Diabetes Mellitus Type 2: Impaired glucose homeostasis, diagnosed usually in adults, in persons with fasting blood glucose levels above 125 mg/dl (ADA, 2006).

Prediabetes: Impaired glucose tolerance, diagnosed in persons with either an abnormal fasting plasma glucose (100-125mg/dl) or impaired glucose tolerance (140-199mg/dl) two hours after a 75GM glucose challenge (ADA, 2006).

Lifestyle Modification Education: Education that is intended to assist the person in changing to a healthier lifestyle. In this context it includes limiting refined sugar intake, eating according to the food pyramid, exercising 30minutes per day at least 5 days per week and maintaining a BMI within normal range. (ADA, 2006)

Culture: the integrated pattern of human behavior that includes thoughts, communications, actions, customs, beliefs, values and institutions of a racial ethnic, religious or social group (AMSA, 2000).

Cultural Competency: A set of academic and personal skills that allow us to increase our understanding and appreciation of cultural differences between groups (AMSA, 2000)

Assumptions

Prior to conducting this study, several assumptions were made by the researcher. These assumptions included the following:

- Nurse practitioners in Montana are interested in health issues relating to American Indians,
- Prediabetes is a precursor to diabetes type 2,
- Culturally appropriate education to Crow American Indian women with PD will lead to a decrease or delay in the development of T2DM,
- Through this research, the non-American Indian researcher will learn new important culturally specific data, related to health education, from American Indian women with PD,
- The use of the ethnonursing (Leininger, 1989) model of qualitative research is appropriate to this study given the nature of the research question.

Limitations

Only adult women were chosen to be included in this study as women are the usual preparers of food in the Crow culture. Thus, no American Indian youth or men were included in this study. Cultural information gathered from this population may not be transferable to other American Indian tribes, as their specific cultural attributes will be different from this particular tribe.

CHAPTER 2

REVIEW OF THE LITERATURE

There were innumerable studies available to the researcher in regards to health education for people who actually have diabetes, as well as resultant cardiovascular complications as can be found in the Journal of Diabetes Care and others.There were less numerous recent studies discussing the effect of both education and medical treatment for persons with prediabetes, impaired fasting glucose (IFG) or impaired glucose tolerance (IGT) on the development of T2DM and, therefore, the risk of long term cardiovascular complications. The researcher will focus in this chapter on both prevention of diabetes literature, evidence based best practice for treatment of PD for American Indians and culturally appropriate education regarding prediabetes (PD).

Diabetes Prevention Studies

The National Institutes of Health (NIH) Diabetes Prevention Program (DPP) was a 27-center randomized clinical trial to determine whether or not intensive lifestyle interventions or medication (metformin) would delay the onset of T2DM (DPP Research Group, 2002). This study included minorities, both racial and ethnic, and reported a 58% reduction in the incidence rate of diabetes. Of note was the finding that strategies used to address the cultural needs of the different ethnic or racial minorities included utilizing case managers from the same ethnic groups as the participants. The interventions in the

DPP were provided by a multi-disciplinary team, including physicians, nurses, exercise physiologists, nutritionists and behavioral psychologists.

A thorough search online revealed that there were no studies in the literature that address this particular issue in relation to American Indian women of the Crow Tribe (Apsaalooke Nation). However, a study conducted by Lillioja (1993) suggested that pre-diabetes may be the strongest predictor of non-insulin dependent diabetes mellitus (NIDDM) among Pima Indians.

The American Diabetes Association and the National Institute of Diabetes, Digestive and Kidney Diseases summarized four well designed controlled studies that were conducted between 1999 and 2002, and concluded that it is possible to delay the onset of diabetes type 2 among persons with prediabetic conditions. One of these studies (Tuomilehto, et al., 2001) provided evidence that T2DM can be prevented, particularly in high risk people with glucose intolerance, when these people make lifestyle changes that result in increased exercise and weight reduction. The Diabetes Prevention Program (DPP), a 27-center randomized clinical trial which was funded by the National Institutes of Health; compared the used of metformin in addition to lifestyle modifications to lifestyle modifications alone among a group of 1,079 persons with IGT who were at high risk for the development of T2DM. This study reported a 58% reduction in the incidence of development of T2DM among the lifestyle modification only group and a 31% reduction in the metformin only group.

Diabetes Among American Indians

The Centers for Disease Control and Prevention (CDCP) (2003) report includes the information that diabetes, within the general population of the U. S., rose 54% between 1994 and 2002. Moreover, the CDCP reported that 15% of Native Americans have diabetes, compared to 7% of Americans in general. In addition, 30% of Native Americans, over age 55, had diabetes.

Gray et al.'s (1998) study explored if there was a correlation between the insulin resistance syndrome (prediabetes) and macro-vascular disease in Native Americans. He asserted that "a blood component containing high density lipoprotein cholesterol, triglycerides, and glucose had a positive association with coronary heart disease in Native American diabetic women and with peripheral vascular disease in both sexes" (p. 869). A trend noted by Brown et al. (2003) is an increase in the overall obesity rate among American Indian and Alaska Native people with diabetes. Brown et al. suggested that this rise in obesity, particularly among the youngest age groups, may then lead to a greater risk for long-term, obesity-related morbidity and mortality. A study by Arauz-Pacheco, Pena-Obando, Mora, and Neal (1999) asserted a similar correlation between obesity, hypercholesterolemia, hypertension and diabetes and an association with cardiovascular disease among Native Americans.

According to the Indian Health Service Guideline for Care of Adults with PD and MetS in Clinical Settings (2006), the prevalence of PD and MetS in American Indian and Alaska Native adult populations approached 30%, and both conditions increased the risk of development of T2DM. This publication discussed which patients should be tested for

PD, gave the classifications and tests used to diagnose PD and MetS, ICD-9 codes for PD and MetS, standards of care for PD and MetS as well as tracking and follow-up recommendations. This guideline has served as a very good tool for all clinicians. However, although it mentions the cultural appropriateness of education, it does not give examples of what cultural appropriateness means.

Evidenced Based Best Practice Guidelines

The health recommendations found in the 2006 IHS Guidelines for Care of Adults with Prediabetes and/or Metabolic Syndrome in Clinical Settings state that "therapeutic lifestyle changes significantly reduce the risk of progression to Type 2 diabetes (T2DM). Typical recommendations include:

1. "7-10% (moderate) weight loss,
2. Reduce calorie and modify fat intake,
3. Patient self-monitoring records
4. Education focusing on: health food choices, healthy food preparation, and the psychology of eating habits" (p. 6).

Culturally Sensitive Educational Interventions

Various studies, such as the Strong Heart Study (Resnick et al, 2003) and Diabetes Prevention Program (National Institutes of Health, 2002) have been conducted that show different strategies of nursing interventions, such as lifestyle modification health education, that help patients control prediabetes and diabetes. Some of these have

been conducted in a manner that took into consideration the specific culture being taught. One such study, Gilliland et al. (2003) suggested that community assessments in the Indian Health Service in New Mexico, produced a "community assessment tool that was a practical, feasible approach for a national community-directed public health program to identify and prioritize tribal communities' diabetes-related needs" (p. 520).

A study by Rith-Najarian et al (1999) compared staged diabetes management (a customized, culturally appropriate plan of guidelines and clinical pathways for the management of diabetes) in a primary care setting community-based Indian health clinic in northern Minnesota, with standard diabetes care in the community-based clinics of the Chippewa and Menominee tribes. The staged management technique included culturally relative educational materials, while the standard care did not. The researchers suggested that the staged diabetes management technique showed an improvement in glycemic control.

An additional study conducted by Gilliland et al. (2002), compared three similar groups of American Indians in New Mexico with diabetes, using three different interventions. The first intervention group received culturally appropriate diabetes educational materials, skill building and social support, provided with a family and friends format. The second intervention group received the same information provided in a one-on-one format. The third group received the usual standard of care through the Indian Health Service clinic (prior to the issuance of the 2006 Standards of Care Guidance).

The first group also received interventions that were derived from focus groups within the Native American community. The authors recommended that traditional Native American story telling be used to convey information about diabetes. They also included information about traditional Native American foods and physical activities, as well as videos that featured Native Americans engaging in healthy lifestyle behaviors. Physical activities were also conducted in groups. Gilliland et al. (2002) concluded that the group that received the culturally appropriate education and activity had "less of an increase in glucose levels and gained less weight. These results lend support to the usefulness of interventions that use culturally appropriate materials" (p. 83).

A clinical trial conducted by Narayan et al. (1998) tested individuals' adherence to specific lifestyle interventions among the Pima Indians of Arizona, and compared them with diabetic Pima Indians who did not receive the culturally appropriate educational sessions, in order to bring about changes in risk factors for diabetes. The control group received routine ambulatory care through the Indian Health Services system. They concluded that activities and interventions that emphasized Pima history and culture in the experimental culturally appropriate education group were more effective in helping clients adhere to lifestyle modification changes. The findings also identified that "sustaining adherence in behavioral interventions over a long term was challenging. Pimas may find a less direct, less structured and participative intervention more acceptable than a direct and highly structured approach" (p. 7).

Nursing Theory Literature

Several writings by Leininger (1989, 1995, and 1996) described her nursing theory of trans-cultural nursing, culture care theory and ethno-nursing research method. Dr. Leininger's theory is designed "to provide culturally congruent nursing care in order to improve or offer a different kind of nursing care service to people of diverse or similar cultures" (1996, p. 72).

According to Streubert-Spieziale and Carpenter (2003), using Leininger's theory and methods are critical to any ethnonursing study because ethnonursing "allows nurses to study explicit nursing phenomena from a cross-cultural perspective in order to discover nursing knowledge as known, perceived and experienced by both nurses and consumers of nursing and health services" (p. 155). This includes lifestyle modifying health education in general. However; the researcher did not find any studies that used Leininger's theories when studying culturally appropriate education for American Indians with PD. This study will attempt to fill that gap by defining what culturally appropriate information relating to lifestyle modifying education about PD means to American Indian Crow women.

CHAPTER 3

METHODS

This chapter describes the research method of a qualitative, ethnonursing study, used to ascertain the cultural perspective of American Indian women in regards to the health education they received when they were diagnosed and treated for pre-diabetes. The population and sample, design, procedures for data collection and instrumentation will be discussed. A discussion of the rights of human subjects and the consent process, as well as the analysis method used, will also be included.

Population and Sample

The researcher in this study has focused, throughout her graduate nursing program, on the topic of diabetes and pre-diabetes among American Indians. Accordingly, adult women with prediabetes from the Crow Tribe were chosen as the population of interest for this study. Most of the Crow Tribe lives on the Crow Reservation in Yellowstone and Big Horn Counties, although there are a number of tribal members who live off the reservation in nearby towns. This study was also an extension of a project which was completed by the author for another graduate course, Rural Nursing, which involved a survey of the town of Pryor along with interviews with rural members of the community about accessing health care in Pryor.

Inclusion criteria for this study were that the person be an American Indian Crow Tribal female, self-identify that she had been given a diagnosis of pre-diabetes and be

between the age of 18 and 64. As women usually are the food preparers, shopping and preparing the family meals in this population, adult males were excluded from this study group.

The sample began with two key informants who fit the inclusion criteria, known to the author. These participants then referred other women to the researcher for interviews through the process of snowballing (Polit & Beck, 2004 p.292). Additional subjects were recruited by posting informational posters (including the phone numbers to reach the researcher) inviting other women, who had been told they have pre-diabetes, to call the researcher to join in the study. On the advice of a local elder who participates as a Pryor District Tribal Health Board member, and with the verbal permission of the manager at each site, these posters were also placed at the local Indian health clinic, the local post office, and the local gas station-convenience store located at the intersection of the only two roads in the selected rural town. In addition, assistance in recruiting was solicited from the nurse who worked at the local Indian health clinic.

A key concept in qualitative research, particularly those studies involving minorities, according to Streubert-Speziale and Carpenter (2003), is the concept of saturation. Interviews continue, along with data collection, until there appear to be no new themes arising during subsequent interviews. “Therefore, predetermination of the number of participants for a given study is impossible” (Speziale & Carpenter, 2003, p. 68). The total sample consisted of six Crow women between the ages of 19 and 46. Saturation of data was completed by the end of the interview with the sixth participants as no new themes were identified.

Design

The ethnonursing research method was chosen for this study due to the cultural nature of the information desired by the researcher. Leininger, a pioneer in cultural related ethnographic nursing research, interpreted ethnography in the nursing field as ethnonursing.

The focus of ethnonursing is the "study and analysis of the local or indigenous people's viewpoints, beliefs, and practices" (Leininger, 1985, p. 38). In 1995 Leininger explains that:

> "The ethnonursing qualitative research method had to be developed in order to examine the theory transculturally. Indeed, a new method was needed to obtain largely emic culture care data that were grounded and inductively derived from the people's holistic lived experiences, beliefs, values, and practices" (p. 75) .

The researcher has participated in the Crow Tribal culture for a number of years through active involvement at a local women's shelter that houses many Crow women who have either pre-diabetes or diabetes. She instructed many women in diabetic prevention education; as well as learned from the many women, she had the honor to know, how their cultural heritage affected their day to day activities.

Variables are difficult to define in qualitative studies. However, a few of the variable identified by the researcher as possibly relevant were: a) the education level of the participant, b) whether the participant lived on or off the reservation and c) the availability of pre-diabetes written materials in the Crow language.

Procedures for Data Collection

Persons were self-identified as potential participants who fit the inclusion criteria; either because of the snowballing effect from earlier participants or from the participant reading one the recruiting posters in Pryor. These individuals then contacted the researcher via telephone. Pseudonyms will not be used in the reporting of the results.

The procedures of the study were verbally explained to potential participants by the researcher, and a time and private place was agreed upon for the one-on-one interview with the researcher. The informed consent was read by the participant. If they agreed to participate, the consent was signed and witnessed by the researcher.

All interviewees were given a $25.00 VISA gift card at the end of the interview as compensation for their time. This compensation was chosen as it was the researchers' experience, from previous contacts with American Indian people from the Crow tribe that gifts are given as a means of respect when one person helps another. The concept of "gifting" was one of the topics at an American Indian Cultural Education session held at the 1996 Montana Public Health Conference in Lewistown, that the researcher attended and as such, the concept of gifting among American Indians is one familiar to the researcher. Therefore, these gift cards were not only compensation for the participants' time, but also a show of respect for their help. Funds for these gift cards were provided by the graduate nursing student researcher, as no corporate or grant funds were used in this study.

Interviews lasted from 45 to 90 minutes. With the participants' permission, five of the six interviews were recorded for later transcription. When the participant declined to

be recorded, the researcher took brief notes of the highlights of the conversation during the interview and wrote more extensive notes immediately after the interviews. The participant who declined to be recorded stated “that would make me too shy to talk”.

Instrumentation

This qualitative, focused ethnonursing study utilized a conversational semi-structured interview. According to Polit & Beck (2004), the qualitative researcher does not use a pre-validated instrument with which to collect data but, rather, starts with a “general set of questions or topics and allows respondents to tell their stories in a narrative fashion” (p. 57). In addition, other texts such as Speziale & Carpenter (2003), describe the focused ethnonursing method of nursing research as including “asking questions to learn what is happening, and using other available sources of information to gain as complete an understanding as possible of people, places and events of interest” (p. 161).

As the topics of these discussions were the cultural aspects of health education the participant had experienced in relation to her pre-diabetes diagnosis and management, seven general topics were discussed with each client, in addition to any other topic they wished to discuss. These seven topics were:

1. the experience of being diagnosed as pre-diabetic, how the American Indian culture affects the view of this diagnosis by the participant,

2. typical actions taken to manage the diagnosis on a daily basis from a cultural perspective (i.e. culturally appropriate recommendations for exercise, diet and weight control),
3. barriers to daily self-management,
4. facilitators to daily self-management,
5. use of alternative therapies or traditional healings,
6. role of spirituality, religion and/or advice from family and/or elders, and
7. recommendations for health care providers, who work with American Indian women with pre-diabetes, to increase their cultural sensitivity. (See Appendix C)

These topics were modified from the seven general topics that were utilized by Utz et al. (2006) in a study regarding the cultural aspects of diabetic education and self-care in another ethnic minority group in the U.S. Open ended questions were used by the researcher so that yes or no answers would be avoided, and more thorough information would be obtained during the interviews. As the researcher has 26 years experience as a local public health registered nurse, working with the underserved and minority population, she is very experienced in the use of open ended questions.

The interviews took place during the months of February and March 2008. Recorded interviews were transcribed by a professional medical transcriptionist who is fully trained and compliant with current HIPPA regulations in order to legally protect the privacy of the participants. The tapes were erased after transcription occurred .The researcher typed the notes from the non-recorded interview.

Human Subjects and Consent Process

Prior to beginning this study, approval for the conduction of the research was obtained from the Montana State University (MSU) Institutional Review Board. The proposal was submitted in November of 2007, and the IRB requested that the researcher also obtain approval for the study from the Crow Tribal Health Board. An outline of the proposed study was presented by the researcher to the Tribal Health Board in December, 2007 and approval was unanimously given which is included as Appendix D. The Chairperson of the Tribal Health Board assigned the ad hoc member from the Pryor District to assist the researcher in initiating the study. After the requested material was submitted to the IRB chairperson, final approval was given by the MSU IRB in December, 2007. The consent form is included as Appendix A.

Analysis of Data

Initial analysis of the data began during the interviews when the researcher began to separate comments expressed by the participants into general categories. By the last interview, data saturation had occurred as no new general categories were discussed by the sixth interviewee.

All individual interviews were transcribed into Word documents that were then imported into Ethnograph ® v.5.0.7 (Seidel, 1998). Domain analysis was the first step in the analysis. This step identified units of cultural knowledge by identifying relational patterns among the verbiage used by the participants and their cultural meaning. This

process identified broad domains which were given general code words within the Ethnograph program.

During the second step, taxonomic analysis, the researcher determined which domains were to be studied in depth. A system of organizing and classifying the codes was then developed in order to name the parent codes and the relationship between codes and the parent codes.

The third step in the data analysis was examining the multiple relationships among codes in the domain, or the componential analysis, looking for similarities and differences. The final step in the data analysis was connecting the parent codes (domains) into cultural themes. These steps were facilitated by utilizing the tools available within the Ethnograph® program (Seidel, 1998).

Throughout the interview process, the researcher was identifying various conceptual domains and common threads that were common among the participants' comments and beginning to interpret these. The participants were asked if the interpretation was correct as the various common themes arose so as to validate the understanding of their comments at the time of the interview when possible.

Validity and Reliability

Polit & Beck (2004) described that, in order for qualitative research to be both valid and reliable, the "gold standard" should be used as: "four criteria establishing the trustworthiness of qualitative data: credibility, dependability, confirmability and transferability" (p. 430).

A recent discussion regarding utilizing a realistic approach to qualitative nursing research was discussed by Porter (2007). He concludes that “if qualitative research is actually about something, and if it is required to provide beneficial information, than a realist approach to validity holds out greatest promise”.

Credibility according to Polit & Beck (2004) in this study was determined first by member checking. The researcher echoed back her understanding of many of the points that the participants made during the conversations, and the participants related whether or not the researcher had heard or interpreted correctly. The second credibility test for this study was investigator triangulation. The researcher had another post-graduate person review the blinded raw interview transcriptions to compare and contrast themes identified by the researcher. Consensus was then obtained with both persons to assure consistency of the analysis. Dependability and confirmability as per Polit & Beck (2004) is shown in this study by the fact the same themes arose over and over again during the various interviews. Although the specifics in each person’s personal story were different, common themes were identified. Transferability (Polit & Beck, 2004) of the results of this study is confined to the data analysis only being applicable to this particular American Indian tribe. Further studies would need to be done in order to determine if the analysis of this study can be transferred to other groups of American Indians. All field notes, raw blinded data, coding data were preserved, which would allow an independent researcher to come to similar conclusions if the study were replicated. However; as realism is inherent to qualitative nursing research, a different cohort of interviewees may indeed have different responses based on their life experiences.

CHAPTER 4

RESULTS

Data analysis occurred concurrently with data collection through verbal feedback to the researcher to assure the responses were interpreted correctly. In addition, as was described in Chapter 3, data was also analyzed utilizing the Ethnographic ® program (Seidel, 1998). As qualitative studies are full of rich personal information, the issue of which of the many topics to include is somewhat restrictive as the amount of data obtained was huge. During the interviews, the seven general areas for topics were used as a rough outline for each interview. However, as the qualitative process is one that is free flowing, with the researcher adapting the questioning and discussion process as the interview proceeded, the order in which each of the seven topic areas was discussed was different with each participant. This results chapter will not focus on the exact answers to the seven general topics used for discussion with each participant; but rather the culture specific information gathered during the interviews while discussing the seven general topics. The purpose of this study is to familiarize the reader with the specific issues of cultural perceptions of six American Indian Crow women about their experience with lifestyle modifying health education regarding prediabetes (PD).The four main cultural themes arising from the interviews will be discussed in depth as they relate to lifestyle modifying health education for PD. These themes are:

- Extended family and elders,
- Spirituality/traditions,

- Culturally specific foods and activities and,
- Inevitability of development of diabetes type 2.

Extended Family and Elders

In the traditions of the Crow culture, (Krumwiede, 1996) each member of the tribe also belongs to a clan, which is a group of related families.

> "To this day, the Crow observe a strict code of behavior based on relationship to one another. The youngsters are expected to respect the elders within the clan, known as clan uncles and clan aunts, who are often called mother or father. Each relationship calls different behavior" (p. 15).

The Ethnograph parent code of extended family included code words from the texts of the interviews: aunties, aunts, mother, grandmother, adopted grandmother, sisters, cousins, mixed messages, big dinners, adopted mother, adopted father, my big family, elders, and respect.

The importance of extended family and elders for the women involved in this study is evidenced in discussions regarding both nutrition counseling (diet and weight control) and exercise. Counsel from family members and/or elders was important to all six participants.

An example from the interview with one participant of how she seeks to verify nutritional and exercise information given to her by her physician, with her family is provided below:

> "I went to the diabetic program place to see all the stuff I could be doing (about preventing diabetes). I talked to the doctor; and for the other stuff I would go to my auntie for more information, because she is a nurse over there (at Crow Agency) and she helps me a lot with all the information. I guess I trust her more".

This theme was repeated by all of the participants in this study in one manner or another, not only in regards to the participant seeking advice from her extended family, but also in relation to activities with extended family. One participant stated that because she has many family birthday parties to go to with all her sisters, cousins and their children, it is hard to avoid sweets at these events. She stated that she would occasionally eat her dinner at home before these birthday parties or other celebrations so that she could honestly say she was full and only have a very small amount of cake or other sweets, "I try not turn her away and just eat half (of a donut or piece of cake)".

Mixed Messages and Big Family Dinners

Large family gatherings and celebrations that center on food were mentioned by all of the participants. One participant stated that her grandmother and her mother both use a lot of bacon fat when cooking even though they know she is trying to get her cholesterol level down. She states out of respect for them, she does not say anything. A different participant stated that her mother is "always telling me to lose weight but she always has sweets around and she knows I can't turn them down".

Only two of the participants lived with just their nuclear family, the other four lived with a combination of some other extended family members. These four women stated that they do not always do the cooking for the people who live at their house and, as such, are dependant on extended family either being supportive or non-supportive of their dietary needs. One of the participants who lives with a large extended family group stated "we get a lot on our food stamp cards in my family because of all the kids around,

but the fresh fruit and vegetables are expensive, so we don't buy too much of them. We get lots of canned stuff though".

All six participants related that they have members of their extended family, both related by blood and adopted, that have diabetes. In addition, some family members also have prediabetes. One woman stated that "diabetes and prevention of diabetes is something that I've known about since I was a little girl. I just never saw many examples of people who really ate much different than the rest of us I guess. We know what to eat; we just don't most of the time". Another participant stated "My mom is borderline-diabetic, I was really scared (when I was diagnosed) because I didn't want to be like my grandma or anybody else. My aunt has it too".

Spirituality and Traditions

According to Krumwiede (1996), the Crow are a deeply religious people, although not all Crow people go to an organized church. The Crow "believed that the tribe was blessed by the creator of the earth, and that the creator was never far away" (p. 19). Another important aspect of the Crow people's spirituality is that religious beliefs "were a part of the Crow individual each and every day…..and while special ceremonies were important religious rituals to the tribe, more time was spent on everyday religious belief" (p. 20).

Some of the code terms that fell under the parent code of Spirituality and Traditions included: old ways, sweats, fasting, visions, herbal medicines, traditional

medicine, prayer, smudging and speaking the Crow language. The most frequently used code terms as they relate to PD nutrition and exercise education will be discussed.

Sweat Lodges

As described to the researcher by more than half of the participants, (five of six), the tradition of using sweat lodges serves numerous purposes, some of which have to do with the general health of the person. This topic was raised most often when the participants were discussing self-management and traditional healing. It was explained to the researcher that it is tradition that the men always use the sweat lodge first, and then the women and young girls use the lodge. According to an informant in Krumwiede (1998)'s study of pain among Crow Indians:

> "The sweat lodge causes intense burning, and to go through the process of that intense burning is so important because it cleanses your mind, it cleanses your spirit, cleanses your spiritual body. It takes all your ailments away so that you don't have (them) inside your body anymore" (p. 46).

One participant in this study stated that her mother in law has a sweat (lodge) in her back yard and that whenever she (the participant) "feels my sugars are too high" (she does not use a glucometer), she will "have a sweat to cleanse out all the extra sugars". Another one of the participants does not use the sweat lodge as "I can't stand all that heat".

One of the younger participants uses a sweat lodge at least once a week, along with her little sister who is now ten. She reported that her sister only stays in the lodge for part of the sweat because she "just doesn't want to sit through all the lady talk". When asked whether or not any health care provider had ever brought up the topic of sweat

lodges with the participants, all of them responded “no”. One of the participants who is over 45 years old stated that she does not partake in sweats very often anymore as she has “low sugars” when she gets over heated in the sweat lodge. Although she had not validated this with a glucometer, she just feels shaky and dizzy and so she drinks orange juice and feels better.

Fasts

According to one participant, there are two types of fasts, one in which “you don’t eat at all or just drink liquids, and there is another type where you eat just fruits and vegetables”. When asked how a person decides what type of fast they need, she said “it’s a personal decision, and they go off and pray or stuff. The fruit and vegetable kind can last for two weeks or so”. This participant uses fruit and vegetable fasts “in the spring” when it is not too hot as a way to “lose the winter fat I put on”. She relayed that she learned this from her mother who learned it from her grandmother. Visions were reported to be an important part of fasts, especially with the ‘no food or drink fasts’ which usually occur in the outdoors, but visions are a “private thing”. Fasting was an issue that most of the participants discussed although not all of them fast as a means of weight control. Two of the participants related that they had discussed fasts with their health care providers, but that they were the ones who brought up the topic as they wondered if this was safe when a person has prediabetes.

Traditional Medicine

Two of the participants discussed the use of traditional herbs, roots for teas, and poultices they use when ill. They reported that they learned these skills from their

mothers, aunts and grandmothers. They also described a very elderly Crow Woman who knows the "old ways" of traditional medicine, and that they hope to learn more from her. Neither of them knew of any traditional medicines that would help with PD other than teas that help control appetite. They did not wish to discuss the contents of these teas with the researcher, as she is an outside to the tribe, and that was respected. They both did not know of many elders left that "know the old ways of our medicine", and stated they were sad about that.

Prayer

All six participants in the study stated they belonged to a local church and that their faith in God is an important factor in how good they feel. They all stated that their church "family" was very important to them, and that praying gives them all hope that they "won't get diabetes". Another common form of traditional blessing/cleansing is that of smudging. As described to the researcher, smudging is done by lighting a twist of small branches and leaves from a particular type of sage plant so that it burns slowly and smoke is given off. The person is then encircled with smoke in a ceremonial manner so that they are cleansed by the smoke. This ceremony is not particular to people with diabetes but is an important spiritual tradition among the Crow that relates to spiritual health.

Traditional Language

According to the participants in this study, the Crow language is spoken in all of their homes when they are talking to other Crow people. They stated that there are some elders that do not speak English. Most children only speak Crow in the home, but are

bilingual and speak English at school. An example of the spoke Crow language can be found on the Crow Tribal official website (2008). Only two of the participants stated they were proficient in reading Crow, and all of the women who participated in this study stated they were comfortable in reading PD educational materials in English. An additional topic relating to language among the Crow people is that storytelling is the traditional manner in which the elders of the tribe pass on information about the past, about the present and about the future to the younger members of the Tribe. This was told to the researcher by one of the older participants who stated that:

> "When my mother passes away; I'll be one of the elders; so I'm really spending time with her for her to tell me her stories. It's so sad that we don't have more of our tribal stories written down because so many of the really old elders are gone now and we're losing a lot of information".

Culturally Specific Foods and Activities

In general, discussion with the participants revealed that most of them have a modern day high carbohydrate, high fat diet that is very similar to the non-American Indian diet. However, there were a few differences that deserve noting. Code terms that fell into the parent category of culturally specific foods included: tripe, fry bread, and eating raw organ meats after a butchering. When asked if any of them had received dietary education regarding their PD that included cultural foods, they all said no.

It is in this category that the majority of discussions regarding barriers and facilitators to daily self-management fell. The code terms that fell into the parent category of cultural activities included: pow-wow dancing and story telling.

Traditional Foods

The use of tripe (Beef or Bison stomach lining) is not a common practice in most non-American Indian families; however it was brought up by four of the six participants when discussing diet and weight control and traditional foods. According to a Yellowstone City County Health Department Nutrition Services Registered Dietician A.W. Brese R.D. (April 2008), tripe is usually cooked with salt pork or other meats high in cholesterol and fat and, as such, is not a healthy choice for a prediabetic to eat very often. Tripe is also used in a traditional dish called manudo which contains tripe, hominy and other ingredients including fatty meats which two participants state is cooked a few times per week in her family.

As described to the researcher by the participants, fry bread is made by making yeast dough, letting it rise once, pushing it down and making it into rounds which are then deep fried. They are then either sprinkled with honey and powdered sugar or used as a base for an "open-faced taco". As was mentioned to the researcher by a majority of the participants, fry bread is not usually a daily staple except in some families. Most American Indians just cook and eat fry bread on special occasions. According to one participant, the "best" fry bread uses lard, high in cholesterol.

Another culturally specific food item brought up by one of the participants is the eating of organ meats (sometimes raw) when either a cow or buffalo is butchered. The participant women who brought up this topic said that it is usually the elder men who partake in the raw liver, but that some of the younger people do also. Three of the participants had never eaten raw organ meat, but did eat cooked liver regularly as a

source of iron. As liver is high in cholesterol and often cooked with onions fried in bacon fat, it should be eaten in moderation by persons with PD.

Pow-wow Dancing

Many of the Crow people attend local, regional and national Traditional American Indian Dance Festivals. These are usually referred to as Pow-wows. There are many different types of dancing that occurs at these events, but all of the participants in this study state they attend at least the local event called Crow Fair (Crow Tribe Website, 2008). Practicing for the dancing is excellent exercise as is the actual competition. Participation includes people of all ages and, according to the study participants, is a very important custom to carry on traditional dances, stories, drumming and fellowship with other American Indian tribes.

Story Telling

The participants in this study each brought up the topic of story telling in describing how they have learned healthy eating, activities, spirituality from their elders. The Crow do have a written language, but all of the participants stated that all of the traditional stories about their tribal history are told to the young people of the tribe as stories. One woman offered to share her Crow to English dictionary with the researcher if it was needed during the process of this study. Of import in this topic was the frequency that the participants mentioned that diabetes and prediabetes is perceived to be a relatively “new disease” to the Crow people. Each of the participants related that their parents and grandparent’s generation had much more diabetes than the generations before.

Inevitability

The term inevitability was coined by the researcher based on phrases and words used by each of the participants that relayed a sense of fatalism in regards to their ability to actually prevent or delay the onset of diabetes type 2 (T2DM) by controlling their blood sugars through diet, exercise and weight control. The phrases that participants used that became code words in the parent code system were: “It won’t matter what I do now, everyone in our family gets diabetes”. “I hope I won’t get it (diabetes), and pray a lot, but just can’t make any changes in my diet or weight”. “I’m real fearful that I’ll get it (diabetes) anyway”. “I’m really afraid that I’ll have complications like my uncle or Mother and lose my foot”. The researcher did not get a sense from interviewing the participants that they had received education which convinced them that they do have the ability to control when and if they will develop T2DM through lifestyle modifications.

As was said before, all six participants had first or second degree blood relatives who have (or had before they died) T2DM. Four of the six had helped to care for these relatives who had complications from the disease, including heart attacks, gangrenous toes, below the knee amputations, and dialysis.

One of the participants has lost enough weight by diet and exercise to get her weight into what she describes as normal range, and has the support of her husband who she reports was also pre-diabetic. In spite of her good management of her prediabetes, she too verbally expressed a fatalism that “it’s just a matter of time before I convert to full blown diabetes and will need insulin”.

General Recommendations by Participants

At the end of each interview, the researcher asked each participant if there were any general things they would recommend to the non-American Indian health care provider to help them understand how to address the issue of culture when treating them for their prediabetes (PD). All of the participants said, in one manner or another, that the most important thing is that the health care provider starts the topic of culture in conversation first. They said they felt respected when their opinion was asked regarding how culture affects their daily self-management of PD. This may seem to be a simple thing for a health care provider to do, but according to the participants, it is seldom done in their experience. Of note, the participants also related that when their health care provider is an American Indian person, cultural issues are always discussed.

CHAPTER FIVE

DISCUSSION

This ethnonursing study of a small group of American Indian Crow women, diagnosed with prediabetes (PD), has revealed just a small portion of a very rich and diverse culture from the perspective of the women who were interviewed. The results of the study, as described in Chapter Four offer the health care providers an insight into one group of American Indian women with PD.

The focus and purpose of this study was to identify Crow culture-specific information that non-American Indian health care providers can use to better provide lifestyle modification education to Crow women with PD. According to the recent studies, conducted by the American Diabetic Association and others described earlier in this paper (Tuomilehto et al., 2001, Resnick, 2003, Rosenstock, 2007) , it has been shown that persons with PD can delay or prevent the onset of Type 2 Diabetes Mellitus (T2DM) and, therefore, the micro- and macro-vascular complications that accompany that disease.

Evaluation

This small study did elicit cultural specific information which was not found in reviewing previously published studies relating to American Indian women from the Crow Tribe. The study was effective in defining what cultural issues are important for health care providers to bring up when providing lifestyle modifying education to

prediabetic Crow women. The issue of cultural competency of the health care provider is one of importance to this group of women as they related many times. As reported by Horner et al (2004), cultural competency by the health care provider is essential to decrease the overall health care disparity experienced by minority groups. The researcher was told by the participants during all interviews that their health care providers who were non-American Indian did not bring up items of cultural importance when providing health education. Conversely, when their health care provider was also American Indian, then cultural aspects of prediabetes lifestyle modification education was brought up and discussed. They all related to the researcher that the issue of cultural competency is one that they hoped would be provided to all new health care providers when they start to work with American Indian peoples.

Study Limitations

This study is limited by the fact it only included women of the Crow tribe, living on the Crow reservation that self-identified with a diagnosis of PD. It is possible that if more women were interviewed, other topics may have arose that are not included here. The utilization of focus groups may have also brought up additional information. Interviewing groups of women from the same family as a group may also have elicited different information. Crow women who live off the reservation in urban or other rural areas may have different cultural issues which are important to them.

This study did not include interviews with men, youth or elders who have PD. There are most likely cultural issues specific to Crow men that are different than those

important to Crow women. It also did not include people who now have T2DM, but that went through a period of time when they were diagnosed with PD. Whether or not these results will transfer to Crow men, youth or elders; or American Indians of different tribes, either in Montana or out of Montana is unknown.

Specific Implications for Nursing Practice

If the nurse or nurse practitioner is to fully provide culturally appropriate lifestyle modifying health education to Crow American Indian women, they must take into consideration the four main themes identified in this study:

1. Extended family and Elders
2. Spirituality and Traditions
3. Culturally specific Foods and Activities
4. Concept of Inevitability or fatalism.

It is this researchers' conclusion that by utilizing these four areas of focus, in addition to using traditional prediabetic educational materials when teaching Crow American Indian Women with prediabetes, will provide more thorough education and improve their chances of making lasting lifestyle modifications.

Extended Family and Elders

The issue of extended family and elders as an important part of the American Indian way of life, especially on the reservation is supported in the literature by Spector (2004) "The family is often a nuclear family, with strong biological and large extend family networks, children are taught to respect tradition and community". Plumbo (1995)

likewise reports that "Native Americans tend to have a strong sense of responsibility towards preserving and honoring the past, while creating something positive for the future" (p156). As the participants in this study related, their sense of trust for their family, both immediate blood family and their extended adopted and clan families is often more important than their trust in their health care provider. Health care providers must be sensitive to this, and elicit from the American Indian person with PD who their sources of support and information regarding their health are in their family so as to enlist the support of these people in the care of the client if the client so desires.

Spirituality and Traditions

Few of the texts available to nursing students have specific information about the spirituality and traditions of the Crow tribe, which is considered to be a relatively small tribe compared to the Cherokee or the Navajo (Spector, 2004). There is information available to Montana State University students specifically about 'American Indians in Montana' which includes the Crow Tribe, by taking the MSU-NAS 201 which is given in the Native American Studies Department.

Krumwiede (1996) studied the experience of pain among Crow people, and had one informant who describes the Crow people's experience with spirituality and western medicine in a very poignant manner:

> "Your spiritual being needs taken care of, as well as your physical being. There's no doubt about it. It seems like in the White medical world, they separate the spiritual from the physical, but in the Indian population, you cannot separate the spiritual part from the Indian person…that is the core of who they are! When a doctor comes to that Indian person to treat them, many times they just want to treat the medical part of that person and they deny the spiritual part, and then the Medicine Man comes because the family has certain spiritual beliefs, and they're not included in the complete health care of the person".

Culturally Specific Foods and Activities

Cultural foods and activities which were determined to be important to the participants of this study had not been discussed with them by their health care providers when they received lifestyle modifying education about their prediabetes. The topics they felt to be important to include in discussion were related to not only what foods were often prepared on a daily basis, but also foods such as fry breads that are cooked for celebrations and family parties. Foods high in cholesterol are also a part of the diet of the Crow people. These choices contain foods that should be eaten in moderation and as such are important for the health care provider to be aware of when teaching healthy food choices.

A habit of regular exercise is an important part of prediabetes management. The women involved in this study reported that a common and enjoyable physical activity for many Crow people is participating in traditional dancing at pow-wows, as well as practicing for the same.

Story telling is a traditional way of teaching others about the history of the Crow people as well as conveying to children traditions and customs. The participants of this study related that story telling is one common manner that they have learned information about health in the past and a way they teach their children about health also.

Inevitability

The fact that the participants in this study all verbalized in one manner or another that they felt that they are going to progress from a pre-diabetic state to an actual diagnosis of diabetes is a poignant one. In this researcher's experience as a health

educator for more than a quarter of a century, the patient's belief that change is not only possible but probable is one that is important for successful change to occur. Repeating health information using different modalities as well as assuring that cultural issues are openly address is important.

Recommendations for Further Nursing Research

As this study was designed to be a beginning for other nursing researchers who are also interested in the topic of culturally appropriate health education regarding PD among American Indians, it can be seen as a pilot study upon which a larger study can be based. The researcher encourages other nursing researchers to use these data as a starting point in further qualitative studies of American Indians with PD.

Repeating a similar study utilizing different subgroups from the Crow Tribe or from other American Indian tribes in Montana would lend more information to the body of knowledge available to the nurse practitioner and other health care providers. More and more studies are available that show that preventing diabetes and/or delaying the onset of diabetes has major positive effects on a persons' health status. A study recently published in the New England Journal of Medicine, (Petal et al, 2008)) concluded that

> "intensive glucose control that lowered a person's glycolated hemoglobin value to ≤6.5% resulted in a 10% relative reduction in the combined outcome of major macrovascular and microvascular events, primarily as a consequence of a 21% relative reduction in nephropathy" (p.).

Comparing American Indians with PD who live on or off the reservation would assist the nurse practitioner in determining if findings are similar or different. It is unknown how many of the traditional foods, customs, and activities are practiced by

those Crow members who live in urban areas, or other Crow American Indians who live off the reservation.

Development of culturally appropriate written educational materials for the American Indian women of the Crow tribe would be a useful endeavor for future studies. Currently; American Indian specific pamphlets and information are produced by the American Diabetic Association and can be accessed at their website. This researcher did not find any written information or pamphlets that were specific to the Crow people with prediabetes. This could be a project that could be taken on by Montana State University undergraduate nurses when they are studying community health.

A study that looked at pre- and post-educational attitudes, including culturally appropriate information as well as an individualized care plan for each participant who was diagnosed with PD, would be one way to determine whether or not culturally adept educators can influence this sense of fatalism.

Conclusion

The concept of inevitability is one that is disconcerting to this researcher. As the theme was repeated by all of the participants in this study, it is felt by the researcher to be a frequent attitude, at least for this sub-group of people. As the area of cultural competency is one that has become part of the core curriculum for most undergraduate and graduate health care providers as well as physicians, it is valuable that studies such as this are conducted.

As Madeleine Leininger (1989) first researched in the 1950's and 1960's; a person who is from outside a particular culture can not know what life is like within that culture without asking the people within the culture to tell their life experiences. It is not enough to simply watch how people go about their daily lives in a culture different from one's own and interpret what is happening from the researcher's perspective. All cultures have traditions, customs, foods, activities, language, etc. that are unique and special, and as health care providers this researcher feels it is our obligation to learn as much about the patient's culture as possible so as to provide the best possible care in a manner that respects that patient's special uniqueness.

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APPENDICES

APPENDIX A

CONSENT FOR PARTICIPATION

APPENDIX A

SUBJECT CONSENT FORM FOR PARTICIPATION IN HUMAN RESEARCH AT MONTANA STATE UNIVERSITY

Project Title: **Cultural Perceptions of Health Education by American Indian Women with Pre-Diabetes in South Central Montana, A Focused Ethnographic Study**

You are being asked to participate in a study that will explore the cultural perceptions of American Indian women with pre-diabetes about health education.

This will help us obtain a better understanding about what culturally competent health education means for American Indian women.

You have responded to a notice asking for local American Indian women, who have been told they are pre-diabetic, to participate in a private interview to discuss the topic of culturally appropriate education about pre-diabetes. This study will involve a one on one interview with the researcher, who is a Registered Nurse enrolled in the MSU College of Nursing Graduate School to become a Family Practice Nurse Practitioner. The researcher has been a Public Health Nurse and worked in the Billings area for 20+ years, and has also worked with, and learned from, many American Indians throughout her career.

- If you agree to participate, you will meet with the researcher to have a discussion about health education you have received in the past about your pre-diabetes. You will not be identified in any way during this study by anything other than a unique number.

- This interview will occur at a place of your choosing; it might be your home, it might be a local restaurant or anywhere you would feel comfortable talking. The interview will take anywhere from ½ hour to 2 hours, depending on how much information you wish to discuss. There will be no blood sugar testing, no review of your medical record and no medical procedures will be done during the interview. If you agree, the sessions will be audio taped so that the researcher can be sure to get all the information talked about written down at a later time to be analyzed. These tapes will be destroyed after they have been transcribed so that the data has been collected. A $25.00 VISA gift card will be

given to each participant at the end of the first interview as a stipend for your time.

- Because the researcher will be talking with other American Indian women who also have pre-diabetes, there may be topics that come up in other interviews that the researcher may want to talk with you about at a second interview. If this occurs, you will be asked to meet again with the researcher to talk about those topics. You may choose to join in a second interview or not. Participation in this study is totally voluntary, and you may decide to withdraw your permission to participate at any time.

Risks: The risks involved in this study include having emotional discomfort if anything talked about during the interview brings up bad memories. There will be no physical discomfort or physical risks that will occur during this study.

Benefits: The benefits you would receive from being in this study include being able to tell your story about healthcare education you have received in the past about pre-diabetes and also being involved in research which may help to benefit American Indian women's health care in the future.

Alternatives available: Persons who do not wish to participate in this study will not be coerced into participating. This study is totally voluntary.

Source of funding of project: Funding for the gift cards is coming from the researcher's personal funds, there are no corporate sponsors for this study

Cost to subject: There are no costs to the participants in this study.

Please feel free to ask any questions you have about any of this study before you decide if you want to participate or not.

Privacy assurances: All women who participate in this study will NOT be identified by name or any other identifying facts in the report of the findings of this study.

Your identifying information such as your name and date of birth will only be known to the researcher. All records of all interviews will be coded so that no one else can know who participated in any of the interviews. The codes will be kept under lock and key in the researcher's office, and all computerized information will be kept in a computer with a password lock system required to gain entry.

The information gathered in this study may be published in medical journals, but your identity will not be revealed.

Injury clause: In the event your participation in this research directly results in emotional distress for you, treatment consisting of counseling through the local Indian Health Service will be available. No compensation is available from Montana State University for injury, accidents, or expenses that may occur as a result of your participation in this project. Further information about this treatment may be obtained by calling Lori Hartford BSN, RN, FNPS (Researcher) at ***(406) 697-3230***.

Additional questions about the rights of human subjects can be answered by the Chairman of the Institutional Review Board, Mark Quinn, ***(406) 994-5721***.

AUTHORIZATION: "I have read the above and understand the discomforts, inconvenience and risk of this study. I, _____ *(name of subject),* agree to participate in this research. I understand that I may later refuse to participate, and that I may withdraw from the study at any time. I have received a copy of this consent form for my own records".

Signed: _____

Witness: _____

Investigator: _____Date_____

APPENDIX B

RECRUITMENT POSTER

APPENDIX B

RECRUITMENT POSTER

ARE YOU AN AMERICAN INDIAN **WOMAN** AGED 18 TO 64, WHO HAS BEEN TOLD YOU HAVE **PRE-DIABETES**?

WOULD YOU LIKE TO PARTICIPATE IN A RESEARCH STUDY?

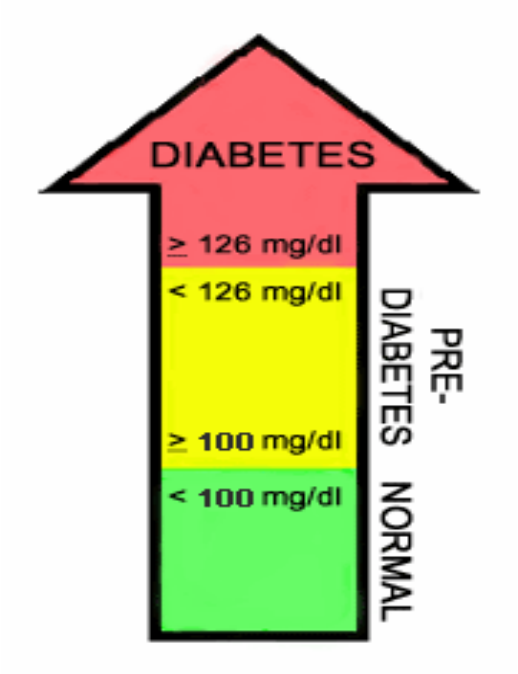
THIS STUDY WILL INVOLVE **ONE OR TWO SHORT PRIVATE INTERVIEWS** WITH A GRADUATE NURSING STUDENT. YOU WOULD TALK ABOUT HEALTH EDUCATION YOU HAVE RECEIVED AND HOW IT RELATES TO YOUR AMERICAN INDIAN CULTURE.

YOU WILL RECEIVE A $25.00 GIFT CARD FOR EACH INTERVIEW.

PARTICIPATION IS **VOLUNTARY** AND THE STUDY HAS BEEN APPROVED BY THE CROW TRIBAL HEALTH BOARD.

ALL INFORMATION GATHERED WILL BE SUMMARIZED WITHOUT THE USE OF NAMES.

IF YOU ARE INTERESTED, PLEASE CALL:
LORI HARTFORD, RN, FNP STUDENT
MSU COLLEGE OF NURSING
256-7957 OR 697-3230



FASTING BLOOD SUGAR LEVELS

APPENDIX C

TOPICS FOR DISCUSSION

APPENDIX C

General Topics for Discussion with Participants

1. The experience of being diagnosed as pre-diabetic, how the American Indian culture affects how this diagnosis is viewed by the participant,
2. Typical actions taken to manage the diagnosis on a daily basis from a cultural perspective (i.e. appropriate recommendations for exercise, diet and weight control),
3. Barriers to daily self-management,
4. Facilitators to daily self-management,
5. Use of alternative therapies or traditional healings,
6. Role of spirituality/religion and/or advice from family/elders, and
7. Recommendations for medical providers/nurses who work with American Indian women with pre-diabetes to be more culturally sensitive.

APPENDIX D

CROW TRIBAL HEALTH BOARD APPROVAL

APPENDIX D

CROW TRIBAL HEALTH BOARD APPROVAL OF PROJECT

<u>TRIBAL HEALTH BOARD MEETING</u>

DECEMBER 5, 2007

Elroy Nomee opened the meeting at 6:17 p.m. Presentation from Lori Hartford, from MSU on a research project she wants to do with 6 diabetic women from Pryor. She will give a $25.00 gift card with sign in consent. Confidental-sign a release. Ages 18-65. Do a poster recruiting. Elroy: Do Health Board approve? Alice made a motion to accept the research-Jeanne seconded the motion. Approved unanimously.