PRENATAL CARE AND PREGNANCY-RELATED HEALTH BELIEFS AMONG AMERICAN INDIANS ON WIND RIVER RESERVATION, WYOMING

A DISSERTATION

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

COLLEGE OF HEALTH SCIENCES

BY

CAROL M. ARNOLD, MS, RN

DENTON, TEXAS

DECEMBER 2000

TEXAS WOMAN'S UNIVERSITY
DENTON, TEXAS

October 20, 2000
Date

To the Dean of the Graduate Studies and Research:

I am submitting herewith a dissertation written by Carol M. Arnold entitled "Prenatal Care and Pregnancy-related Health Beliefs among American Indians on Wind River Reservation, Wyoming." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Health Education.

Eva L Doyle
Major Professor

We have read this dissertation
and recommend its acceptance:

William B. Crosbie

Susan Ward

Susan Ward
Chair, Department of Health Studies

Accepted: Michael H Dunge
Dean of Graduate Studies and Research

ACKNOWLEDGMENTS

The goal was not achieved alone, much guidance and encouragement was given along the way and to these people I give great thanks.

To the people of the Wind River Indian Reservation, please accept my gratitude for being a part of my life, teaching me, and guiding me along a wonderful journey of discovery. It is my hope that I have used your trust in a good way.

To the March of Dimes, and especially Susan Clifford and Michelle Schaffer at the National Office, and Betty Momodo in the Wyoming Chapter, thank you for opening the door to that journey and all the words of encouragement you gave along the way.

To my husband, Leck, who always believed I could make the journey even when I did not, all my thanks and love for your support, I could not have reached this goal without you.

To my family and friends who always encouraged me, and put up with my joys and sorrows along the way, thank you for your forbearance.

And, lastly to Dr. Eva Doyle, thank you. You helped me realize that when I thought I heard hoof beats, not to always look for zebras in Iowa.

COMPLETED RESEARCH IN HEALTH SCIENCES

Texas Woman's University, Denton, Texas

Arnold, Carol M. Prenatal care and pregnancy-related health beliefs among American Indians on Wind River Reservation, Wyoming. PhD in Health Sciences, 2000, 104 pp. (E. Doyle)

The purpose of this study was to elicit information from the American Indians and their health care providers on the Wind River Indian Reservation regarding their perceptions of pregnancy-related health beliefs. A second purpose was to examine the relationship between American Indian and health care provider perceptions about available prenatal care. Techniques based on ethnographic interviews and the Rapid Assessment Procedure (RAP) were used for semi-structured interviews along with participant observations. Analysis of the interviews and the participant observations revealed that the American Indian participants on the Wind River Indian Reservation had positive prenatal care and pregnancy-related beliefs that supported the utilization of prenatal care and a healthy lifestyle. The use of traditional medicine also was believed to support a healthy lifestyle. Prenatal care services identified on the reservation included a prenatal clinic, a county home health visitation program, a new program offering prenatal education and support by community members, and delivery services at two contract civilian hospitals near the reservation. Barriers to prenatal care in this community that were identified in this

research included lack of cultural sensitivity by health care providers and one of the contract hospitals, transportation and access difficulties, concerns over continuity of care, issues of confidentiality, and a lack of awareness by the American Indian participants of the full range of services and education provided to the community.

TABLE OF CONTENTS

Page

CHAPTER 1

INTRODUCTION

The United States has often been described as a melting pot where people have become acculturated and assimilated into American society and culture. However, as Spector (1996) and Huff and Kline (1999) point out, America is a complex mix of cultures and beliefs. Cultural heritage strongly influences how an individual views the world as well as his or her health practices and beliefs. Western medicine explains health and illness in terms of pathophysiology, often not viewing the whole individual but only the presenting symptoms.

According to Spector (1996), the North American health care provider has been socialized to believe that modern Western medicine is the answer to all human needs. However, many cultural groups within the United States view heath and illness quite differently. Many cultures within the U.S. believe that health and illness are the dynamic and changing relationships with the world around them, and include nature and family relationships as well in their belief. The cultural differences and beliefs can present major barriers to health-seeking behaviors and health care interventions. Health care professionals must have some understanding of the beliefs and culture of the groups that

live within the United States to effectively plan, implement, and evaluate health care programs and interventions.

American Indians and Alaska Natives belong to groups of people with distinct social, cultural, political, and biomedical traits and beliefs. Like other minority groups, American Indians also share high poverty rates, low educational attainment, as well as elevated morbidity and mortality rates. According to the Indian Health Service ([IHS], 1999), the American Indian enjoyed excellent health status before the arrival of the Europeans in North America.

Historians do not agree about the number of American Indians present in North America before Columbus arrived in 1492. The estimates range from a conservative figure of 1 to 2 million to 18 million and over (Deloria, 1999; Hodge & Fredericks, 1999; Nies, 1996; Wilson, 1998). What is known, however, is that contact with the Europeans brought catastrophic changes to the American Indian in every facet of their lives and culture. By 1900 the numbers of American Indians had been reduced to less than 200,000.

However, numbers are only part of the story. The Europeans and, later, the U.S. government sought to forever change the beliefs, values, customs, and numbers of American Indians through assimilation, attempted annihilation, and progressive dispossession of their lands (Deloria, 1999; Deloria & Lytle, 1983; Kunitz, 1996; Nies, 1996; Wilson, 1998). U.S. government policies changed the status of the American

Indian and cultural clashes between the U.S. government and American Indians continue to exist to this day.

In the time period following the Indian Wars, native cultural and spiritual practices were outlawed. Indian children were sent to boarding schools where the objective was to turn them into Americans. Today these children and their families are called the 'lost generation' by the American Indians (Wilson, 1998). These experiences left the American Indian one of the most troubled minorities in the United States with their communities plagued by social and health problems.

Kingfisher (1998) wrote that this long history of oppression and displacement created low self-esteem, hopelessness, depression, and grief. The American Indian has had a long history of ambivalence about assimilation and since the 1970s, numerous Indian groups such as the American Indian Movement (AIM) have led a return to traditional values. Although American Indian communities look "American," beneath the surface many of those communities continue to be fundamentally different from the rest of America. American Indian communities have differences in belief systems and values, including the values that impact how an individual within that community views health, illness, and health-seeking behavior.

The health needs of the American Indian today exceed that of all U.S. races in such areas as diabetes, obesity, hypertension, and the prevalence of multiple social pathologies such as alcoholism, violence, and unintended injuries (Hodge & Fredericks,

1999; Noren, Kindig, & Sprenger, 1998). American Indians have a higher birth rate than all U.S. races as well as a high teen pregnancy rate (IHS, 1999; U.S. Department of Health and Human Services [USDHHS], 1996). Infant mortality is high and the rate of prenatal care for the American Indian is lower than for the general population. These health problems stem not only from lifestyle, poverty, nutritional status, and lack of access to health care, but also to a belief system that does not always coincide with the Western world.

Not surprisingly, health research and program development among American Indians are colored by the long turbulent history between the Indian and the non-Indian. A profound mistrust of non-Indians has developed through the years. To work with and plan effective health programs or interventions for the American Indian, researchers and health professionals must understand the history between the cultures. Researchers also must understand the rich cultural diversity that exists among the American Indians today. There are over 500 American Indian Nations remaining today and they are not one homogeneous people; they have distinct languages, beliefs, and ceremonies (Davis & Reid, 1999; Deloria, 1999; Deloria & Lytle, 1983; Nies, 1996; Wilson, 1998). A culturally sensitive approach that acknowledges the American Indian belief system, their culture, history, diversity, and needs is paramount to effect changes in health behavior.

Purpose of the Study

The primary purpose of this study was to elicit information from the American Indians living on the Wind River Reservation regarding their perceptions of pregnancy related health beliefs. A second purpose was to look at the relationship between American Indians and health care provider perceptions about available prenatal care.

Research Questions

The research questions addressed by the study were:

1. What are the present pregnancy related health beliefs and practices among the American Indians on the Wind River Indian Reservation, Wyoming?

2. What are the perceptions among the American Indians on the Wind River Indian Reservation about available prenatal care through the IHS and contract services?

3. What is the relationship between American Indians and health care provider perceptions about available prenatal care on the Wind River Reservation?

Definition of Terms

The following terms were defined for the purpose of this study:

1. American Indians: Those tribal members of the Eastern Shoshone and Northern Arapaho heritage living on or near the Wind River Indian Reservation, Wyoming.

2. Contract health services: Services not available directly from the IHS or tribes that are purchased under contract from community hospitals and practitioners.

3. Health care providers: Individuals who provide health care and education services to the American Indians. They may or may not have American Indian heritage.

4. Indian Health Service (IHS): The primary health service for American Indian and Alaska Native people through the U.S. Department of Health and Human Service.

5. Rapid Assessment Procedure (RAP): The method that provides health professionals with guidelines for conducting rapid assessments of health seeking behavior (Scrimshaw & Hurtado, 1987).

6. Wind River Indian Reservation: The 50- by 70-mile reservation in central Wyoming where the U.S. Government relocated the Eastern Shoshone through the treaty of Fort Bridger in 1863 and 1867. The Northern Arapaho also were relocated to the same reservation in 1878 and both Nations reside on the reservation today.

Limitations

The study was limited by the following:

1. The participants were recruited from among American Indian tribal members on the Wind River Indian Reservation and their health care providers, which constitutes a convenience sample.

2. The accuracy of self-reporting.

3. The non-Indian status of the investigator.

4. The use of a signed consent form in a community where there is mistrust of outsiders.

5. The investigator was not able to generalize the findings of this study to other American Indian communities due to the limitations of convenience sampling and self-reporting.

Delimitations

The study was delimited by the following:

1. The investigation included only tribal members of the Eastern Shoshone and Northern Arapaho Nations and their health care providers.

Background and Significance

The health status of American Indians is considered at a critical stage with incidences of tuberculosis, alcoholism, diabetes, and accidents at a considerably higher rate than for all U.S. races (USDHHS, 1997). The increased prevalence of conditions such as diabetes, alcoholism, smoking, and drug use increase the probability of adverse pregnancy outcomes (Lia-Hoagberg et al., 1990; Olds, London, & Ladewig, 2000). American Indians have a high rate of premature birth, high birth weight infants, fetal alcohol syndrome (FAS), and teen pregnancy (Davis, Helgerson, & Waller, 1992; Hodge & Fredericks, 1999; Lia-Hoagberg et al., 1990; Long & Curry, 1998; Spector, 1996).

The barriers to health-seeking behavior for the American Indian have been identified as their belief system involving health and illness, extreme poverty, access to appropriate culturally-based care, and the potential of mistrust of interventions of others

outside of their culture (Cunningham & Cornelius, 1995; Lia-Hoagberg et al., 1990; Long & Curry, 1998; Sokoloski, 1995; Spector, 1996). Programs and interventions must be designed to reflect the values and beliefs of the community as well as an understanding of the importance of those values on health-seeking behavior.

Qualitative information is essential to permit an accurate understanding of the underlying social and cultural characteristics in health seeking behavior (Scrimshaw, Carballo, Ramos, & Blair, 1991). To work successfully with American Indian communities, an understanding of Native heterogeneity with marked differences in language, beliefs, gender roles, spiritual practices, economic opportunity, and social class in that community is essential. Ethnographic research which involves fieldwork that immerses the investigator in the culture of interest may be utilized to provide a deeper perspective on American Indian and Alaska Native culture that may not be discovered through quantitative research and standardized testing tools (Lange, 1988; LeMaster, 1994).

CHAPTER II

REVIEW OF LITERATURE

The review of literature will provide background information about the study population, the community in which they live, and the research methodology. The general topics are: American Indian demographics, health issues and beliefs among American Indians, pregnancy-related heath issues and beliefs, the Indian Health Service, history of the Wind River Reservation, demographics on the Wind River Reservation, research in American Indian communities, and the Rapid Assessment Procedure.

American Indian Demographics

There are approximately 2.3 million American Indians and Alaska Natives in the United States today, or approximately 1% of the total U.S. population (Hodge & Fredericks, 1999). The U.S. Government recognizes over 500 tribes, each with their own language, philosophy, customs, and government (Hodge & Fredericks, 1999; LeMaster, 1994). There are over 300 reservations located in 35 Reservation States with the largest Indian populations found on reservations in Arizona, New Mexico, Utah, South Dakota, and Montana (Paisano, 1990). American Indians living on reservations and trust lands account for nearly 50% of the American Indian population. Many of these reservations

are very rural and isolated. Nearly 50% of the Indians live in the West, 29% in the South, 17% in the Midwest, and 6% in the Northeast (Paisano, 1990).

The American Indian population is young, poor, uneducated, and considered the most neglected minority in the U.S. today (Cunningham & Cornelius, 1995; Hodge & Fredericks, 1999). Thirty-nine percent of the American Indian population is under 20 years of age with a median age of 26 years as compared to 33 years for all U.S. races (Paisano, 1990). This young population has large families with a birth rate of 28.8 per 1,000 or nearly double the 14.7 per 1,000 for all U.S. races as reported in 1990 (Seideman, Jacobson, Primeaux, Burns, & Weatherby, 1996). The percentage of single female head of house families for the American Indian is higher than for all U.S. races at 27% as compared to 17% (Paisano, 1990).

American Indians have lower incomes than the general population. The median household income in 1990 for American Indians residing in the Reservation States was $19,897 as compared to $30,056 for the total U.S. population (USDHHS, 1996). According to Hodge and Fredericks (1999), 31.6% of American Indians live below the poverty level as compared to 13.1% for all U.S. races. In some Reservation States the number of American Indians living below the poverty level exceeds 40% (USDHHS, 1996).

The American Indian is less likely to be employed than the general population with 16.2% of American Indian males unemployed as compared to 6.4% of all U.S.

males. For the American Indian female, the rate of unemployment also is high at 13.4% as compared to 6.2%. Unemployment on some reservations is greater than 25% (USDHHS, 1996).

Lack of higher education remains a problem for American Indians. There is a high rate of school dropout. According to the 1990 Census, 66% of American Indians over 25 were high school graduates as compared to 75% of the total U.S. population. American Indians are less likely than the entire population to have completed a bachelor's degree or higher with 8.9% attaining a bachelor degree as compared to 20.3% of the total U.S. population (USDHHS, 1996).

American Indians have less access to health care than the general population with an estimated per capita health care expenditure in 1995 of $1153 as compared to $2,912 for the total U.S. population (Noren et al., 1998). While American Indian health has improved throughout the 20th century, there are several areas of concern: (a) rise in chronic disease, (b) persistence of infectious diseases, and (c) the prevalence of social pathologies such as violence, unintentional injuries, and the effects of alcohol and drug abuse.

Health Care Issues

According to Boufford and Lee (1998) where poverty and unemployment are widespread, the health of the population is poor with high rates of infant mortality, premature death and disability, as well as widespread tobacco and alcohol abuse, and high teen pregnancy rates. The health status of the American Indians is not equal to that of the general population (USDHHS, 1997). American Indians once succumbed to infectious diseases such as smallpox and measles, but today they die of chronic diseases with a strong behavioral component such as alcoholism, heart disease, cancer, and diabetes. According to the USDHHS (1997), the leading causes of death among American Indians are heart disease and malignant neoplasm, which is the same for all U.S. populations. However, the American Indian death rates are considerably higher in the following areas: (a) alcoholism, (b) tuberculosis, (c) diabetes, (d) accidents, (e) suicide, (f) pneumonia and influenza, and (g) homicide (USDHHS, 1997).

The prevalence of smoking among American Indians is reported to be twice the rate of that reported for the general population and two of five Indian deaths have been attributed to smoking (Hodge & Fredericks, 1999). Smoking increases the rates of cardiovascular disease and cancer. Smoking rates vary widely by geographic location, in some Western states more than 50% of adult Indians smoke (Davis et al., 1992; Hodge & Fredericks, 1999). Of particular concern is the prevalence of smoking among American Indian women during their pregnancies. According to Mathews (1998), American Indian

women are among the groups of people with the highest rates of smoking during pregnancy. Smoking during pregnancy causes low birthweight infants and is associated with spontaneous abortion, premature delivery, congenital malformations, and fetal and perinatal mortality and morbidity including sudden infant death (Dunn, Pirie, & Lando, 1998; Hodge & Fredericks, 1999; Mathews, 1998).

Alcoholism has been described as the number one health problem with a rate of alcohol and/or alcohol related death rate more than five times greater than for all U.S. races (Hodge & Fredericks, 1999; USDHHS, 1996). Alcohol is often related in the high rates of accidents, homicide, violence, and in some of the complications of pregnancy and fetal alcohol syndrome for the infant.

Diabetes is considered epidemic among American Indians with an increase in both incidence and prevalence, particularly among full blooded American Indians (Ghodes, 1999; Jacobson et al., 1998). The Pima Indians of Arizona have the highest rate of all with a rate of 500 per 1,000. The presence of diabetes in the American Indian is linked to diet, lack of physical exercise, as well as a genetic marker with insulin resistance. This genetic marker has been found in the Pima and the Oklahoma Indians (Ghodes, 1999). The pregnant woman with diabetes is at increased risk for pregnancy-induced hypertension, increased amniotic fluid, and difficult labor due to macrosomia (large for gestational age infant). The infant of a diabetic woman is at increased risk for congenital anomalies, macrosomia, hypoglycemia, and respiratory distress syndrome.

Health Care Beliefs

American Indian cultures are diverse and each tribe and individual differs in the extent to which they adhere to traditional ways. American Indians strive to live in harmony with nature and make no distinction between the physical, psychological, social or spiritual (Huttlinger & Tanner, 1994; Spector, 1996; West, 1993; Williams & Ellison, 1996; Yee & Weaver, 1994). Health and illness take place in a holistic combination of mind, body, and spirit. The belief that disharmony has been caused by the supernatural is not uncommon (Huttlinger & Tanner, 1994; Spector, 1996; West, 1993).

The traditional American Indian concept of health and healing is found in both the physical and spiritual world (Sobralske, 1985: Upvall, 1997). What may seem to be a cure to the Western mind may only be a treatment of a symptom to the American Indian as they see illness or disease caused by an imbalance in the spirit, mind, and body (Boyden & Prestrzelski, 1995; Hodge & Fredericks, 1999; Williams & Ellison, 1996). In American Indian healing there is no separation of mind, body, and spirit; all must be healed together and the use of medicine men, traditional healers, and herbal remedies is a continued practice (Hutlinger & Tanner, 1994). According to West (1993), approximately 90% of American Indians seek traditional healing before entering the Western health care system. To the American Indian, the family is the backbone of the sociocultural system. Health includes the support of the family as well as the balance or a harmony with the surrounding environment.

Traditional American Indian communication patterns involve the use of silence and body language; one who interrupts may be seen as immature and asking questions or asking an individual to repeat what he or she has said is interpreted as not listening and may cause mistrust. Time to the American Indian is casual and present orientated and life is not dictated by the clock (Duff, Bonino, Gallup, & Pontseele, 1994; Spector, 1996; West, 1993). Due to their orientation to time, American Indians may view long-term treatment and planning much differently than the Western health care provider.

Pregnancy-related Health Issues

According to the USDHHS (1997), the leading cause of admissions to the IHS and contract hospitals during 1992 to 1994 was obstetric deliveries and pregnancy and postpartum complications. The birth rate for American Indians in 1992-1994 was 25.6 per 1,000 population or approximately 65% more than the 1993 birth rate of 15.5 for all U.S. races (USDHHS, 1997). The American Indian has higher rates of low- and high-birthweight infants, teen pregnancy, complications of pregnancy, and one of the highest rates of smoking and substance abuse during pregnancy than the general population (Mathews, 1999; Singh & Yu, 1995; Sokoloski, 1995). Fetal alcohol syndrome (FAS) is reported to be 33 times greater for American Indians than in the general population (Burd & Moffatt, 1994).

The leading causes of neonatal (infants 28 days old or less) deaths are prematurity, low birthweight, and congenital anomalies. Although low birthweight is

among the major causes of neonatal death, the American Indian has a higher incidence of high birthweight than all U.S. races (USDHHS, 1997). High birthweight is a complication of diabetes and both are a complication of pregnancy.

Infant mortality (death before 1 year of age) for the American Indian population in 1995 was 10.0 per 1,000 live births and is second only to Black Americans. The USDHHS (1997) states that this figure does not reflect the diversity among Indian communities where some have an infant mortality rate almost twice the national average. The leading causes of infant mortality in the American Indian population include Sudden Infant Death Syndrome (SIDS) and congenital anomalies (USDHHS, 1997).

For the woman who engages in risk drinking (seven or more drinks per week) or in binge drinking (five or more drinks on one occasion), the results in prenatal alcohol exposure have been documented to increase the risk for FAS (Masis & May, 1991). FAS has been called the most common and preventable cause of mental retardation in the Western world (Burd & Moffatt, 1994; Masis & May, 1991).

Smoking during pregnancy is related to low birthweight, intrauterine growth retardation, infant mortality and negative consequences for child health and development (Davis et al., 1992; Mathews, 1999). According to Mathews, the rate of smoking among American Indian women of childbearing age (18 to 44 years) is 43%.

Smoking also is associated with SIDS as well as cardiovascular disease and cancer (Irwin, Mannino, & Daling, 1987; Mathews, 1999). American Indians have the highest risk of dying from SIDS than for all U.S. populations (Irwin et al., 1987).

Research has indicated that American Indian women do not regularly attend prenatal care (Cheadle, Pearson, Wagner, Psaty, & Diehr, 1994; Cunningham & Cornelius, 1995; Lia-Hoagberg et al., 1990; Sokoloski, 1995). Prenatal care is a major factor in preventing low birthweight and other adverse pregnancy outcomes (Long & Curry, 1998; March of Dimes, 1999).

Barriers that have been identified to seeking prenatal care for the American Indian include: (a) access, (b) transportation, (c) poverty, (d) maternal age, (e) fear, (f) negative feelings toward the pregnancy, (g) fear of pressure from the health care system to have an abortion, (h) feeling that prenatal care is not necessary, and (i) family violence.

Pregnancy-related Health Care Beliefs

Lia-Hoagberg et al. (1990) stated that there is not a wealth of research and information on prenatal and pregnancy-related beliefs and there is a need for further investigation to promote greater use of prenatal care and education. For the American Indian, pregnancy is generally regarded as a natural process needing no assistance (Sokoloski, 1995; West, 1992). Being a mother and rearing a healthy family is considered the ultimate achievement for the American Indian woman (Niethammer, 1977). There is a deep and profound respect for life, women, and children (Seideman et al., 1996).

Historically, infant mortality for the American Indian has been high and many women died in childbirth. Mothers were taught to use every means to ensure a healthy child and safe delivery. Each tribe utilized their own herbs and teas believed to relieve the common discomforts of pregnancy as well as promote a healthy delivery. There are traditional ceremonies and taboos associated with American Indian childbearing. The majority of this research is among the Navajo, however, some of the beliefs are shared by other tribes (Dempsey & Gesse, 1995; Higgins, 1983; Niethammer, 1977; Rose, 1993; Wolf, 1982). These beliefs center around the concept that pregnancy is a state of wellness; and that the woman should continue with her life, exercise, and a good diet. Pregnant women are considered special and are to be cared for by the family. Taboos for the pregnant woman relate to the special power the woman has during this time, as well as to protect the mother and child. Some taboos have to do with refraining from eating certain foods or participating in some activities while others relate to not participating in ceremonies that include men or being in the presence of a dying individual (Higgins, 1983; Niethammer, 1977; Wolf, 1980). For some American Indians, childbirth customs include women and/or a midwife attending the birth and often in seclusion from all men. Historically, the infant mortality rate was high for American Indians, and even today there remains the belief that ceremonies surrounding the new child should be delayed until the child is older.

Indian Health Service

The federal government has provided care to American Indians both as a treaty obligation and as a consequence of its role as a trustee (Kunitz, 1996). Health care for American Indians began with Army physicians taking measures to curb smallpox and other contagious diseases among the tribes near military posts in the early 1800s. In 1849 the Bureau of Indian Affairs (BIA) and IHS were transferred from the War Department to the Department of the Interior where the responsibility for Indian health remained until 1954 (Kunitz, 1996; IHS, 1999). In 1954 congress transferred IHS to the U.S. Public Health Service.

The U.S. Public Health Service developed a system of care to provide a full range of services to the American Indian. Today the IHS consists of both IHS- and tribally-operated hospitals, clinics, health centers, and contract services. The Indian Self-Determination and Education Assistance Act of 1975 (amended in 1988, 1990, and 1994) gave Indian tribes the ability to contract directly with the IHS for the management and control of their own health programs (Hodge & Fredericks, 1999; Kunitz, 1996).

The IHS provides services free of charge regardless of the ability to pay. However, for contract services, the IHS is a "residual" payer, meaning that other payment sources for which an Indian patient is eligible (such as Medicaid) must be exhausted before the IHS is responsible (Wellever, Hill, & Casey, 1998). Federal funding for the IHS is not an entitlement program, but rather an annual appropriation by the U.S.

Congress each year for Indian health. Those appropriations have consistently increased since 1955; however, they are substantially less than are needed for optimal health care (Kunitz, 1996). According to Trujillo (1999), most of the programs for the IHS are funded at 60% to 70% of level of need and some (such as mental health programs) at only about 30% to 40% of need. The consequence of this unequal funding is unequal accessibility and quality of care. According to Boufford and Lee (1998), the IHS has never been adequately funded, staffed, or equipped to meet the needs of American Indians and Alaska Natives. Expensive diagnostic and treatment services purchased through contract agreements are often delayed or denied, and regular IHS services may be limited in some areas due to the unequal distribution of funds and, therefore, significant disparities to access remain (Cunningham & Cornelius, 1995; Kunitz, 1996).

Historically, the IHS has been a system dominated by white professionals. Today there still is a lack of American Indian staff and a high turn over of clinicians (Noren, Kindig, & Sprenger, 1998). The IHS also has had problems with poor customer relations, tensions between Indian and non-Indian staff, institutional racism, and culturally insensitive services (Noren et al., 1998).

A powerful change in the IHS is the accelerating assumption of responsibility of health care services by the tribal governments. Boufford and Lee (1998) agree with Trujillo (1999) and Noren et al. (1998) that if this move is supported, unique and supportive programs can develop. Kunitz (1996) cautions, however, that if mismanaged,

this change could result in fragmented and expensive programs requiring large expenditures of tribal resources.

History of the Wind River Indian Reservation

The Treaty of Fort Bridger created the Wind River Indian Reservation in 1863 and encompassed over 44,000,000 acres in Utah, Idaho, Montana, Wyoming, and Colorado. This treaty also established relations between the Eastern Shoshone and the U.S. Government (Markley & Crofts, 1997; Stamm, 1999; Trenholm & Carly, 1964). The treaty also gave safe passage through the reservation for non-Indians and set compensation to the tribe for game lost as a result of that traffic (Flynn, 1991).

The Second Treaty of Fort Bridger in 1868 formally established the Wind River Indian Reservation for the Eastern Shoshone Indians and was signed by Chief Washakie (Markley & Crofts, 1997; Stamm, 1999; Trenholm & Carley, 1964). This treaty fixed smaller boundaries entirely within the state of Wyoming and established a Bureau of Indian Affairs (BIA) agent and schools for the children. This was the last treaty the U.S. made with the Eastern Shoshone. However, later negotiations continued to decrease the size of the reservation. Gold was discovered on the southern portion of the reservation and the U.S. paid Chief Washakie $20,000 worth of cattle and $5,000 in cash over a 5-year period for the land south of the Popo Agie River (Stamm, 1999). Land was ceded again in 1897 and 1904 so that today the reservation consists of approximately 2.3 million acres or over 3,000 square miles (Flynn, 1998; Stamm, 1999). The reservation

lies east of the continental divide at the foothills of the Rocky Mountains, and is 55 miles north to south, 70 miles east to west.

The Wind River Indian Reservation includes high mountains, arid sagebrush hills, flat plateaus, and Conifer forests. Elevations range from 5,000 to 12,000 feet. The temperature ranges from minus 50 degrees in the winter to over 100 degrees in the summer. Rainfall measures less than 12 inches annually in the lower elevations while snowfall can exceed 300 inches at the higher elevations (Stamm, 1999). Major waterways include the Big and Little Wind River, the Popo Agie, and the Big Horn River.

Before relocation to the reservation, the Eastern Shoshone lived in the upper Green River Valley of western Wyoming, southeastern Idaho, and northern Utah. The Shoshone were regarded as mountain Indians, but also had a buffalo-hunting legacy.

Hunting and gathering sustained the Shoshone throughout the 1700s and 1800s and the Eastern Shoshone developed friendly associations with trappers and fur traders (Stamm, 1999; Trenholm & Carley, 1964). The impetus for Chief Washakie to enter into a reservation agreement was thought to represent a need for hunting rights and not a permanent residence (Stamm, 1999). Meanwhile rival tribes including the Lakotas, Cheyenne, and Northern Arapahos had begun to move into the Wind River area. The white intrusions throughout the plains and into the Great Basin contributed to the convergence of people on the Wyoming plains and increased intertribal warfare over dwindling buffalo herds.

The Northern Arapaho arrived on the Wind River Indian Reservation in March of 1878. The Northern Arapaho had no treaty rights and the Eastern Shoshone did not want the Arapahos on the reservation (Fowler, 1982). The Northern Arapaho had been promised their own territory in southern Wyoming and into southern Colorado; however, a permanent reservation of their own was never established (Flynn, 1991; Fowler, 1982). At the end of March 1878, the two tribes, historic adversaries, met at a joint council to discuss the reservation situation (Stamm, 1999). Both tribes had expected the Arapahos would receive land near the Shoshone reservation but not within the existing reservation. The U.S. government had promised both tribes that the Northern Arapaho would be given a reservation of their own. That promise was never fulfilled. In 1927 the Shoshone sued the U.S. government for giving a portion of their land to the Arapaho without permission or compensation. The Eastern Shoshone won a $4.5 million settlement and the Northern Arapaho became legitimate residents of the reservation entitled to half of the profits and area. No legal boundaries were drawn, but today the Northern Arapaho live mainly in the eastern part of the reservation around Ethete, Arapahoe, and St. Stephens. The Eastern Shoshone live primarily at Fort Washakie, Crowheart, and Burris to the west.

Each tribe is governed by a council of six members elected every 2 years. The Business Council derives its power from the general council, which is the absolute authority of each tribe. This council is made up of all enrolled adult tribal members. The governing of the two tribes comes together with meetings of the Joint Business Council.

The duality of administration on the Wind River Indian Reservation poses its own challenges with two distinct political bodies of equal status and voting power that must come together on matters that affect both tribes.

Wind River Indian Reservation Demographics

The estimated population on the Wind River Indian Reservation in 1999 was 7,680 according to the Joint Business Council of the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Indian Reservation ([JBC], 1999). The demographics on the Wind River Reservation are reflective of the national American Indian demographics. The community has a median age of 24.5 which is slightly younger than the median age reported for all American Indians in the 1990 census (JBC, 1999). The median household income for 1997 was reported at $12,300 with 53.2% of the families living below the poverty line (JBC, 1999). Eastern Shoshone tribal members receive monthly per capita payments of $300, while the Northern Arapaho receive $150 per month ("Per Capita Payments Take a Big Jump," 2000). The per capita payments are derived from tribal trust income from oil and gas royalties. Job opportunities for this reservation reflect a geographic area with an economy that lacks manufacturing operations, few service jobs in the private sector, and fewer professional and technical positions. The percentage of unemployment for ages 18 to 54 is 49% (JBC, 1999). The median educational attainment for individuals 25 years and older is 11.7 years; however, 37% of community members 18 and over have had some college experience with 17%

having an associate degree and 15% holding a bachelor's degree (JBC, 1999). The family and household structure varies on the reservation with 22.8% of individuals living in a dwelling with more than one family (JBC, 1999). Approximately 3 out of every 10 families noted that their homes were not adequate for their needs with 33.2% having no phones, 8.8% not having bathroom fixtures and 19.3% saying they had inadequate heating (JBC, 1999). Eighty-seven percent of community members stated they had access to transportation, yet over 12% noted that transportation for medical care or food shopping was a major problem for them (JBC, 1999).

The major health issues on the Wind River Reservation as perceived by the community and reported by the Joint Business Council of the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Indian Reservation (1999) included diabetes and related conditions with asthma, heart disease, cancer and alcohol in that order of priority. The reported use of tobacco (cigarettes) was 52.3%, 38% reported alcohol use, and over 66% believed there was a substance abuse problem within their family (JBC, 1999). During 1998, one out of five community members reported being a victim of crime and 40% reported that they thought there was more crime on the Wind River Reservation than the surrounding communities (JBC, 1999). The perceptions of health concerns and related problems are, in order of priority to the community: (a) alcohol abuse, (b) drug abuse, (c) juvenile delinquency, (d) unplanned pregnancy, (e) school drop out, and (f) gang involvement (JBC, 1999).

The IHS on the Wind River Indian Reservation has a full service clinic at Fort Washakie and a satellite clinic in Arapahoe. In 1998, 89% of American Indians on the reservation reported utilizing health care at the IHS and 8.1% reported having difficulty receiving care (JBC, 1999).

Research in American Indian Communities

According to LeMaster (1994) relatively few health education interventions directed at preventative health behaviors among American Indians have been reported in the literature. Seideman et al. (1996) as well as LeMaster (1994) have noted that several barriers have contributed to that fact including: (a) rural geographic locations, (b) language and low literacy levels, and (c) the potential for mistrust among American Indians of research and interventions by non-Indians. This population is regarded as being particularly difficult for non-Indians to access (Jacobson et al., 1998). Davis and Reid (1999) reported that a long history of trust violation by researchers continues to color the relations between American Indians and non-Indian researchers. The turbulent history between the white society and American Indians has not been forgotten and conflict continues to this day (Seideman et al., 1997; West, 1993).

American Indians are a diverse group with different languages, cultural traditions, and beliefs. The researcher must understand the uniqueness of the tribe with which he or she wants to work. According to Davis and Reid (1999), researchers often have had little understanding of the historical relationships between native and non-native people. If

problems arose with the research, often the researcher was quick to assume the American Indians were being uncooperative instead of considering the problem may have been a cultural clash. In the past, research has been aimed at the American Indian rather than implemented with community input. Conventional research approaches may leave American Indian community members feeling invaded and, therefore, many American Indian communities have refused to participate in research conducted by parties with no track record of assisting the community (Davis & Reid, 1999; Jacobson et al., 1998; Seideman et al., 1996). To conduct research among American Indians, Davis and Reid (1999) suggested the researcher must learn and understand the culture and traditions of the community, ensure the study is culturally appropriate, respect the cultural diversity, and provide feedback during the research as well as communicate any findings to the community.

LeMaster (1994) stated that qualitative and participatory research methods may be particularly suited to working with American Indians. Observational techniques and structured and unstructured interviews with the community are useful tools for gaining information about health beliefs and practices as well as the perceived needs of the community. Davis and Reid (1999) stated that there has been an important shift of research issues in American Indian communities. Today the research in these communities focuses on the effects of education, taking action, and effecting change.

Rapid Assessment Procedure

There has been an increasing emphasis on the importance of social science research in health because health programs have often failed to reduce disease (Manderson & Aaby, 1992). Manderson and Aaby stated that these failures have been associated with the failure to recognize the importance of social, cultural and behavioral factors associated with health behavior.

The Rapid Assessment Procedure (RAP) was developed in collaboration with the United States Agency for International Development (USAID) and the United Nations for rapid assessment of health and health seeking behaviors, and to improve understanding of successes and problems related to health programs. The original RAP was developed in 1981 under the auspices of USAID as an aid for research on infant feeding problems in Honduras (Manderson & Aaby, 1992; Scrimshaw & Hurtado, 1987). The procedure was expanded and refined in 1983 with the help of the United Nations to develop a methodology for the study of the effectiveness of health care programs and the relationship between users and providers (Pearson, 1989).

RAP has its foundations in both ethnographic and descriptive qualitative research. It is intended to explore health related beliefs and perceptions regarding the prevention and treatment of disease as well as the utilization of traditional and biomedical resources. Ethnography describes a culture and how that cultural system influences behavior. Ethnography is not synonymous with qualitative research; however, much of the

information is gathered using qualitative methods (Gittelsohn et al., 1996; Spradley, 1979). The RAP guidelines apply ethnographic methods of observation, participant observation, informal and formal interviews, and focus groups to collect information (Scrimshaw et al., 1991; Scrimshaw & Hurtado, 1987).

The RAP procedure has been utilized in over sixteen countries and has been modified to focus on specific diseases such as epilepsy and AIDS (Manderson & Aaby, 1992; Scrimshaw et al., 1991; Scrimshaw & Hurtado, 1987). The basic RAP method contains guidelines for conducting rapid assessments of health-seeking behavior. The RAP does not provide detailed descriptions of basic technique, but suggests topics for data collection (Scrimshaw & Hurtado, 1987). The basic RAP method was designed to be used by health workers, health researchers, and various social scientists with an ability to organize, develop rapport with people, and transmit their views. According to Pearson (1989) and Scrimshaw and Hurtado (1987), the results gained from RAP are not meant to be statistically valid but rather a documentation, analysis, and communication of basic concepts related to health seeking behavior.

Wolcott (1985) stated that this type of research does not give the comfort level of acceptable levels of significance or great numbers of participants; however, this type of research will come closer than any other strategy to explain a phenomenon. Qualitative information is essential to permit an accurate understanding of the underlying social and cultural characteristics in health seeking behavior (Scrimshaw et al., 1991). The

ethnographic interview can provide a deeper perspective on American Indian culture that a standardized testing tool may not detect (Lange, 1988). Even though the issues of reliability and validity utilizing the RAP are open to criticism, the purpose of RAP is to gain understanding of a community and, therefore, the type of information is the important consideration. According to Leininger (1985), measurement is not the goal of qualitative research but the gaining of knowledge and understanding.

CHAPTER III

DESIGN AND METHODOLOGY

The purpose of this study was to elicit information about pregnancy-related health beliefs among American Indians on the Wind River Indian Reservation. A second purpose was to look at the relationship between American Indians on the Wind River Indian Reservation and their health care providers' perceptions about available prenatal care. This chapter describes the sample population and sampling procedure, how subjects were protected, procedures for the study, instrumentation, and treatment of the data.

Population and Sample Selection

The study population consisted of male and female American Indians living on or near the Wind River Indian Reservation, Wyoming, and their health care providers. All participants in this study were aged 18 or older. The sample consisted of 24 individuals; 18 were American Indian, and 6 were health care providers on the reservation. The selection process consisted of convenience sampling of those American Indians and health care providers willing to participate in a one-on-one interview and sign a consent form. Eight tribal members who were approached declined to participate after being informed of and looking at the consent form.

Protection of Human Subjects

Collection of data for this study was not begun until the investigator obtained permission from the Human Subjects Review Committee at Texas Woman's University. Each participant was given a verbal explanation of the study and the consent form. Explanations were given in regard to their right not to answer questions and to withdraw from the study at any time. Each participant was given a signed copy of the consent form and the original was placed in a sealed envelope. The identity of each participant was held in confidence and is not referred to in any manner in the written report of this study.

Procedures

The steps of this study included selection of the research design, gaining permission from the Wind River Indian Reservation, a pilot study, face-to-face interviews, and participant observations on the reservation.

Step One: Design selection

Methods from RAP were selected due to its design-based intent to investigate cultural themes and to gain an understanding of the values and beliefs of the culture. The RAP procedure includes interviews, focus groups, and participant observations. Face-to-face interviews were utilized to collect data pertaining to pregnancy and prenatal care health beliefs from both American Indians and health care providers on the reservation. Participant observations were utilized to investigate health care facilities and the

community capacity to support a healthy lifestyle and pregnancy. Focus groups were not utilized in this community due to the sensitive nature of the questions.

Step Two: Gaining permission from the Wind River Indian Reservation

The investigator wrote to the Joint Tribal Council on the Wind River Indian Reservation requesting permission to conduct interviews with community members regarding their prenatal and pregnancy related health beliefs in November of 1999. In January of 2000, the investigator wrote to the individual Tribal Councils of the Eastern Shoshone and Northern Arapaho Indians. Phone and written permission were received from both the Eastern Shoshone and Northern Arapaho Tribal Councils to conduct face to face interviews and participant observations on the reservation during the month of June 2000 (see Appendix A).

Step Three: Pilot Study

A pilot study was conducted on the Wind River Indian Reservation to determine the overall effectiveness of the interview questions and consent form. The pilot study was designed to have two participants; however, one American Indian approached for the pilot study did not want to place a signature on the consent form and was not included.

Following the pilot study with one American Indian health care provider, explanations were modified for better understanding of the study. The explanation of the signed consent form was modified to emphasize the intent to protect the participant's

identity. An explanation was added about persons who would have access to the signed consent forms once the investigator left the reservation. The actual interview questions were deemed appropriate as they had been written.

Step Four: Interview and Participant Observations on the Wind River Indian Reservation

The investigator approached tribal members at Head Start and Early Head Start at Fort Washakie, Arapahoe and Ethete, the Tribal Council at Fort Washakie, the cultural centers at Fort Washakie and Ethete, the Wind River Bureau of Indian Affairs (BIA), and the senior citizens center at Fort Washakie. The health care providers were approached at the IHS clinic at Fort Washakie and Arapahoe. Those individuals who consented to participate had the option of designating the time and place for the interview. At the beginning of each interview, the investigator introduced herself, explained the purpose of the study, the time frame for the interview, and the consent form.

Following a discussion of any questions or concerns, each participant was asked to sign the Informed Consent Form (see Appendix B) signifying consent to participate in the study. After the consent form was signed and placed in a sealed envelope, the investigator conducted individual face-to-face interviews consisting of open ended questions. The Tribal Member Questionnaire (see Appendix C) was utilized with American Indians and the Health Care Provider Questionnaire (see Appendix D) was utilized with the health care providers. All participants were asked by the investigator for permission to take notes during the interview and all participants agreed. Participants

were encouraged to ask for clarification if questions were unclear and the investigator used probing questions to help clarify answers.

To gain additional information pertaining to the health care services provided to the Wind River Indian Reservation, the investigator conducted participant observations. These observations were conducted at the outpatient clinic at Fort Washakie and Arapahoe, the two contract service inpatient facilities in Lander and Riverton, Wyoming; and a public health department in Fremont County, Wyoming. The Community Data Collection Tools were utilized for the participant observations (see Appendix E). The Community Data Collection Tools were also utilized to collect demographic, socioeconomic, and epidemiological information from existing records, the IHS, and personal communications.

Instrumentation

The RAP method of investigation includes guidelines for interviews, focus groups and observations and utilizes basic ethnographic techniques (Scrimshaw & Hurtado, 1987; Spradley, 1979). These guidelines include techniques for data collection from communities, households, and primary health care providers. According to Scrimshaw and Hurtado (1987), it is important for each researcher to develop specific modifications. The RAP guidelines are intended to help focus the research, organize the data collection process, and serve as a foundation for formulation of project specific questionnaires and checklists.

Ethnographic interviews are intended to be active rather than passive which gives the investigator the ability to clarify and ask further probing questions to elicit further information (Spradley, 1979). The semi-structured interview technique for this study included 17 questions for the American Indian participants (see Appendix C) and 14 questions for the health care provider participants (see Appendix D). These questions were developed from the RAP guidelines to meet the specific intent of this study. Participants were encouraged to ask for clarification and to expound on any question. As a participant observer, the investigator led the participants through a discussion of pregnancy and prenatal health care beliefs on the Wind River Indian Reservation.

Utilizing the RAP guidelines, the investigator developed the Data Collection Tools (see Appendix E), which were utilized for participant observations of the health care facilities as well as to investigate the community as a whole, and any assets the community had to support health care and a healthy lifestyle.

Treatment of Data

The purpose of qualitative research and the ethnographic analysis is not to find a specific answer but to know and understand and seek out meaning (Parse, Coyne, & Smith, 1985). Ethnography is a systematic process of observing, detailing, describing, documenting, and analyzing the life ways of a culture (Leininger, 1985). The information collected in this manner can be utilized as the basis of fresh insights, interpretations of behavior, and the guide to changes.

All the collected information from interviews, participant observations, and existing records were treated as data. The combined data provided the basis for final analysis. Data from the interviews were coded in a systematic procedure to provide consistency of analysis. The first step was to establish preliminary coding categories.

Reviewing the questionnaires and field notes facilitated the process of identifying emerging themes. A record was maintained of the coded themes that allowed comparison within and among the interviews. After all the interviews were analyzed, common themes were grouped into categories providing the basis for the final analysis.

Data from the participant observations and community assessment were reviewed and compared to the information provided by the participants. This information along with the interviews gave the investigator a better understanding of health care services on the Wind River Indian Reservation.

CHAPTER IV

FINDINGS

Qualitative methods were used to analyze the data obtained through interviews and participant observations. This chapter will discuss the themes that emerged from the participant responses regarding prenatal care and pregnancy-related health beliefs. The data analysis will be presented in the following sequence: descriptive characteristics of the participants, interview data, and participant observations.

Descriptive Characteristics of the Participants

Six health care providers and 18 American Indians participated in the interview process. Of the 18 American Indians participants, 15 were women and 3 were men. The age range of the American Indian participants was 18 to 66 years of age. Seven of the American Indian participants were fluent in either Arapaho or Shoshone, 8 could speak and understand their language on a limited basis, and 3 stated they did not speak their language. Fifteen of the American Indian participants lived on the reservation, and 3 lived in either Lander or Riverton, Wyoming. The investigator was asked not to make comparisons between the Arapaho and Shoshone participants, therefore all data collected from the American Indian participants were referred to collectively.

Among the health care provider participants, five were women and one was male. Health care provider participants were not asked their ages, but rather how many years they had been in the health field and how long they had worked at their current facility to help identify their familiarity with the community. The number of years working at the Wind River Indian Reservation Indian Health Service and/or a county health department ranged from 1 year to 11 years. The number of years worked in the health field ranged from 8 years to over 30 years. Two of the health care provider participants had American Indian heritage. One of the health care provider participants spoke both the Arapaho and Shoshone language; two others spoke some of the languages but felt they were not fluent in the language. Three of the health care provider participants lived on the reservation.

Analysis of Interview Data

The interview notes were evaluated for comparative and contradictory themes concerning pregnancy-related health beliefs and issues on the Wind River Indian Reservation. The American Indian participants were asked 10 questions relating to prenatal care and pregnancy-related beliefs, 2 questions regarding birth, 3 questions relating to health services on the reservation, and 1 question concerning their perceptions of the most troubling pregnancy health-related issues on the reservation. The health care provider participants were asked 1 question regarding pregnancy and prenatal care, 3 questions concerning pregnancy-related health concerns on the reservation, 6 questions related to health services on the reservation, 1 question on cultural accommodations, 1

question on community perception of the health care services, and 1 question concerning general health needs. Both health care providers and American Indians were asked for any additional comments. The longest interview was 50 minutes and the shortest interview was 15 minutes.

Based on the interview questions and the responses, 11 preliminary categories were established: (a) participant's prenatal health care beliefs, (b) healthy pregnancy related beliefs, (c) unhealthy pregnancy-related beliefs, (d) birth-related beliefs, (e) cultural accommodations by the health care providers, (f) pregnancy-related health concerns on the Wind River Indian Reservation, (g) pregnancy-related services on the Wind River Indian Reservation, (h) community perception of health care services, (i) principle health needs on the Wind River Reservation, (j) methods to improve health care on the Wind River Reservation, and (k) any additional comments.

Participant's Prenatal Care Health Beliefs

The health care providers were asked one question about the meaning of prenatal care. All six participants responded that seeking early and regular prenatal care was important. One health care provider also noted the need for prenatal education.

The American Indian participants were asked two questions on their prenatal care beliefs and perceptions. Twelve of the American Indians responded that going to the doctor early in the pregnancy was very important; 3 stated that prenatal care also related

to education about pregnancy, learning about resources on the reservation, and one other included the signs of preterm labor as an important part of prenatal care.

The American Indian participants also were asked from whom would they prefer prenatal care. Five responded that they would feel more comfortable with a female health care provider, 1 believed that the women on the reservation had no choice in the matter, and 12 believed that the sex of the health care provider was not important but that the prenatal care was the important thing. Two stated they wished the reservation had a resident obstetrical physician or midwife and not the current system of rotating physician groups from Lander and Riverton, Wyoming.

Based on the responses, all participants believed that obtaining prenatal care was important. The need for more prenatal education on the reservation was another common response. The concern not shared by both groups was who the provider should be within the community. The American Indian participants believed that obtaining prenatal care was an important factor for prenatal health. However, nearly half of the American Indian participants believed a female health care provider would make the pregnant woman feel more comfortable going to the clinic. The American Indian participants also believed continuity of care would be better if they had their own obstetrician or midwife on the reservation.

Healthy Pregnancy-related Beliefs

The American Indian participants were asked five questions about healthy or helpful pregnancy-related beliefs including questions exploring nutrition, activities, and family teachings. All of the participants stated that a pregnant woman should eat right. No special diet or foods were mentioned other than a balance between meat, vegetables, and fruits. One participant responded, "My grandmother told me whatever you put into your body, the baby gets." Another stated that her grandmother had cautioned her, "Not to overeat;" another stated, "She shouldn't eat too much fry bread;" and another noted, "If she eats too much her baby won't come out."

Twelve of the participants stated that exercise also was important for a healthy pregnancy. Walking and swimming were the most common forms of exercise or activity suggested. One participant stated that her grandmother said, "Don't let yourself go just because you are pregnant, don't lay around."

Family support was believed to be an important part of a healthy pregnancy among five of the American Indians, while three more believed that freedom from a violent relationship was a major part of that family support. One participant stated, "My grandmother said we need to learn to care for each other, to assist each other in all things." Four participants stated that a pregnant woman needed a "healthy spirit" to have a healthy baby. Two participants believed that participation in the sweat lodge ceremony would be helpful if the woman had spiritual or physical problems. "The sweat lodge

ceremony does not separate the physical and spiritual nature of the individual and both are necessary to have a healthy pregnancy" (Traditional Healer, personal communication, June 13, 2000).

Healthy pregnancy-related beliefs included a good diet (but not eating too much), getting exercise, having the extended family support, and a healthy balance between body, mind, and spirit. Utilizing traditional medicine to obtain this balance was considered an appropriate intervention.

Unhealthy Pregnancy-related Beliefs

American Indians were asked three questions that explored beliefs of what may be harmful to a pregnancy. All participants indicated that a pregnant woman should not drink alcohol, smoke, or take drugs. One participant stated, "They should show videos at school to really show what an FAS baby is like," and another stated, "a mother shouldn't party."

Lack of family support was thought to be harmful to a pregnancy. Three participants felt that an abusive relationship was harmful. Four participants expressed that not going to the clinic or just not caring about the pregnancy would also be harmful. One participant stated that "long ago we didn't go to the doctor, we had to learn on our own, depend on our family, today it is different."

Suggested limitations to activities for a pregnant woman included things that were too strenuous such as heavy lifting, playing basketball, or riding horses. One participant

said, "The older people say not to ride a horse if you are pregnant." Other activities thought to be harmful to a pregnancy included certain ceremonies such as the Sundance. One participant said, "My grandmother said to stay away from the Sundance and not to touch eagle feathers."

Honoring the body and the spirit growing within the mother guided the beliefs of those things that could be harmful to the pregnant woman. The themes emerging concerning harmful pregnancy practices included substance abuse, lack of family support, abusive relationships, and not seeking appropriate prenatal care. There were also certain activities and ceremonies in which the community believed a pregnant woman should not participate including horseback riding and the Sundance.

Birth-related Beliefs

The American Indian participants were asked four questions regarding any preparations that should be made for the newborn and birth-related events including questions exploring preparations that should be made before the baby is born, who should be with the mother during her labor, and any special considerations at the birth. Emerging themes reflected a belief in waiting for the baby to arrive before acquiring too many supplies, birth in a hospital with supportive family around the woman, and special considerations for the umbilical cord.

One participant stated, "Native Americans don't believe in gathering too much before, you should wait until the baby is born." Another stated, "Don't buy too much, you

never know, it is better to wait." Two participants mentioned handmade cradleboards as a good thing and that "They (cradleboards) were coming back."

Nine participants felt that a baby should be born in a hospital and two specifically stated they would prefer the hospital in Lander, Wyoming, because "they are more caring to the Indians." Five participants stated that if a mom was healthy, a home birth might be considered. Three said, "Today a woman has to deliver at the hospital in Lander or Riverton," but also stated they "wished the reservation had its own birth center and midwife." All participants felt that a woman should have whomever she wants and felt comfortable having with her for the labor and birth. Nearly half of the participants believed that the father should be there as long as he was "supportive." After the father, mothers, sisters, and close friends were considered important to be with the mother during the labor and birth. One participant said, "My mother-in-law was the only one with me but I was embarrassed to have her there." Another participant stated, "There shouldn't be too many people or the mother might not be able to labor right." One participant noted that American Indian women do not make a lot of noise in labor or cry out, that they are supposed to "be strong."

Seven participants believed the umbilical cord should be saved after it dried and fell off. The cord then was to be kept and sewn into a small pouch that could be in the shape of a turtle or lizard. This pouch could be beaded and given back to the child for a "long and happy life," "good luck," and "common sense."

Cultural Accommodations by Health Care Providers

The health care provider participants were asked one question exploring any cultural accommodations made at the IHS clinic or contract services. Three of the health care provider participants stated, "No special accommodations are made." However, one of those participants also stated, "We are tuned into native ways." Another stated, "We always ask that patients tell us if they are using herbal teas or the sweats so we can take that into consideration with medical treatments." One health care provider noted, "The whole family is important to be included."

Although the health care provider participants acknowledged no specific cultural accommodations on the reservation, they did state that they understood the importance of family support as well as the use of Native Medicine. As one health care provider stated, "The whole family will come."

The community relations specialist at one of the contract hospitals (personal communication, June 26, 2000), stated that her hospital is prepared and aware that whole families come with the woman and are prepared to make accommodations for large numbers of family. She also stated, "We have the Native American healing room here with the ability to hold cedaring ceremonies." Further discussion of the two contract hospitals appears under participant observations.

Pregnancy-related Health Concerns on the Reservation

The health care provider participants were asked two questions concerning pregnancy-related health problems and needs on the Wind River Indian Reservation. All the health care provider participants stated that transportation and, therefore, access to prenatal care was a significant problem on the reservation. Health care providers also saw poverty, lack of communication (no phones), nutrition, dysfunctional families, and teen pregnancy as problems. Pregnancy-related hypertension was noted by two participants as being an increasing concern in the pregnant women on the reservation. They thought that the young age of the pregnant women and underlying obesity, as well as hypertension in the population, was the major reason for this increase in pregnancy-related hypertension. The major themes that emerged from the health care provider participants regarding pregnancy-related health concerns were access, poverty, nutrition, alcohol ("as the major drug of choice on the reservation"), and teen pregnancy, in that order of priority.

The American Indian participants were asked one question regarding their perceptions of the most troubling pregnancy-related problems on the reservation. Eight of the American Indian participants believed substance abuse including drugs, alcohol, and smoking among pregnant women was the major concern. Seven included teen pregnancy as the major concern, and five stated that transportation to the clinic was the major problem. Non-supportive families were believed to be a problem by four participants, and

four more believed that lack of prenatal care and prenatal education were problems. Only one American Indian participant stated that poverty was a major problem.

The American Indian participants believed the most troubling pregnancy-related health concerns included substance abuse, teen pregnancy, no transportation, and a lack of family support. Although both the health care provider participants and the American Indian participants had similar beliefs about pregnancy-related health concerns, there was a disparity in the priority of the problems. The American Indian participants saw substance abuse and teen pregnancy as the major concerns as well as dysfunctional families. The health care provider participants believed that access and poverty to be the major concerns. Dysfunctional families and teen pregnancy were mentioned but not as major problems by the health care provider participants. Both agreed that transportation and access were concerns but the American Indian participants did not view this as the major problem.

Pregnancy-related Services on the Wind River Reservation

The health care provider participants were asked three questions exploring the prenatal health care services and education available on the reservation. All health care provider participants noted the IHS as a primary service and the channel to access services including: (a) Special Supplemental Food Program for Women, Infants, and Children (WIC); (b) home visiting public health nurses; (c) the Community Health Representatives (CHRs); (d) Title 19 (the Wyoming State Medicaid program); and (e)

ancillary services such as dental service, the dietitian, and mental health services. One health care provider stated,"We have one-stop shopping, and our staff know how to direct women through the services." Three health care provider participants stated that the services were not fully utilized by the women. The strength of the services on the reservation were felt to be "the staff," "team," and "the availability of the services," as well as "the CHRs who can help transport moms to appointments."

The American Indian participants were asked one question relating to what they knew about prenatal care services and education on the reservation. Seven participants stated that the IHS has other services and the girls receive their information there. Five believed that the pregnant girls learned about pregnancy from the community through their friends and family, the school, and the Eastern Shoshone Boy's and Girl's Club. Three stated that they weren't aware of other services, and three stated they thought the girls learned about pregnancy and prenatal care services through the Early Head Start program on the reservation. Only seven of the American Indian participants or 39% were aware of the prenatal related services and education available to a pregnant woman on the reservation as compared to the belief by the health care providers that they had "one-stop shopping."

Community Perceptions of Health Care Services

Both the health care provider and the American Indian participants were asked one question regarding their perceptions of the health care services on the Wind River

Indian Reservation. The major theme emerging from the health care providers was that they believed that the community believed that there was "no continuity of care." The health care provider participants also stated, "there is a long (historical) distrust of the government." Other responses included, "I think they dislike waiting to see a doctor." One stated, "I think they think the services are pretty good." However, one health care provider noted, "The people don't all care about getting prenatal care."

The health care provider participants also were asked about the strengths of the IHS services. Over half of the health care provider participants believed that the availability of services was a strength. One noted that the "people" were the strength, saying, "they are knowledgeable and caring." Two of the health care provider participants thought that the referral system to other resources was a positive aspect stating, "the staff know how to work the system to the benefit of the patient." Another provider commended the CHRs as a great support helping to provide transportation and acting as a bridge between the IHS and the community. One health care provider participant believed the IHS had great educational materials available to the community.

Six of the American Indian participants responded that they believed the services to be "pretty good," and one stated, "I like the public health nurse visits; it's cool that she comes to my house." Two responses were less positive but hopeful, "Doing what they can," and "Used to be poor, but getting better." Another believed that the doctors seemed to be staying on the reservation longer. The remaining nine responses were less positive

and included statements such as the care is "rushed," "long waits," "only giving surface care--just doing what they have to," "they don't tell you what they are doing," "the care is poor," "not caring," and "they ask insensitive questions." One participant stated, "They ask the young mothers if they want an abortion on the first visit; they aren't thinking what the baby means to the mother."

There was a discrepancy in the perceptions between the American Indian participants and the health care provider participants on the quality of care given on the reservation. All of the health care provider participants believed they were giving good care and that always trying to change is good. However, only 45% of the American Indian participants believed the services were good and 55% had less positive perceptions with a lack of sensitivity, long waits, and rushed and impersonal care as the major concerns.

Principle Health Needs on the Wind River Indian Reservation

The health care provider participants were asked two questions that American Indians were not. These two questions explored the health care providers' perceptions of the major health concerns on the Wind River Indian Reservation. Interestingly, half of the health care provider participants believed that the health status on the Wind River Indian Reservation was comparable to any small rural population of the same socioeconomic level. These participants also noted that the American Indians on the reservation had

greater access to services than if they were living in a large city, if they would only take advantage of the opportunity.

Half of the health care provider participants believed the health status was lower than the general population. Concerns centered on lifestyle-related diseases including smoking, diet, and inactivity. Diabetes was believed to be a major health problem by 50% of the health care providers. The health care provider participants believed that life style, nutrition, and obesity contributed to the diabetes problem and were becoming major health concerns as well. Alcohol was considered the drug of choice on the reservation by 50% of the health care providers. Smoking, transportation issues, and poverty were each mentioned as contributing to the health concerns on the reservation. One health care provider believed that the community was becoming more aware of health concerns and another noted that there was not a teen pregnancy problem on the reservation.

Although the American Indian participants were not asked similar questions, two responded in their additional comments that they believed diabetes to be a big problem on the reservation. Cancer and teen pregnancy also were mentioned.

Identification of Methods to Improve Health Care Services

Both the health care provider participants and the American Indian participants were asked for their thoughts on ways to improve health care on the reservation. Two of the health care provider participants believed a transportation system going to the clinic would help. Another stated, "We need to let the people know we are trying, we are not

indifferent, people aren't aware of how hard we try." Another stated, "Our goal is to provide the best care to individuals, families, and the community." Two providers stated that they are working on the long waiting time by trying an appointment system. However, one of them also stated, "American Indians are not big planners, but if they don't have access to transportation, they have to [plan]." One of the health care provider participants noted, "Budget constraints mean we must prioritize and do more prevention." Two of the health care provider participants believed that the IHS should be closed and the health care should be mainstreamed into the private sector. Another noted, "We need more leaders, and role models from inside the culture."

The American Indian participants believed more IHS staff, correcting the long waiting time, transportation, and more culturally sensitive care would be beneficial to the health care services. Three participants felt that more prenatal education and or support for the young women would make the care better. Continuity of care was a concern for four of the American Indian participants. One stated, "We need our own doctor or midwife on the reservation, someone to feel at ease with out here."

Two American Indian participants stated that the health care providers needed to be more sensitive to the "feeling of the moms." One stated, "We all took turns and went with my niece because she was so afraid." Another stated, "We need more personalized, sensitive care."

Both the American Indian participants and the health care provider participants saw a need for a transportation system on the reservation to help transport people to clinic visits beyond the system that is currently available. The health care provider participants also noted a need for better marketing. Nearly 60% of the American Indian participants lacked an awareness of the full range of services provided by the IHS. Health care providers acknowledged an awareness of the waiting times to see a doctor and have implemented an appointment system. The American Indian participants believed that continuity of care and cultural sensitivity remained a concern while health care providers believed that they were doing the best they could.

Additional Comments

Both the American Indian participants and the health care provider participants were given the opportunity to make any additional comments. Three of the health care provider participants had no further comments. One health care provider participant stated, "There are a lot of strengths in this culture, how they value life. All individuals are valued for just being born into the family as opposed to the white world where you are valued by what you do." Another health care provider participant stated, "There are road blocks to health care on the social side, such as fear and embarrassment, this is a small community and everyone knows when a girl comes to the prenatal clinic."

Four American Indian participants had no further comments. Comments from the 14 remaining American Indian participants included concerns about teen pregnancy,

individual responsibility, substance abuse on the reservation, the continuity of care, and long waits for service at the clinic.

One American Indian participant stated, "We have to get to the kids younger, takes away your freedom to have to raise a baby." Another stated, "A person has to take care of herself, makes it hard on the girl and the baby. Then the grandparents have to raise the baby." Another stated, "We need to educate the kids about pregnancy and having babies as teenagers; it's a responsibility." Other comments included one about a woman's personal responsibility in learning more about pregnancy, and the male accepting more of the responsibility in pregnancy and parenting. Substance abuse and the risk to a baby were concerns for other participants. "We have to let them (teens) know the dangers of drugs and smoking and babies being born sick and having to go to Denver."

The concern for continuity of care was reflected in statements such as, "We need a doctor who knows us and can follow through with the girls. No one doctor knows you very well; you have one doctor at the clinic, one for the delivery and another for after and things can go wrong."

Long waits for appointments were a concern for two American Indian participants. One stated, "We have long waits even with an appointment." One participant believed the long waits were related to the lack of funding for the IHS.

The emerging themes of the additional comments for the American Indian participants continued to reflect concerns of the teen pregnancy problem, substance

abuse, and personal responsibility, and again noted their perception of the need to improve IHS services regarding continuity of care and the long waits for service. The health care provider participants who responded to this question chose to see the inherent strengths and values within the community. However, one believed the roadblocks to prenatal care services were social including fear, embarrassment, and loss of confidentiality by coming to the clinic on Tuesday morning.

Participant Observations

To gain additional information about the health care services for pregnant women on the Wind River Indian Reservation, the investigator visited the IHS clinics at Fort Washaki, the satellite clinic at Arapahoe, a county public health department in Fremont County, the Early Head Start Program, and the two contract hospitals in Lander and Riverton, Wyoming. The Fort Washakie clinic serves anyone on the reservation and the Arapahoe clinic serves those who live closer to Arapahoe than Fort Washakie.

The Fort Washakie clinic was opened in 1955. Today the clinic is a full-service outpatient clinic. During 1999, the clinic handled 68,280 clinic visits including pharmacy visits and a total of 73,000 contacts, which includes outside visits to schools (public health nurse, personal communication, June 25, 2000). The clinic has four full- time physicians, including a full time pediatrician, public health nurses, a nurse practitioner, dietitian, dental hygienist, pharmacist, behavioral medicine staff, optometry services, and social services. Many of the patient visits on any given day are for pharmacy refills and

other social services. The clinic building itself has been remodeled and today is clean and bright with American Indian art and photographs on the walls. The Fort Washakie clinic had culturally appropriate health-related videos showing in the waiting area during the investigator's visit. The CHRs were the staff responsible for showing the videos. The exam rooms at the Fort Washakie clinic had informational posters on the walls but none appeared culturally appropriate to the population served. The only pregnancy-related poster was on the benefits of breastfeeding (no pictures). The interactions observed between the staff and patients were very warm and professional. The staff also appeared to have a "team spirit." The investigator did not observe anyone waiting in the lobby area during the observation and the appointment system seemed to be on schedule that morning.

The Fort Washakie clinic has prenatal clinic hours on Tuesdays from 8 A.M. until 12 noon, and the newly initiated appointment system. Physician groups from Lander provide prenatal care on alternating weeks at the Fort Washakie clinic. The Arapahoe clinic does not provide prenatal care. If a woman comes into that clinic and is found to be pregnant, an initial screening history is completed, she is given educational materials, and then is referred to Riverton for prenatal care. However, if the woman prefers, she may also attend prenatal care at Fort Washakie. The prenatal literature given to the clients at both Fort Washakie and Arapahoe clinic included literature from a variety of sources.

None of the literature was specific to the culture; however, most of the pamphlets were aimed at low literacy levels.

During 1999, there were 185 deliveries with 21 or 11% of those deliveries to teens aged 14 to 17 years. According to the public health nurse at the Ft. Washakie IHS clinic (personal communication, June 25, 2000), the teen pregnancy rate has been approximately the same for the past several years. Although the teen pregnancy rate is low, 10 of the teen pregnancies, or nearly 50% of the deliveries were to teens less than 17 years of age. The public health nurse (personal communication, June 25, 2000) also noted that there were no infant deaths in the year of 1999.

Travel time to the Fort Washakie clinic depends upon where an individual lives. The distance may be just a few steps or over 30 miles. Major roads between Fort Washakie, Ethete, and Arapahoe were under construction at the time of the investigator's visit, and travel time was greatly increased by gravel roads and construction equipment.

There is no public transportation on the Wind River Indian Reservation. Public transportation is provided during the school year for the reservation for those who want to attend the college in Riverton, Wyoming. The investigator was unable to discover a regular schedule for the bus during the summer months.

The Early Head Start Program was begun on the Wind River Reservation in 1998. This program has the responsibility for education and support of pregnant women and infants from pregnancy through age 3 years. The intent of the program is community

based support and education for women and children. There are Early Head Start Centers at Fort Washakie, Arapahoe, and Ethete. The staff are community members and they are responsible for prenatal education, support, and early childhood development education in the centers. The March of Dimes and this investigator assisted the Early Head Start staff with training in pregnancy and prenatal care issues in September of 1998, March of 1999, and in May 2000. The child development program is working well with children at the centers on a daily basis; however, due to staff turn over and management issues, the prenatal program has not yet been instituted on the same scale. The Early Head Start centers were built in 1998 and are brightly decorated with culturally appropriate posters and pictures on parenting and prenatal care.

The labor and delivery and postpartum areas of both of the contract hospitals in Riverton and Lander also were visited. The smaller of the two hospitals does not have neonatal intensive care capabilities. The larger hospital does have some neonatal intensive care capabilities; however, if an infant is born needing assisted ventilation, the infant must be transferred to Denver, Colorado, or to Salt Lake City, Utah. Both of the contract civilian hospitals have a Labor and Delivery Room (LDR) system of care. In this type of maternity service, the woman labors, delivers, and recovers in the same room and then is transferred to a postpartum room for the remainder of her stay. The rooms in both hospitals were clean and bright; neither hospital had American Indian art or decor in the immediate area. The larger hospital does have a designated room for Native American

patients and their families. This room is decorated with American Indian art as well as having a small braiser for cedaring ceremonies or other Native American healing ceremonies by a Native Healer. According to the community relations specialist (personal communication, June 25, 2000), this room was planned co-operatively with elders from the Wind River Indian Reservation, the IHS, and physicians from the hospital. She stated that this room is not a marketing tool but rather a firm commitment to the community they serve since 40% to 50% of their admissions come from the reservation. The room has been available for over 8 years, and that this is the only for-profit hospital (civilian) in the U.S. that has an Indian Healing Room. Other accommodations at the larger hospital include programs for all employees on cultural sensitivity including awareness and acceptance that large numbers of family members will be with patients, utilization of sage bundles on the shirts of the infants who may be ill, and other cultural specific requests. The smaller hospital makes no similar accommodations to the reservation population.

The investigator also visited a county public health department in Fremont County and their prenatal home visitation program serving the Wind River Indian Reservation. The public health nurse receives referrals from the IHS and visits all first-time mothers and all teen mothers. The visits follow a schedule of once a week for the first month following referral, then bimonthly until delivery, once a week for 6 weeks for the newborn, and then monthly until 24 months. The objective is teaching, support, evaluation, and enhancing the informal support system (family and friends). The public

health nurse was observed to treat her clients with warmth and respect. The clients and their families responded with similar respect.

CHAPTER V

DISCUSSION

This chapter will present a general summary of the study, and a discussion of the findings, conclusions, and future research. In addition, implications for the health educator will be provided.

Summary

The primary purpose of this study was to elicit information regarding pregnancy and prenatal health care beliefs from the American Indians on the Wind River Indian Reservation, Wyoming. A secondary purpose was to look at the relationship between American Indian and health care provider perceptions about the available prenatal care on the reservation. Qualitative research was to be utilized to gain information about health beliefs and perceived needs of the community. The Rapid Assessment Procedure (RAP), as a form of qualitative and participatory research, was utilized as a framework for the study. The open-ended questions developed from RAP guidelines were utilized to collect information from health care providers and American Indians. Eighteen American Indians and 6 health care providers from the Wind River Indian Reservation participated in the interviews. To gain additional perspectives on the prenatal health care available to the

American Indians on the Wind River Indian Reservation, the investigator also conducted participant observations. The IHS clinic at Fort Washakie and the satellite clinic at Arapahoe were visited as well as the inpatient facilities in Lander and Riverton, Wyoming.

The results of this study represent the views of the participants on the Wind River Indian Reservation and therefore cannot be generalized to other American Indian communities. The study had two major limitations in the non-Indian status of the investigator and the use of a signed consent form in a community of people where there is mistrust of outsiders.

Findings

Interviews

From the 11 categories identified in the interviews and observations, the following major themes evolved: (a) prenatal care beliefs, (b) prenatal care services, (c) pregnancy-related health beliefs, (d) birth-related beliefs, and (e) pregnancy-related health concerns on the Wind River Indian Reservation. These themes related to the three questions established by the investigator:

1. What are the present pregnancy related health beliefs and practices among the American Indians on the Wind River Reservation?

2. What are the perceptions among the American Indians on the Wind River Indian Reservation about available prenatal care through the IHS and contract services?

3. What is the relationship between American Indian and health care provider perceptions about prenatal care available on the Wind River Reservation?

Analysis and interpretation of all the data collected were utilized by the investigator as the basis of the conclusions. Direct quotations from participants are recorded in Chapter IV and were utilized to support these conclusions.

Prenatal Care Beliefs

There was no difference in the health care provider and the American Indian beliefs on the importance of a woman seeking out prenatal care as soon as she discovers that she is pregnant. The American Indian participants believed, however, that provision of a female obstetrician would be of aid in making the young mothers feel more comfortable going for prenatal care. There also was the perception among the American Indians that the reservation should have its own obstetrician or midwife to provide more continuity of care rather than the contract providers from different locations.

The participants in this community believed that prenatal care from a health care provider was an important part of a healthy pregnancy. The belief that a woman should maintain a healthy lifestyle reflects the beliefs found among American Indian participants in other studies (Lia-Hoagberg et al., 1990; Long & Curry, 1998). The perception of a need for a female obstetrician and or a midwife is consistent with identified barriers to seeking prenatal care among other American Indian women (Cheadle et al., 1994; Cunningham & Cornelius, 1995; Lia-Hoagberg et al., 1990; Sokoloski, 1995).

Prenatal Care Services on the Wind River Indian Reservation

There is a multitude of prenatal services on the Wind River Indian Reservation including the IHS clinic at Fort Washake, delivery services at Lander and Riverton, Wyoming, and a county public home health nurse who makes home visits to all pregnant teen moms as well as all first-time moms. The reservation also has begun a project with Early Head Start to have community members provide prenatal health education and support. The health care providers believed that the prenatal care services available provided a full range of pregnancy-related health care and education. However, the health care providers also believed that the community was unaware of the availability of services. Only 39% of the American Indian participants were aware of the full range of services on the reservation. American Indians perceived family and community as avenues for a young woman to gain information including friends, the school, the Eastern Shoshone Boy's and Girl's Club and girls' club on the reservation. The Early Head Start Program, the WIC program, and the county public health nurse also were mentioned as sources of prenatal information.

Fifty-five percent of the American Indian participants had a negative view of the care through the IHS and contract services citing long waits, rushed care, and insensitivity to the culture as major problems. Health care providers agreed that there were problems with long waits and had recently instituted an appointment system. The health care providers did believe that they were sensitive to the cultural beliefs and values

of the community. The American Indian participants felt that culturally sensitive and personalized care was lacking in the prenatal care services, and at the contract hospital in Riverton, Wyoming. Cultural insensitivity has been found to be a barrier to obtaining prenatal care for other American Indian women (Cheadle et al., 1994; Cunningham & Cornelius, 1995; Lia-Hoagberg et al., 1990; Sokoloski, 1995).

Both health care providers and American Indians believed that the lack of transportation was a major concern for accessing care on the reservation. Cheadle et al. (1994), Lia-Hoagberg et al. (1990), and Cunningham and Cornelius (1995) agree that transportation is a barrier to prenatal care. The American Indian community also thought more prenatal education services and/or home visits to moms without transportation would be of benefit. According to Lia-Hoagberg et al. (1990) important motivators to attend prenatal care include outreach programs that facilitate education and support in the home or in the community, as well as transportation. This community has access to home visits by a county public health nurse and her efforts may have increased the awareness of the importance of prenatal care in this community.

Pregnancy-related Health Beliefs

Consistent with the American Indian belief that pregnancy is a natural state (Niethammer, 1977; Seideman et al., 1996), all American Indian participants stated that to have a healthy pregnancy a woman should eat a good diet, continue to exercise, have a supportive family, and a healthy balance between her body, mind, and spirit. There were

no special considerations for diet, and walking was the most frequent form of exercise. Family support was considered important by almost 45% of American Indian participants including freedom from violence. Participation in the use of traditional medicine during a pregnancy also was seen as beneficial.

All American Indian participants agreed that substance abuse including drugs, alcohol, and smoking could be harmful to a pregnancy. Not seeking out prenatal care and lack of support also were seen as harmful to a pregnancy.

Birth-related Beliefs

All American Indian participants believed that a woman should have a supportive family around her at the time of birth. Nearly half of the participants felt this also should include the father of the baby as long as he was supportive. Fifty percent believed the safest place to give birth would be in a hospital; however, nearly 45% believed that a baby could be born at home if the mother was healthy. The importance of family and family support is consistent with the health beliefs found in the literature (Dempsey & Gesse, 1995; Higgins, 1983; Niethammer, 1977; Seideman et al., 1996).

Of interest in response to any special handling of the umbilical cord or placenta, 38% believed that the infant's umbilical cord should be saved after it dries and falls off.

The cord then could be sewn into a small pouch and given back to the child to ensure a healthy life and good luck.

Pregnancy-related Health Concerns on the Wind River Indian Reservation

Although the American Indian participants were not asked about general health care concerns, they agreed with the majority of the health care providers that diabetes is the major health problem on the reservation. The prevalence of diabetes on the reservation has been reported to be 125 per 1,000 persons (over the age of 15) by Ghodes (1999). Diabetes can cause complications of pregnancy. There was, however, a discrepancy in the perception of pregnancy-related health concerns between the American Indian participants and the health care provider participants on the Wind River Indian Reservation. The health care providers believed the major pregnancy- related health concerns on the Wind River Indian Reservation to include access (including transportation), poverty, nutrition, alcohol as the major drug of choice, teen pregnancy, and dysfunctional families in order of priority. The American Indian participants believed that the major pregnancy related health concern was substance abuse followed by teen pregnancy, transportation problems, and lack of family support. Although the American Indian community believed teen pregnancy to be a major concern, the teen pregnancy rate of 11% is lower than for all American Indian groups. However, the fact that nearly half of the teen deliveries were to teens below the age of 17 may have contributed to the concern over teen pregnancy. The pregnancy-related health concerns of this community from both the health care provider participants and the American Indian participants reflect the

concerns documented in the literature (Hodge & Fredericks, 1999; Lia-Hoagberg et al., 1990; Long & Curry, 1998; USDHHS, 1996, 1997).

Although the general health status was not a focus of this study, 50% of the health care providers believed that the health status of the Wind River Indian Reservation population was comparable to any small rural population of the same socioeconomic level and 50% believed that the health status of the population was lower than the general population. The health care providers believed the major concern was chronic disease related to lifestyle with diabetes as the major problem.

Participant Observations

The IHS clinics at both Fort Washakie and Arapahoe were observed. The interiors were clean and bright, both had American Indian decor in the waiting areas but little patient information or educational materials. The exam rooms had no culturally appropriate posters or information on the walls. The interactions between the staff and the patients were observed to be very professional and respectful.

The Early Head Start program has the potential to become a community support group for pregnant women. However, the community is unaware of the service and the staff has yet to fully implement the prenatal education and support aspect of this program.

The investigator also toured the two contract civilian inpatient facilities in Riverton and Lander, Wyoming. The larger of the two hospitals had a Native American Healing Room and acknowledged that 40% to 50% of their admissions were American

Indians. This hospital also tries to accommodate the beliefs and customs of the American Indian population.

Conclusions

The American Indian participants on the Wind River Indian Reservation believe that pregnancy is a natural state supported by a woman keeping a healthy balance between body, mind, and spirit. To support a healthy pregnancy, the American Indian participants believed that pregnant women should eat a healthy diet, continue to exercise, avoid substance abuse, and have a supportive family to help her. The American Indian participants and their health care providers agree that a pregnant woman should seek out early and regular prenatal care. American Indian participants believed that not seeking prenatal care was harmful to a pregnancy and baby. The use of traditional medicine was thought to be beneficial by American Indians to maintain the healthy balance. The health care provider participants were aware of the use of traditional medicine and only asked to be informed when a woman used traditional methods of healing.

There are discrepancies between the American Indian participants and the health care provider participants regarding the prenatal health care services. Fifty percent of the American Indian participants believed that the care was not culturally sensitive including complaints of impersonal care, rushed service, and the asking of culturally insensitive questions that led them to believe that the health care providers did not understand the

culture. American Indian participants also believed the larger of the two contract hospitals was more sensitive to the needs of the American Indians.

Both the health care provider participants and the American Indian participants agreed that there were pregnancy-related concerns on the reservation but did not agree on the priority of the problems. The American Indian participants believed substance abuse in pregnancy and teen pregnancy were the major concerns followed by transportation and lack of family support. The health care provider participants believed transportation and access to be the major health concern followed by poverty, nutrition, alcohol as the major drug of choice, and teen pregnancy.

The beliefs of the American Indian participants on the Wind River Indian Reservation support a healthy pregnancy and obtaining appropriate prenatal care. There are, however, barriers to obtaining prenatal care on the Wind River Indian Reservation including a perception of the lack of cultural sensitivity by health care providers, transportation difficulties, and a lack of awareness of available services and education. The health care provider participants did not perceive cultural insensitivity on their part and there did not seem to be any collaborative efforts by health care providers to coordinate an awareness of prenatal services.

Implications

Based on the analysis and interpretation of the data collected, there is support for the following implications:

1. Prenatal care services and education on the Wind River Reservation would benefit from better integration of traditional cultural beliefs. Although the health care providers acknowledge that they are aware of native ways, the community perceives insensitivity. Perception of cultural insensitivity, fear, and embarrassment are barriers to obtaining prenatal care. Review of the present history-taking procedures and treatment procedures by the health care providers may uncover areas of beliefs and culture that are not being addressed at this time.

2. Support and assistance from community members is an important motivator to obtaining prenatal care. The Wind River Indian Reservation has begun a prenatal education and support program through the Early Head Start Program. This program remains in its infancy and is not widely recognized within the community for prenatal education or as a support resource. The promotion of this community support effort may benefit from increased involvement by tribal leaders and elders.

3. Although the reservation has different systems working with pregnant women, the community remains unaware of the full range of services. Collaborative efforts on the part of the Tribal Council and leaders, IHS, EHS, and the county public health department would benefit the pregnant woman. These services would not be a duplication of efforts as each offers an integral part of the prenatal care, education, and support that the community wants.

4. The community believes that teen pregnancy is a major concern. The health care providers do not perceive teen pregnancy as a major concern noting that the teen pregnancy rate in 1999 was 11% and that has been the approximate rate for several years.

However, nearly half of the teen deliveries in 1999 were to young girls below the age of 17. The implementation of early education and prevention programs in the school would be of benefit to the community.

5. The community also believed that substance abuse during pregnancy is a major problem. A collaborative effort between the IHS and EHS would possibly increase the effectiveness of programs directed toward substance abuse and the effect on pregnancy. There are substance abuse support programs on the reservation but they do not focus on the pregnant woman.

6. Based on the responses of the participants, the IHS and Tribal Council may want to consider the reallocation of funds for a resident prenatal health care provider. A nurse midwife or women's health nurse practitioner would be more economical than a resident obstetrician.

The community believed that continuity of care was not now available. A few participants also noted that a female health care provider would make some of the young women feel more comfortable about going to prenatal care.

7. A resident nurse midwife or nurse practitioner could help alleviate two other concerns voiced by the community of long waits and loss of patient confidentiality by

having OB appointments only on Tuesdays. The recent institution of an appointment system by the IHS may alleviate part of the waiting time but will not address the continuity of care or loss of confidentiality concern.

8. Transportation is a necessary factor. As observed, there is no direct public transportation on the reservation to the IHS clinic. A review of this concern by the Tribal Council and allocation of funds to support the existing system or collaborative efforts that could include the present CHR program of transportation assistance would benefit the community.

9. The IHS clinic could investigate a greater use of health related posters and educational material that are culturally appropriate and have these readily available in patient waiting and treatment areas. The design of culturally appropriate materials by the IHS and health educators may be of benefit to this community.

10. The community perceives that one of the contract civilian hospitals is not sensitive to American Indian culture and needs. A review of hospital admissions and the population served may benefit the hospital and the community. Hospital orientation for staff might benefit from the inclusion of information pertaining to American Indian culture and beliefs.

11. Although general health concerns was not the focus of this study, both the health care provider participants and the American Indian participants saw diabetes as a

concern on the reservation. Implementation and support of a diabetic education program would benefit the general community as well as the pregnant women of the community.

Recommendations for Further Research

This study identified pregnancy-related health beliefs and perceptions of prenatal care within the American Indian community on the Wind River Indian Reservation. Due to the exploratory nature of this study, further studies on prenatal care service utilization as related to pregnancy outcome would be beneficial. A study related to the teenage population and their specific beliefs and potential participation in early prevention programs would be of value to the community. A study to further delineate barriers to prenatal care would help identify problems and potential solutions. A future study to evaluate the impact of the community support program through the Early Head Start Program also would be important to the community. Diabetes was considered to be a concern on the reservation and research and implementation of a program with diabetes as the focus would benefit not only the pregnant woman, but also the whole community.

American Indians are a diverse population and the beliefs, values, and culture of one tribe cannot be assumed to apply to other tribes; therefore, continued research on the belief systems and the impact on health seeking behavior is vital to effect change and for the development of programs that will make a difference in the health status of the American Indian. Scrimshaw and Hurtado (1987) recommended that the use of verbal consent rather than signed consent forms be utilized for research in communities where

there exists mistrust of outsiders. Davis and Reid (1999) and Jacobson et al. (1998) indicated that research by outsiders is difficult in American Indian communities. The present investigator recommends that future researchers consider the recommendations of these authors to utilize verbal consent to participate in research rather than signed consent forms.

Implications for Health Educators

Although not every health educator will work with an American Indian community, the importance of understanding and respecting cultural differences as they relate to health beliefs is vital to effect change. To work with the American Indian culture, the health professional must recognize that the American Indian can be torn between traditional beliefs and values and those being thrust upon them by those of non-Indian cultures. The United States has become a world community and the concepts of understanding and respecting another's culture is vital to the health care professional as he or she seeks to work with people and develop programs and interventions that will truly affect health behavior in a positive manner.

REFERENCES

Boufford, J., & Lee, P. (1998). Federal programs and Indian country: A time for reinvention. Public Health Reports, 113(1), 34-35.

Boyden, Y., & Prestrzelski, D. (1995, August). Tailoring care to culture. RN, 15-16.

Burd, L., & Moffatt, M. (1994). Epidemiology of fetal alcohol syndrome in American Indians, Alaska Natives and Canadian Aboriginal Peoples: A review of the literature. Public Health Reports, 109, 688-693.

Cheadle, A., Pearson, D., Wagner, E., Psaty, B., & Diehr, T. (1994). Relationship between socioeconomic status, health status and lifestyle practice of American Indians: Evidence from a plains reservation population. Public Health Reports, 109, 405-413.

Cunningham, P., & Cornelius, L. (1995). Access to ambulatory care for American Indians and Alaska Natives: The relative importance of personal and community resources. Social Science Medicine, 40, 393-407.

Davis, R., Helgerson, S., & Waller, P. (1992). Smoking during pregnancy among Northwest Native Americans. Public Health Reports, 107, 67-69.

Davis, S., & Reid, R. (1999). Practicing participatory research in American Indian communities. American Journal of Nutrition, 69(Suppl.), 755S-759S.

Deloria, V. (1999). Spirit and reason. Golden, CO: Fulcrum.

Deloria, V., & Lytle, C. (1983). American Indians, American justice. Austin, TX: University of Texas Press.

Dempsey, P., & Gesse, T. (1995). Beliefs, values and practices of Navajo childbearing women. Western Journal of Nursing Research, 17(6), 591-614.

Duff, S., Bonino, K., Gallup, P., & Pontseele, R. (1994). Community baby shower as a transcultural nursing intervention. Journal of Transcultural Nursing, 5(2), 38-41.

Dunn, C., Pirie, P., & Lando, H. (1998). Attitudes and perceptions related to smoking among pregnant and postpartum women in a low-income, multiethnic setting. American Journal of Health Promotion, 12(4), 267-274.

Flynn, J. (1998). Tribal government: Wind River Reservation. Lander, WY: Mortimore.

Fowler, L. (1982). Arapahoe politics, 1851-1978. Lincoln, NB: University of Nebraska Press.

Ghodes, D. (1999). Diabetes in North American indians and Alaska natives [On-line]. Available: www.ihs.gov/Publicinfo/

Gittelsohn, J., Harris, S., Burris, K., Kakegamic, L., Landman, L., Sharma, A., Wolever, T., Logan, A., Barnie, A., & Zinman, B. (1996). Use of ethnographic methods for applied research on diabetes among the Ojibway-Cree in Northwest Ontario. Health Education Quarterly, 23, 365-382.

Higgins, P. (1983, January). Pueblo women of New Mexico: Their background, culture and childbearing practices. Topics in Clinical Nursing, 69-78.

Hodge, F., & Fredericks, L. (1999). American Indian and Alaska Native populations in the United States. In R. Huff & M. Kline (Eds.), Promoting health in multicultural populations (pp. 269-334). Thousand Oaks, CA: Sage.

Huff, R., & Kline, M. (Eds.). (1999). Promoting health in multicultural populations. Thousand Oaks, CA: Sage.

Huttlinger, K., & Tanner, D. (1994). The Peyote way: Implications for culture care theory. Journal of Transcultural Nursing, 5(2), 5-10.

Indian Health Service. (1999). Comprehensive health care program for American Indians and Alaska Natives. [On-line]. Available: www.ihs.gov/NonMedicalPrograms/Profiles/profileChrono.asp

Irwin, K., Mannino, S., & Daling, J. (1992). Sudden infant death syndrome in Washington state: Why are Native American infants at greater risk than white infants? The Journal of Pediatrics, 121, 242-247.

Jacobson, S., Booton-Hiser, D., Moore, J., Edwards, K., Pryor, S., & Campbell, J. (1998). Diabetes research in an American Indian community. Image: Journal of Nursing Scholarship, 30(2), 161-165.

Joint Business Council of the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Indian Reservation. (1999). Looking to the future of the Wind River Indian Reservation: Executive summary of the Wind River Indian needs determination survey (WINDS-II). Fort Washakie, WY: Author.

Kingfisher, P. (1998). Post-Colonial survival patterns: The health of U.S. indigenous women--Native American, Alaska Native and Native Hawaiian [On-line]. Available: www.ejrc.cau.edu/comapaPK.html

Kunitz, S. (1996). The history and politics of U.S. health care policy for American Indians and Alaska Natives. Journal of Public Health, 86(10), 193-195.

Lange, B. (1988). Ethnographic interview: An occupational therapy needs assessment tool for American Indians and Alaska Native alcoholics. Occupational Therapy in Mental Health, 8(2), 61-80.

Leininger, M. (1985). Qualitative research methods in nursing. Orlando, FL: Grune and Stratton.

LeMaster, P. (1994). Health education interventions among Native Americans: A review and analysis. Health Education Quarterly, 21, 521-539.

Lia-Hoagberg, B., Rhode, P., Skovholt, C., Obeg, C., Berg, C., Mullett, D., & Choi, T. (1990). Barriers and motivators to prenatal care among low-income women. Social Science Medicine, 30, 487-495.

Long, C., & Curry, M. (1998). Living in two worlds: Native American women and prenatal care. Health Care for Women International, 19(3), 205-215.

Manderson, L., & Aaby, P. (1992). An epidemic in the field? Rapid assessment procedures and health research. Social Science Medicine, 35, 839-850.

March of Dimes. (1999). Maternal, infant and child health in the United States. Washington, DC: Author.

Markely, E., & Crofts, B., (1997). Walk softly, this is God's country: Sixty-six years on the Wind River Indian Reservation. Lander, WY: Mortimore.

Masis, K., & May, P. (1991). A comprehensive local program for the prevention of fetal alcohol syndrome. Public Health Reports, 106, 484-489.

Mathews, T. (1998). Smoking during pregnancy, 1990-1996. National Vital Statistics Reports, 47(10) (DHHS Publication No. [PHS] 99 1120). Hyattsville, MD: U.S. Department of Health and Human Services.

Niethammer, C. (1977). Daughters of the Earth: The lives and legends of American Indian women. New York: Simon and Schuster.

Nies, J. (1996). Native American history. New York: Random House.

Noren, J., Kindig, D., & Sprenger, A. (1998). Challenges to Native American health care. Public Health Reports, 113, 22-33.

Olds, S., London, M., & Ladewig, P. (2000). Maternal newborn nursing a family and community centered approach. Upper Saddle River, NJ: Prentice-Hall.

Paisano, E. (1990). The American Indian, Eskimo and Aleut population [On-line]. Available: www.census.gov

Parse, R., Coyne, A., & Smith, M. (1985). Nursing research qualitative methods. Bowie, MD: Prentice-Hall.

Pearson, R. (1989). Rapid assessment procedures are changing the way UNICEF evaluates its projects. Hygie, 8(4), 23-25.

Per capita payments take a big jump. (2000, June 7). Wind River News, p. 1.

Rose, V. (1993). Mother earth: American Indian beliefs and practices in childbearing. Midwives Chronicle and Nursing Notes, pp. 104-107.

Scrimshaw, S., Carballo, M., Ramos, L., & Blair, B. (1991). The AIDS rapid anthropological assessment procedures: A tool for health education, planning and assessment. Health Education Quarterly, 18(1), 111-123.

Scrimshaw, S., & Hurtado, E. (1987). Rapid assessment procedures for nutrition and primary health: Anthropological approaches to programme improvement. Los Angeles: UCLA Latin American Center.

Seideman, R., Jacobson, S., Primeaux, M., Burns, P., & Weatherby, F. (1996). Assessing American Indian families. Maternal Child Nursing, 21, 274-279.

Singh, G., & Yu, S. (1995). Infant mortality in the United States: Trends, differentials, and projections, 1950-2010. American Journal of Public Health, 85, 957-964.

Sobralske, M. (1985, October). Perceptions of health: Navajo Indians. Topics in Clinical Nursing, 32-39.

Sokoloski, E. (1995). Canadian First Nations women's beliefs about pregnancy and prenatal care. Canadian Journal of Nursing Research, 27, 89-100.

Spector, R., (1996). Cultural diversity in health and illness (4th ed.). Stamford, CT: Appleton & Lange.

Spradley, J., (1979). The ethnographic interview. Orlando, FL: Harcourt Brace Jovanovich College Publishers.

Stamm, H. (1999). People of the Wind River: The Eastern Shoshones 1825-1900. Norman, OK: University of Oklahoma Press.

Trenholm, V., & Carley, M. (1964). The Shoshones sentinels of the Rockies. Norman, OK: University of Oklahoma Press.

Trujillo, M. (1999). Challenges and change [On-line]. Available: www.ihs.gov/Publicinfo/Publications/stateIHS.asp

Upvall, M. (1997). Nursing perspectives of American Indian healing strategies. The Journal of Multicultural Nursing and Health, 3(1), 29-34.

U.S. Department of Health and Human Services. (1996). Trends in Indian health. [On-line]. Available: www.ihs.gov/gov/PublicInfo/Publications/trends

U.S. Department of Health and Human Services. 1997). Trends in Indian health. [On-line]. Available: www.ihs.gov/PublicInfo/Publications/trends

Wellever, A., Hill, G., & Casey, M. (1998). Commentary: Medicaid reform issues affecting the Indian health care system. American Journal of Public Health, 88, 193-195.

West, E. (1993). The cultural bridge model. Nursing Outlook, 41(5), 229-234.

William, E., & Ellison, F. (1996). Culturally informed social work practice with America Indian clients: Guidelines for non-Indian social workers. Social Work, 41(2), 147-151.

Wilson, J. (1998). The earth shall weep: A history of Native America. New York: Grove.

Wolcott, H. (1985). On ethnographic intent. Educational Administration Quarterly, 21(3), 187-203.

Wolf, B., (1982). The ways of my grandmothers. New York: William Morrow.

Yee, B., & Weaver, G. (1994, Spring). Ethnic minorities and health promotion: Developing a "culturally competent" agenda. Generations, 18(1), 39-43.

APPENDICES

Appendix A

Permission Letters from the Wind River Indian Reservation

Eastern Shoshone Business Council
P.O. Box 538
Fort Washakie, WY 82514
(307) 332-3532/4932
Fax: (307) 332-3055

March 7, 2000

Carol M. Arnold
6724 Wickliff Trail
Plano, TX 75023

Dear Ms. Arnold:

The Shoshone Business Council welcomes you to visit the Wind River Indian Reservation. June is a very eventful month with many tribal activities sponsored by the Eastern Shoshone Tribe as well as the Northern Arapaho Tribe.

We would suggest that you contact the Wind River Indian Health Service. Their main number is (307) 332-7300. I am sure they will be very helpful in your research as they conduct well child clinic once every month. The tribes also have a WIC Program, Social Services Program, and TANF Program which may be helpful.

If you have any questions please call me at the above number or send e.mail to washakie@washakie.net.

Sincerely,

John Washakie, Chairman
Eastern Shoshone Business Council

15 February 2000

Mr. Benjamin Ridgley, Acting Chairman
Northern Arapaho Business Council
Wind River Reservation, Wyoming

Dear Mr. Ridgley,

I am writing again because I realized that I did not tell you I needed a response to my request for permission to come to Wind River and conduct interviews with the community during June. I need to know either yes or no by the 1st week of March. I must submit a letter to the graduate research department at my university and they have a definite time line that I must follow. I sincerely apologize if this will inconvenience you in any way

Thank you very much for your consideration. If you have any questions please feel free to contact me.

Sincerely,

Carol M Arnold

Carol M. Arnold
6724 Wickliff Trail
Plano, Texas 75023 (972-517-1327)

Approved

- JOSEPH OLDMAN, COUNCIL MEMBER
- HUBERT N FRIDAY, COUNCIL MEMBER
- BURTON HUTCHINSON SR, COUNCIL MEMBER
- ANTHONY A ADDISON SR, CHAIRMAN

1 COPY TO ABC SUPPORT FILE

Appendix B

Consent Form

TEXAS WOMAN'S UNIVERSITY
SUBJECT CONSENT TO PARTICIPATE IN RESEARCH

Prenatal Care and Pregnancy Related Beliefs Among
the American Indians on the Wind River Reservation, Wyoming

Investigator: Carol M. Arnold
Home Phone: (972) 517-1327

Advisor: Eva Doyle, PhD.
Office Phone: (940) 898-2481

You are being asked to participate in a research study for Mrs. Carol Arnold's dissertation at Texas Woman's University. The purpose of this study is to determine perceptions about pregnancy health care beliefs among the American Indians on the Wind River Reservation, Wyoming. A second purpose will be to look at the relationship between the American Indian and health care provider perceptions about available prenatal (pregnancy related) care on the reservation. For this study you will be interviewed regarding your perceptions of pregnancy and pregnancy related health care. This interview will be a face-to-face interview with the researcher at a private location agreed upon by you and the investigator. The interview will last approximately 30 to 45 minutes.

The investigation described above involves the risk of embarrassment of your identity becoming known, and confidentiality. Confidentiality will be protected to the extent that is allowed by law. The interview will take place in a private location agreed upon by you and the researcher. Only the researcher will have access to the transcripts. You should not state your name or any other individual's name during the interview. If you inadvertently state a name, this name will not be transcribed. The original data will be stored in a locked filing cabinet for a minimum of three years (June 2003) and then will be shredded. It is anticipated that the data will be published for dissertation, books, and/or journal articles. However, names or other identifying information will not be included.

Another risk is that of possible anxiety as a result of the questions being asked. If you experience any anxiety during the interview, you may stop answering questions at any time. If you feel as though you need to discuss your anxiety with a professional, the researcher will provide you with names at the Indian Health Service you should contact. Any costs incurred as a result of participation in this study will be your responsibility. Other possible risks would be loss of time, fatigue and boredom. The interview will take approximately 30 to 45 minutes and you may take a break (or breaks) during the interview as needed. You may also discontinue your participation in the study at any time without penalty.

The only direct benefit of this study to you is that at the completion of the study, an abstract (or summary) of the study will be mailed to you upon request.

_____
Subjects Initials

Approved by the
Texas Woman's University
Human Subjects Review Committee

May 2, 2000

If I have any questions about the research study you should ask the researchers: their phone numbers are at the top of this form. If I have questions about your rights as a subject or the way this study has been conducted, you may call Ms. Tracy Lindsay in the Office of Research & Grants Administration at 940-898-3377 or email HSRC@TWU.EDU.

The researchers will try to prevent any problem that could happen because of this research. You should let the researchers know at once if there is a problem and they will help you. However, TWU does not provide medical services or financial assistance for injuries that might happen because you are taking part in this research.

Participation in this study is completely voluntary and you may withdraw from the study at any time without penalty or loss of benefit to which you are otherwise entitled. If you have any questions, please contact the investigators at the above phone number. You will be given a copy of this dated and signed consent form to keep.

_____ _____

Signature of Participant Date

The above consent form was read discussed, and signed in my presence. In my opinion, the person signing said consent form did so freely and with full knowledge of its contents.

_____ _____

Signature of Investigator Date

- ☐ Check here if you would like to receive a summary of the results of this study and list below the address to which this summary should be sent.

_____

_____

_____

- ☐ Check here if you do not wish to receive a copy of the results of the study.

Approved by the
Texas Woman's University
Human Subjects Review Committee

May 2, 2000

Appendix C

Tribal Member Interview Questions

Tribal member
Interview Questions

Location	Shoshone/Arapaho
Date	Speaks Language
Time begun	Lives: on reservation In town
Time ended	Marital status
Gender	
Age	

1. What do you think a woman can do to have a healthy baby?

2. What do you think would be good prenatal care (pregnancy related health care)? From whom?

3. What do you think are things that are good for a pregnant woman and her baby?

4. What things do you think might be harmful to a pregnancy?

5. What kind of things do the grandmothers, or mothers teach about being pregnant?

6. Do you know of any prenatal (pregnancy related) classes on the reservation? Have you heard if they are helpful?

7. What kind of foods should a pregnant woman eat?

8. What kind of activities should a pregnant woman participate in?

9. What kind of activities do you think a pregnant woman should not participate in?

10. What kind of preparations do you think should be made for the new baby?

11. Where do you think a baby should be born (delivered)?

12. Who do you think should be with a woman in labor and birth?

13. Are there any special things that should be done with the (umbilical) cord or the afterbirth (placenta)?

14. What do you believe are the most troubling concerns for a pregnant woman on the Wind River Reservation?

15. What do you think of the health care services for the pregnant woman in this community?

16. What do you think could make health care services better for the pregnant woman?

_____

_____

_____

17. Any additional comments?

_____

_____

_____

Appendix D

Health Care Provider Interview Questions

Health Care Provider
Interview Questions

Location	Arapaho/Shoshone
Date	Speaks the Language
Time begun	Lives on reservation yes / no
Time ended	Number of years in health field
Education	Title
Responsibilities	Number years at current facility

1. What does prenatal health care mean to you?

2. What do you think are the most significant pregnancy related problems within the Shoshone Nation/Arapaho Nation? Will you rank them?

3. What do you think are the principle pregnancy related health needs within the Shoshone Nation/Arapaho Nation?

4. What is being done to address these issues?

5. How do you think the Shoshone/Arapaho on Wind River Reservation feel about the health services here?

6. Are there any traditional/cultural pregnancy related beliefs that have been incorporated into prenatal care in this facility? Any other cultural accommodations?

7. What are the support services here for a pregnant woman?

8. How would a pregnant woman access these services? In your opinion, are the services fully utilized?

9. What are the strengths of the health care services here for the Shoshone/Arapaho?

10. How do you think the health status of the Shoshone/Arapaho compare to that of the white population?

11. What do you think are the principle health needs on the Wind River Reservation?

12. What do you think can be done to improve the health care services?

13. What future improvements do you foresee in this facility?

14. Any additional comments?

Appendix E

Data Collection Tools

Data Collection
Community

1. Geographic characteristics

2. Community type

3. Climate, seasons

4. Services available to the community

5. Public transportation or other accommodations

6. Distance from neighborhoods to urban centers, schools, markets, hospitals, clinics

7. Health resources used by the community

8. Types of health practitioners and facilities

9. Types of health related literature in the health care facilities

_____
_____
_____

10. Transportation to health resources: distances to travel, transportation type, cost

_____
_____
_____

Data Collection
Demographic and Epidemiological Information

1. Population

2. Birth rate

3. Ethnic Groups

4. Sex distribution

5. Age distribution

6. Languages

7. Religious groups

8. Migration patterns

9. Epidemiology
   - Infant mortality
   - Major cause
   - Child mortality
   - Major cause
   - Major causes of adult mortality
   - Maternal mortality

Data Collection
Socio-economic Characteristics

1. Community Organization

Local Authorities_____

Leaders_____

Groups_____

Sanitation_____

Water Supply_____

2. Domestic / household

Nuclear vs. extended_____

Residence patterns_____

3. Economic characteristics

Major employers_____

Unemployment_____

Per capita income_____

Landownership_____
_____
_____