DIABETES IN A NAVAJO COMMUNITY: A QUALITATIVE STUDY OF HEALTH/ILLNESS BELIEFS AND PRACTICES

by

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ABSTRACT

The increasing problem of Type II diabetes among Navajo people prompts this study in transcultural nursing. Among the Navajo people today, the prevalence of diabetes ranges between 10 and 20 percent, or about two to four times the national rate of five percent.

Literature about the pathophysiology and epidemiology of diabetes is abundant; however, sociocultural studies of American Indian people's experience with the phenomenon of diabetes are few and have not been previously described.

In this descriptive and exploratory research, transcultural nursing and sociocultural theories serve as a framework to identify Navajo beliefs and practices. It is argued that an understanding of cultural beliefs and practices about diabetes is necessary in order for nurses and other health care providers to offer efficacious and effective health care.

This study takes place in a small community on the Navajo reservation. Proper steps were followed to seek permission for the study and to protect individual and community confidentiality. A modified ethnography using methods of semistructured interviews, participation, and observation in community activities, and field note taking is the methodology for data collection. In addition, this

writer serves as a key informant, being a member of the Navajo Tribe and speaking the language.

Content analysis of interviews and field notes is undertaken to develop themes associated with beliefs and practices concerning diabetes. Diabetes is viewed as a gestalt illness experience by Navajos, while it is viewed as a pathological entity by providers. Decision-making concerning health care utilization and compliance involves more complexity than is viewed by health care providers. Lack of understanding between patients and providers is a major factor contributing to many concerns expressed by both sets of informants.

Recommendations are made to alleviate some misunderstandings between patients and providers, where diabetes is concerned. Increasing patient participation in learning situations, emphasizing preventive education among younger population, increasing nursing involvement at the community level, returning to more traditional methods of health promotion by running and eating more native foods, and effecting change at the tribal government and trading post levels are some specific recommendations made.

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CHAPTER 1

INTRODUCTION

The concept of culture is relevant for nurses in several ways. Nurses are becoming increasingly more active and interested in working with people from different cultural backgrounds. If the goal of nursing is to provide care in health and illness situations, it would seem prudent for nurses to learn and understand culturally preferred ways their clients seek and receive care. An important way for nurses to learn about people's health, illness, beliefs, and practices is to conduct research in these areas. In this manner, nursing care may be more effectively and efficaciously provided.

Leininger (1978), the founder and leader of transcultural nursing, defines it as:

> the subfield of nursing which focuses upon a comparative study and analysis of different cultures and subcultures in the world with respect to their caring behavior, nursing care, and health-illness values, beliefs, and patterns of behavior with the goal of developing a scientific and humanistic body of knowledge in order to provide culture-specific and culture-universal nursing care practices (Leininger, 1978, p. 9).

> Specifically, the goal of transcultural nurses is to identify, test, understand, and use a body of transcultural nursing knowledge and practices which is culturally derived in order to provide culture-specific nursing care to people (Leininger, 1978, p. 8).

Research in the field of transcultural nursing is emerging with focus on the general health/illness beliefs and practices within the larger world view and environmental context of specific cultural groups (Hautman & Harrison, 1982; Leininger, 1978; Raqucci, 1972; Tripp, 1982). The use of qualitative (particularly ethnographic) research methods are dominant in those studies as transcultural research is concerned with systematically observing, documenting, and analyzing the lifeways or patterns of culture as they relate to health, illness, and caring situations.

Although transcultural nursing strongly emphasizes the comparative approach in research, this descriptive and exploratory study focuses on the Navajo only. Identification and description of cultural health beliefs and practices from this study will be useful to compare and contrast with other tribal groups.

Need Statement

Diabetes Mellitus in American Indian people was once a rare disease; today, the prevalence of Type II Diabetes is as high as 50 percent in some tribes (Bennett, Rushworth, Miller, & LeCompte, 1976; Hagey, 1984; Mouratoff & Scott, 1973; West, 1978). Of the estimated one and one-half million American Indians in the United States, approximately one in three risks developing diabetes. The Piman groups to which the Pima and Papago Indians belong,

have prevalence rates of 50 and 42 percent, respectively (Sievers & Fisher, 1985). Among Athapaskan linguistic groups of Alaska and Canada, and Alaskan Eskimos, lower rates of diabetes have been reported (Bennett et al., 1976; Mouratoff & Scott, 1973). However, varying rates have been reported among the San Carlos Apaches (25%), Whiteriver Apaches (11%), and Navajos (13-16%). Compared to general estimated diabetes prevalence of 5% in the United States, American Indian tribes are suffering from increasing incidence and prevalence rates of Type II diabetes and its complications.

Problem Statement

This study explores the cultural perceptions of diabetes among a community of Navajo people, and their decisions to seek and adhere to health care advice. An understanding of native health and illness beliefs and practices as they pertain to diabetes is essential for the planning and delivery of health care to decrease the high prevalence of diabetes. Although Type II diabetes mellitus can be prevented or delayed, it has reached epidemic proportions among American Indian people. Nurses, as well as other health care providers, should be able to provide culturally appropriate care and education to impact on the problem of diabetes among the Navajos and other Indian people.

Many conceptual models have been developed and tested to explain patient beliefs and behaviors in order to better understand why patients choose to "comply" or "not comply" with medical regimen. The health belief model (HBM) is one such model initially employed by behavioral scientists to explain patient compliance to medical regimen (Rosenstock, 1985). Recent studies have attempted to apply the model to patient beliefs/behaviors in chronic diseases (Becker & Maiman, 1975) and preventive dental health intervention among children (Weisenberg, Kegelis, & Lund, 1980). Essentially, the HBM predicts that compliance with medical regimen will be enhanced if the following patient characteristics are present: (1) Health motivation, (2) perception of vulnerability, (3) severity and consequences of an illness, (4) benefits outweigh costs, and (5) self-efficacy. However, the HBM does not explain health/illness beliefs and behaviors in diverse cultural groups. In addition, the HBM assumes that behavior change recommended by health care professionals is the best approach without considering patient perceptions that are often deeply ingrained in sociocultural patterns.

To explore Navajo health perceptions of diabetes within a sociocultural framework, research questions that guided this study are as follows:

1. What are Navajo health and illness beliefs concerning Type II diabetes?

2. What are Navajo health practices concerning Type II diabetes?
3. How do Navajo health or illness beliefs complement or interfere with the beliefs of Western-trained health care providers from the local clinic?
4. How do Navajo health practices complement or interfere with the practices of Western-trained health care providers from the local clinics?
5. What are the sociocultural differences and similarities between Navajo and modern health provider beliefs and practices concerning diabetes?
6. How do Navajos incorporate health and illness beliefs in their decision-making process to seek health care where diabetes is concerned.
7. How do Navajo people decide whether to follow advice provided by native or modern health providers where diabetes is concerned?

Purpose

The purposes of this qualitative study in transcultural nursing were fourfold: (1) To describe and explore Navajo health/illness beliefs and practices related to diabetes, (2) to identify and describe sociocultural factors which influence Navajo decisions to choose and follow traditional health care and/or modern (western) health care advice for diabetes, (3) to identify and

describe congruent and incongruent beliefs and practices of Navajo people and their Western-trained health care providers, and (4) to identify transcultural nursing implications related to diabetes.

Chapter 2 cites literature on Type II diabetes and Chapter 3 discusses the general health status of the American Indian population. Chapter 4 describes the research process undertaken in this study and Chapter 5 provides a background for the social-cultural factors present in the community where the study takes place. Chapters 6 through 10 describe Navajo and health provider beliefs and practices about health and illness in general, diabetes, and decision making regarding care and compliance. Chapters 11 and 12 summarize, conclude, and provide specific nursing recommendations for health care providers working with the Navajo.

CHAPTER 2

REVIEW OF LITERATURE ON DIABETES IN AMERICAN INDIANS

In this chapter, a review of literature on diabetes research in American Indian population is conducted to provide a perspective of the diabetes problem. This is followed by a review of studies pertaining to socio-cultural factors influencing health and illness states, including studies among the Navajos. Finally, a general review of Leininger's transcultural nursing theory is undertaken to provide the conceptual framework used in this study.

Of the estimated one and one-half million American Indians today, approximately 1 in 3 risks developing diabetes, whereas in the general population, the risk is 1 in 20 people (Brousseau, Bata, & Marquart, 1984). For unexplained reasons, rates vary among tribes. The Navajos, of Athapaskan linguistic stock, who were thought to have low rates in the 1960s are now reported to be experiencing gradually increasing prevalences which stand at 13 percent to 16 percent (Sievers & Fisher, 1985).

Researchers now invoke the "thrifty gene theory" to explain the increasing incidence and prevalence due to the onset of diabetes among many tribal groups since 1940,

This theory states that American Indians who were formerly hunters and gatherers biologically adapted to periods of feasting and famine, whereby, during periods of famine, the body efficiently used the stored fat for energy (Knowler, Pettit, Bennett, & Williams, 1983; Neel, 1962). Today, when food supplies are plentiful, this same biological mechanism continues to operate; this time with detrimental consequences.

Another theory espouses that stress related to lifestyle changes causes or contributes to disease manifestation. People react to stress as an external force which then impinges on the person in such a way as to produce physical and mental symptoms (Wilson, 1970). Much literature is devoted to ways of coping with stress among people with diabetes because hormonal imbalance will contribute to diabetes-related crises (i.e., hyperglycemia episodes).

Environmental Factors

The lifestyles of most indigenous populations in the world are changing dramatically, particularly those aspects related to physical activity and nutrition. Mouratoff and Scott (1973) found that among the Eskimos, six percent more people were overweight and four and one-half percent more became glucose intolerant among 187 adults (over 40 years of age) when retested after a 10-year period (1962 to 1972). During this period, the Eskimo people adopted the

use of labor-saving machinery (i.e., snowmobiles, chain saws, and fuel oil) over their more traditional devices such as dog sleds, handsaws, and use of wood for heating. In this study, glucose tolerance did not seem to have a genetic basis, but rather, the change over time suggested strong environmental influence. Nutritional assessments were not made to determine the effects of dietary changes (Mouratoff & Scott, 1973).

Obesity is often associated with inactivity and consumption of high calorie foods. In Type II diabetes, obesity seems to be a precipitating factor in the appearance of diabetes as indicated in studies among the Pimas (Bennett et al., 1976). Different patterns of association with age emerge such as younger Pimas (35 years) with obesity have a higher prevalence of diabetes than older obese and non-obese individuals. In an eight year study with Pima Indians as subjects, Hamman and Miller (1975) determined that the peak incidence of diabetes occured between the age of 25 and 44 years and was associated with the degree of obesity and previous glucose tolerance levels. Obesity and high glucose levels independently were statistically significant risk factors for diabetes development.

Although the above studies link the precipitating role of obesity and glucose intolerance to diabetes onset, the specific underlying causes of final events leading to the

onset were not determined. Inglefinger, Bennett, Kamenetsky, Savage, Dippe, and Miller (1973) followed a group of Pima Indians from 2 to 4 years prior to the onset of diabetes by monitoring weight and glucose tolerance levels. In the 2 1/2 years prior to diabetes onset, previously normal glucose levels gradually increased and weight increased by 10 to 14 pounds in the same individuals. Further studies are necessary to explain the reasons for these changes. In addition, distribution of adiposity needs to be explored as the higher prevalence of diabetes is associated with upper body fat or centripetal fat distribution (Szathmary & Holt, 1983).

Genetics

Studies among American Indians do not sufficiently explain the mode of diabetes inheritance and whether one or many genes are involved (Bennett et al., 1976). It is likely that the increase in the frequency of diabetogenic genes that once were small may result from inbreeding in most tribes (West, 1978). However, this holds true only among "fat" tribes while "lean" tribes have lower diabetes rates.

Familial tendency of diabetes among American Indians is not explained by factors independent of familiality of obesity (West, 1978). Knowler, Pettit, Bennett, and Williams (1983) suggest that Pima Indians' resistance to glucose utilization and high insulin concentrations in

their blood results in increased fat storage. This hypothesis supports Neel's (1962) thrifty genotype theory which suggests that when food supplies are steady, increased fat storage leads to obesity, insulin resistance, and eventually the manifestation of diabetes.

Hyperinsulinism

When insulin levels, in response to rapid intravenous glucose infusion, are compared between Pima Indians and Caucasian controls, the Pima Indians exhibit a two and one-half times greater response than Caucasians, even when degree of obesity is controlled (Aronoff, Bennett, & Gorden, 1975). It is speculated that the hyperinsulinemia bears a relationship to the propensity of Pima Indians to develop diabetes, especially as hyperinsulinemia is associated with the presence of obesity (Bennett, Rushworth, Miller, & LeCompte, 1976). It is still unclear whether hyperinsulinemia causes obesity or whether it is secondary to obesity, or if it is a compensatory response to an inherited insulin receptor defect. The presence of hyperinsulinemia when glucose tolerance is normal in subjects from a population with a high presence of diabetes reinforces the "thrifty gene" theory proposed by Neel (1962).

Diabetes Complications

It is generally agreed among researchers that people with diabetes are at greater risk of developing several complications which are associated with lack of metabolic control, duration of disease, or other contributory factors (Ross, Bernstein, & Rifkin, 1983). People with diabetes have a greater risk of developing vascular diseases which may lead to blindness, renal failure, myocardial infarction, and lower extremity amputation. Diabetes in pregnancy also presents serious problems to both the mother and the infant.

About 5,000 new cases of blindness are reported among diabetics of 20 to 74 years of age every year due to diabetic retinopathy (Klein & Klein, 1985). Diabetic retinopathy is characterized by small vessel damage in the retina. About 10 percent of people with diabetes have diabetic nephropathy which follows a progressive pattern of constant proteinuria leading to renal failure or death if untreated (Herman & Teutsch, 1985). Treatment for diabetic nephropathy consists of renal dialysis or transplantation. Impaired blood flow to the legs and feet can lead to ulcers, gangrene, or amputation of the affected limbs. About eight percent of diabetics have poor arterial perfusion to the lower limbs at the time of diagnosis (Palumbo & Milton, 1985). Diabetes-related amputations account for 40 to 45 percent of all nontraumatic

amputations in the United States annually. Heart disease in adult diabetics is the single most common cause of death accounting for at least one-third of all deaths occurring after the age of 40 (Barrett-Connor & Orchard, 1985). Unlike microvascular complications, arteriosclerotic coronary heart disease is not directly associated with severity of diabetes but is present in both insulin dependent and non-insulin dependent diabetics (Barrett-Connor & Orchard, 1985 ;Ross, Bernstein, & Rifkin, 1983).

With the introduction of insulin, maternal diabetic mortality has dramatically declined; however, the risks of morbidity and mortality to the infant of the diabetic mother remains higher as compared to the nondiabetic prenatal population (O'Sullivan, Harris, & Mills, 1985). Between one and five per thousand pregnancies are complicated by diabetes; this prevalence increases in non-Caucasian, obese, and lower socioeconomic populations (Fleischmann & Finberg, 1983). Congenital defects, macrosoma, hyperbilirubinemia, and neonatal respiratory distress syndrome are complications associated with infant morbidity in diabetic pregnancies. Stillbirth and neonatal mortality of infants in diabetic pregnancies remain five times that of the normal population.

Diabetes Complications in American Indians

American Indians suffer from similar diabetes complications compared to those observed in the general population, but in greater proportions. Among Pima Indians who have been subjected to many studies, statistically significant relationships are found between the duration of diabetes and frequency of retinopathy and elevated blood pressure (Kamenetsky, Bennett, Dippe, Miller, & LeCompte, 1974). The frequency of retinopathy is also associated with elevated plasma glucose and elevated systolic blood pressure (Dorf, Bennett, Ballantine, & Miller, 1975).

In a 6-year cohort study by Knowler, Bennett, and Ballantine (1980), the incidence of retinal exudates more than doubled in diabetics with mean blood pressures of at least 145 mmHg compared to those with blood pressures of less than 125 mmHg. Retinal lesions found in these Pima Indians are described as diabetic retinopathy associated with high blood pressure rather than hypertensive retinopathy associated with diabetes.

In a cross-sectional study, Rate et al. (1983) found Hopi and Navajo diabetics had complication rates comparable to the general United States population. Duration of diabetes was strongly related to microvascular complications such as retinopathy (57 percent), nephropathy

(40 percent), peripheral vascular disease (28 percent), and peripheral neuropathy (21 percent). Until the study by Rate et al., Navajos were thought to have low diabetes prevalence and low complication rates. Thus, Navajos, who as recently as the 1970s were thought to have low incidence and prevalence of diabetes, now have rates exceeding those of the general population. Likewise, complications from diabetes are similar and will probably increase rapidly among the Navajo people with diabetes.

Because of the concern raised by the seriousness of diabetes and its complications, the Indian Health Service in 1980 received Congressional appropriations for model programs to conduct intensive interventions to decrease the detrimental effects of diabetes. Five sites representing five different geographical and subcultural groups were selected for interventions designed to increase self-management and community level awareness to enhance weight reduction, pregnancy outcome and decrease amputations (Gohdes, 1986).

Among the Northern Ute Indians where diabetes-related diabetic nephropathy is about 20 times the national rate, a comprehensive community intervention was designed and implemented jointly by the Ute Indian Tribe, Indian Health Service, and Utah Department of Health with special assistance by the Centers for Disease Control (Tom-Orme, 1984; Tom-Orme & Hughes, 1985).

Research-based interventions with particular attention to sociocultural influences in health and illness states (in this case diabetes) are in order to lessen the effects of health problems among American Indian groups. Type II diabetes is the same type observed in the general United States population; however, American Indians suffer disproportionately higher incidence and prevalence rates. To better understand the problem of diabetes as experienced and perceived by Navajo individuals, this study attempts to explore the sociocultural context of health/illness beliefs and practices.

Sociocultural Influence on Health and Illness States

Elling (1977) states that health care behavior is strongly related to health status. Furthermore, the interaction between these two activities is affected by sociocultural forces (i.e., social, economic, political) in people's environment. This part of the discussion provides some background as to how sociocultural forces influence health and illness status.

Culture may be defined as the way of life of a group of people or as Hall (1981) explicates, "culture is man's medium; there is not one aspect of human life not touched and altered by culture" (p. 16). Thus, beliefs about health/illness are a cultural phenomena (Borhek & Curtis, 1975). Acquisition of culture by individuals is referred

to as socialization (by sociologists) and enculturation (by anthropologists).

Culture has many attributes which are worth noting (Borhek & Curtis, 1975):

1. Culture is patterned so that it has an internal consistency of related, (not discrete) elements organized in some general pattern.
2. Culture is the source of orientation, according to which problems are dealt with through traditional and alternative solutions.
3. Culture changes in response to the pressure of events, but only very slowly, because it is systematic to a degree.
4. Cultures are differentiated into subcultures which are coextensive with networks of communication. Thus, beliefs within cultural groups may vary because participants have a unique perspective based on their roles, interests, experiences, and exposure to external viewpoints.
5. Generally, culture produces intensely personal experiences involving feelings of reliance on, subordination to, and identification with a force beyond and outside the individual.

Spector (1979) maintains that health care studies are more complete when the cultural beliefs and practices of

both health providers and patients are revealed and discussed. Through socialization practices, individuals have learned beliefs, practices, habits, likes, dislikes, norms, customs, and rituals which are difficult to change, particularly in times of illness. Learned behaviors associated with illness are important determinants as to whether diagnosis and treatment begins at all. Western-trained medical practitioners traditionally deal with etiology (disease diagnosis) and treatment but neglect to pay equal attention to behavioral factors that determine when treatment will be sought, the response to illness, and the use of medical facilities.

Health/illness attitudes and behaviors reflect the culture or world view of people. Hartog and Hartog (1983) identify several cultural values that differentiate groups and which may affect care-giving behavior. Cultural values vary by how people relate to nature, their view of others and disease, the way people relate to others, time orientation, global value orientation, existential orientation, family relationships, and perception or responsibility toward self. Thus, illness behavior as a social and cultural product determines who agrees to become a patient, how one behaves as a patient, and how social values affect decisions about a patient's treatment.

In an analysis of the literature on illness, Fabrega (1979) observed that researchers concentrate on illness

episodes (signs and symptoms) and medical care actions rather than the meaning of the patient's illness experience and its influence on behavior. The illness experience is often specified by the sick person's social status or role in a given society. Thus, the illness experience varies among sociocultural groups and is more complex than the simplified Western concept of disease and treatment.

Furthermore, the sick role phenomenon which legitimizes a person's illness behavior in a social context consists of four main components: (1) Exemption from normal social obligations and responsibilities, (2) expectation that the illness is temporary, (3) expectation that rapid recovery should follow, and (4) expectation that the ill person is in need of help (Fabrega, 1979). Illness behavior may be defined as ways in which given symptoms are differentially perceived, evaluated, and acted (or not acted) upon by different kinds of persons (Mechanic, 1962). On the other hand, health behavior may be defined as activity undertaken to prevent disease or illness.

Socioeconomic factors (Coburn & Pope, 1974) and how people experience interpersonal difficulties (Mechanic, 1962) are other determinants thought to affect illness perception and subsequent behavior. Some social scientists suggest that the "culture of poverty" has its own belief system, values, and lifestyle that is self-perpetuating and reinforced by each generation of people born into it

(Spector, 1979). Some characteristics attributed to this so-called "culture" are fatalism, violence, unstable family structure, abandonment, and a total sense of the present. Further studies are necessary, however, to determine whether this is a legitimate label for those unfortunate people or victims who are categorized here.

A brief discussion on social and cultural forces influencing health and illness states is presented to provide an overall framework within which to place the role of health beliefs and practices. In the following section, studies on Navajo health/illness beliefs and practices are presented.

Studies on Navajo Health/Illness Beliefs and Practices

Health/illness perceptions, as they relate to diabetes, are not documented in ethnographic studies of the Navajos, partly due to the relative newness of the disease and partly to the importance placed on modern medical management which often supercedes the role of native views of disease. Kunitz (1983) and others (Kluckholn, 1944; Reichard, 1950; Sandner, 1979), describe how Navajo explanations for disease causation lie in the beliefs of soul loss, intrusive objects, spirit possession, breach of taboo, and witchcraft. Other sources of disease or illness, as viewed by the Navajos, are natural phenomena

such as lightning or wind, powerful forces involved in ceremonials, and evil spirits associated with the dead.

Kunitz (1983) posits that the Navajo belief system toward diseases and health has changed minimally by the incorporation of modern medicine, Peyotism introduced by other tribes, Christianity, and faith healing. He attributes this relative stability in beliefs and practices to the sacredness of the Navajo healing system which is the core of their religion and to the belief system which deals with causative factors rather than just alleviation of symptoms. Thus, Navajo patients may seek relief of symptoms by any means available, whether it be traditional ceremony, Peyotism, or other newer healing systems. Often a combination of several means is practiced.

Health and illness states, particularly among American Indians, are closely linked and intertwined with dietary patterns, social activities and religious practices. The role of dietary patterns and the meaning of food in health/illness states are documented in health and nursing literature (Primeaux & Henderson, 1981). Joos (1984) shows the relationship between diabetes and changes in food sources and preparation among the Florida Seminoles between the early 1900s and contemporary time. In their early reservation days, Seminole people obtained food from hunting, fishing, and farming and ate when hungry during the course of the day's activities; today, most follow a

three-meal-a-day pattern which is structured by wage, work, and school schedules. Food preparation now consists primarily of frying. Consumption is of high carbohydrate snacks. The Seminoles' value and the symbolic meaning of food have remained intact over time, such that the exchange and sharing of food continues to demonstrate cultural value of friendship. Therefore, restrictions of certain foods in order to lose weight or reduce obesity for diabetes management may not be taken seriously. There is no documentation of Navajo health and beliefs and practices relative to the emergence of diabetes and its complications.

There is a paucity of literature on how Navajos within their cultural context discuss symptoms or how they decide to seek health care, whether it be traditional or modern (Kunitz, 1983). Kunitz asserts that Navajo behavior is similar to "other poor people" who attempt to tolerate illness with minimal discomfort until physical function is impaired because treatment is costly. This view is countered by others (Wilson, 1983; Primeaux & Henderson, 1981) who posit that health maintenance and illness prevention practices exist and are strongly integrated in traditional American Indian health systems. Furthermore, other socio-cultural factors such as kinship responsibilities rather than economic needs may prohibit the immediate utilization of modern health care.

Lamphere's (1977) work on cooperative kin and community activities in ritual and economic endeavors of Navajos relates the importance of reciprocal kin networking in the area of health concerns.

Theoretical/Analytical Framework

Leininger's theory of transcultural nursing and health care is used as a guide to describe, explain, and interpret data in this study (1978, 1985). Generally, this theory holds that care and health situations differ as they are molded by people's cognitions, values, and practices among different cultural groups. Also, this theory holds that there exists universal and non-universal care and health features of cultures which are of interest to a humanistic science (i.e., transcultural nursing) (Leininger, 1978, 1981, & 1985).

This theory espouses that social structure features such as religion, kinship, political, and economic values of cultures are interrelated and interdependent with health/illness and care values; and they influence health care differences and similarities across cultures. Efficacious and culturally-appropriate nursing care is contingent upon the use of culturally derived ethnographic data on health/illness situations. Knowledge of different people's cultural values and worldview also contribute to the development of cultural sensitivity in nurses.

This theory is based on the epistemology that people can determine most of their own caring needs based on their cultural knowledge and experiences. The role of nurses and other health care providers is only pertinent and valid when it considers and incorporates those cultural values, beliefs, and behaviors held in esteem by the cultural group. If such nursing fails "to recognize culturological aspects of human needs, there will be signs of less efficacious nursing care practices and some unfavorable consequences to those served" (Leininger, 1978, p. 33).

Leininger's theory of transcultural nursing emphasizes the understanding of people's worldview or discourses prior to assisting them in planning their health care. Understanding may take place at three levels of meaning: real, symbolic, and imaginary (Higgins, 1981). Higgins states that at the real level of meaning, communication deals with actualities of the dialectic relationship between one's self and the multiple contexts in which one lives. The symbolic deals with how people form strategies to understand, alter, or transform particular relationships or realities within their contexts. This may include concepts of health, illness, and caring behaviors. At the imaginary level of meaning, the discourse between professionals and people they serve often becomes exaggerated in the sense that symbols and what is considered real are distorted or weakened. For example,

health professionals may espouse education as the only means to overcome illness, poverty, or ignorance in using the health care system. It is this last level that poses great difficulties between health professionals and their patients.

The concept of culture which transcultural nursing is based on is best described by Max Weber (Geertz, 1973) as follows:

> . . . that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning (Geertz, 1973, p. 5).

To understand the concept of culture through transcultural research, one must experience the subjective reality of people as suggested by Wagner (1975) or via the dialectical process purported by the concept of negativity. Dialectical reasoning is the antithesis of positivism as it calls for the understanding of opposed entities rather than ordered structures or fixed boundaries characterized by positivism. Its epistemological premise is that the objective world has an existence and reality of its own, but its impact on the observer (researcher) is subjective. An interpretive theory of culture, therefore, is crucial in studying people's health/illness and caring situations, as it asks, "why do people do what they do?" rather than "how much effect does X have on Y?"

Because this study is descriptive and exploratory, it is limited to one cultural group and, therefore, does not seek comparative health and care features on a larger level as proposed by Leininger (1985). However, the "thick description" provided may be compared with existing studies in other cultural groups.

Summary

Current literature on the Navajo cultural health beliefs and practices are few, particularly as they pertain to diabetes, the Navajo's health-seeking process, and how prescriptions by providers are followed (or not followed). Studies analyzing diabetes from a sociocultural perspective in other tribes are few (Hagey, 1984; Joos, 1984) but general statements about American Indian health beliefs and practices are made (Primeaux & Henderson, 1983; Wilson, 1983). Diabetes is researched using epidemiologic methods; treatment is thought to be fairly effective if patients adhere to medical advice, but patient belief systems have not been explored or described. This study is an attempt to make the initial step to increase understanding of belief systems among a community of Navajo people with diabetes.

CHAPTER 3

THE HEALTH STATUS OF NAVAJOS AND OTHER INDIANS

To acquire a better understanding of the health status of the Navajos, it is necessary to deal with the historical development of modern health care among the Navajo and their health status in relationship to other American Indians. This chapter looks at the Navajo health status over a period of time and compares Navajo health to that of other Indian groups.

Historically, the involvement of the federal government in Indian health care dates back to the era of treaty-making when Indian tribes agreed to give up their lands and independence in exchange for a protected trusteeship status. Through treaties, the colonial government recognized Indian tribes as sovereign nations, a stance strongly supported by students and experts in Indian law. Most such treaties specified the protection of tribal trust land and water rights, but did not specify the protection of the health of the tribal people although indirect references were made to the well-being of native people (The Navajo Treaty, 1868).

Among the Navajo, the Treaty of 1868, signed by appointed Navajo tribal members and Government agents, did

not specifically cover health care of the Navajos. Over a period of time and many subsequent treaties, the principle of health care was introduced (Kane & Kane, 1972). By the mid-twentieth century, Indian health care had become a federal obligation, perhaps precipitated by the spread of contagious diseases which were introduced by white settlers.

Prior to 1849, the War Department controlled Indian affairs. At that time Indian tribes were settled on reservations, often living in close proximity to military posts. The proximity to military posts created a favorable environment for Indians to contract smallpox, tuberculosis, and other contagious diseases.

In 1849, after the Department of Interior was established, the Bureau of Indian Affairs (BIA) assumed control of medical care for the Indians. At first the BIA restricted medical care to government employees and Indian school students. By 1909, the devastating effects of trachoma and tuberculosis among Indians necessitated the inclusion of those Indians requiring medical care. Subsequently, funds were specifically appropriated for the purpose of health care provision.

In 1955, the responsibility of Indian health care was transferred from the BIA to the Public Health Service (PHS), an agency within the Department of Health, Education, and Welfare (Kane & Kane, 1972). Problems of

high tuberculosis and trachoma rates, low immunization levels, and lack of dental and mental health care remained high. Inadequate facilities and understaffed programs, in addition to the complex lifestyles of Navajo people, contributed to these health problems. The PHS enlisted the services of Commissioned Officer Corps in the Indian Health Service (IHS) as an alternative to military service.

With headquarters in Washington, D.C., the newly formed IHS became a hierarchical organization which was departmentalized into several area offices. Each area office, comprised of several service units, provided health care to local residents. From 1955 to 1967, service units on the Navajo Reservation were part of the Albuquerque Area Office of IHS. Later, the Navajo Area Office was established in Window Rock, Arizona, to administer the Navajo Service Units for a large population which has grown to approximately 200,000 today (Navajo informant, personal communication, 1986).

Thus, the history of federal Navajo Indian health care emerged in piece-meal fashion and often in response to crisis situations. It is unclear if the treaty of 1868, (the first treaty between the Navajo people and the United States Government), guaranteed health care to the Navajos. However, Navajos as well as other Indian people

> were guaranteed continuing rights to reservation lands and collective existence in return for relinquishing their claims to the greater continent. There is no analogous situation in the United States today. The

> goal of the Indian Health Service cannot be limited to the provision of quality medical care; that must be provided in a context which preserves the right of the Indian to his own group identity and life on his own land (Kane & Kane, 1972, p. 8).

Health Care of Navajos: 1940s and 1950s

Trachoma, tuberculosis, and other contagious diseases were rampant during this period and presented great challenges to the people, and those involved in Indian health care. Navajos lived in remote areas of the reservation, with most roads travelled only by horses or wagons; trained medical personnel were few and not readily available. Most people had not encountered the formalized Western-oriented health care system although remnants of it were present since the early 1900s (Kane & Kane, 1972).

Treatment was not sought for contagious diseases, which were easily preventable or treated, because of the Navajo peoples' use of indigenous practitioners and the pervasive dominance of cultural practices, values, and beliefs surrounding their health and illness. Individuals who did use medical facilities often did so only when problems were most critical, thus limiting the effectiveness of Western medicine. As a result, the patients often died. Consequently, hospitals were seen as places to die; people avoided them for fear of death or ghosts of the deceased. Because many of the early medical physicians were missionaries, their interests were not only

to provide medical care, but also to proselytize and assimilate native people into a different way of life.

The Indian Health Service operated nine hospitals within the larger communities and agencies on the Navajo reservation, but access was a tremendous problem. Hospitalization often meant isolation from familiar surroundings and relatives; many patients were homesick and often left the hospital without the knowledge of providers.

Health Care of Navajos: 1960s and 1970s

Between 1950 and 1960, the number of physicians serving the Navajos increased from 16 to 43. The physicians themselves shifted from missionary types to those with more interest and respect for the peoples' culture. An increase in patient utilization of health care facilities was observed in outpatient visits and hospitalization for deliveries. Correspondingly, infant mortality declined 50 percent between 1954 and 1959, and the tuberculosis rate also decreased 60 percent (Iverson, 1981).

In spite of the decreasing prevalence of contagious diseases and maternal-infant morbidity, the health of the people remained very poor during the 1970s. The medical draft during the years of the Vietnam period brought in many young physicians, directly out of internship programs, to serve a 2-year obligation in the PHS. These professionals were not accepted by Navajo patients because

of their relative inexperience, the brevity of time spent on the reservation, and their cultural and physical isolation from the people (Iverson, 1981; Kane & Kane, 1972).

To address the shortage of Navajo-speaking health care providers, the Navajo Area Community Health Program began training paraprofessionals to serve as physician assistants in 1971. The medics were invaluable as they spoke the language, provided more personalized care, and saw outpatient clients who comprised about 90 percent of the health care in IHS at that time.

In 1974, more than 120 lay people were trained as community health representatives (CHRs). These individuals served as a tribal liaison between the people and the health care professionals. The CHRs performed a variety of tasks from translating for community health nurses to providing simple health care activities in remote areas.

In concert with a new tribal direction to increase and promote tribal self-sufficiency in all areas, a Navajo Area Indian Health Advisory Board was created in 1970, to provide a forum for local perspective in local health matters (Iverson, 1981). However, these changes could not penetrate some internal problems within the PHS system. Chronic problems of insufficient federal funding, the shortage of nurses and physicians, and a severe lack of

facilities and equipment continued to plague the PHS and the Navajo people.

In 1977 the Division of Health Improvement Services (DHIS) was established to coordinate the planning and organization of health care delivery with all other health care agencies (Iverson, 1981). A major achievement of this department was the completion of the first comprehensive health plan designed for the entire Navajo reservation. The establishment of the Navajo DHIS (Iverson, 1981) and other achievements created a harmonious blend of Western and Navajo health care practices among the Navajo people.

Two important pieces of legislation, relevant to Indian health care discussions, were passed during this time period. Under the Indian Self-Determination and Education Assistance Act of 1975 (Public Law 93-638), tribes were given the option of assuming IHS and BIA programs which were managed by the government. However, many tribes now question whether the intent of this bill is another "termination" policy in which the federal government is attempting to shirk its treaty obligation to Indian tribes. Several reasons are given for tribal reluctance in assuming management of health and education services (Office of Technology Assessment (OTA), 1986). Among this list are: (1) A lack of tribal administrative experience in health care management, (2) whether IHS would continue to fund tribally-administered funds at previous

levels, (3) difficulty in receiving unanimous approval by all tribes served within a service unit, and (4) the disparity in available tribal funds for salaries and fringe benefits if they were to cover former federal employees.

The Indian Health Care Improvement Act of 1976 authorized urban Indian health programs to contract with IHS for funds to operate health care centers with an emphasis on increasing access to existing public programs. Up until this time, the IHS primarily served reservation-based populations. As more than one-half of the Indian people migrated to urban areas, they lacked either the funds to seek health care or the knowledge of how urban health care systems are utilized. In 1984 there were 37 urban Indian health centers which provided direct or referral services to both Indians and non-Indians. As the number of Indian health doctors diminished, tribal groups are challenged to work closely and effectively with Congress and the judicial systems to resolve health care issues, interpret Congressional intent behind statutes, determine where budgets should be cut, and prevent defeat of legislation such as the Indian Health Care Improvement Act which already faced extinction in 1980 and 1984.

Health Care of the Navajos: 1980s

Many changes are taking within the IHS and among Indian people during the 1980s. The Department of Health, Education, and Welfare was formally renamed the Department

of Health and Human Services (DHHS). Also, due to the ever expanding Indian population and the decrease in federal dollars appropriated to the IHS, criteria regarding service eligibility were established with eligible recipients of IHS services being:

> persons of Indian descent belonging to the Indian community in which he/she lives based on tribal membership or enrollment, residence of restricted property, active participation in tribal affairs, or other factors in keeping with general BIA practice in the jurisdiction (OTA, 1986, p. 3).

Eligibility for IHS health care is a major concern as many Indian people move into metropolitan areas and intermarry with non-Indian people. In spite of these changes, the health status of Indians both on and off reservations remains poorer compared to the general U.S. population. Today, the IHS serves approximately one million eligible service population (Smith, 1987).

The IHS remains hampered by a shortage of qualified personnel. Anglo physicians, who serve 2 years to fulfill a government pay back for educational expenses, continue to come and go. The passing of the Vietnam era and the draft introduced a severe shortage as physicians no longer are required to serve a military commitment. The National Health Service Corp (NHSC) will soon be phased out and there are few Navajo physicians and nurses. NHSC physicians are the main source of medical providers in the 1980s as they replace the Vietnam-era physicians. Navajo professionals, who spend at least 4 years away from the

reservation for their training, become all too comfortable in the Western world and do not return to the reservation where their skills are in great demand. Often these individuals become acculturated into an urban environment which is less demanding. Health care facilities on the reservation usually lack state of the art amenities and personnel, unlike urban-based facilities (Iverson, 1981).

The future of the IHS is volatile due to the shortage of voluntary providers, the ever-decreasing government funds, and the growing population of Indian people. Smith (1987) suggests two alternatives to reduction of services: (1) Closure of facilities and heavy reliance on contract health services, and (2) Congress must encourage more demonstration programs such as Indian enrollment in health maintenance organizations as well as more state cooperation in working with Indian enrollment in Medicaid programs. These alternatives would alleviate the demand on the IHS system. However, Indian people may perceive these possible solutions as another threat to their sovereign status and their special relationship with the federal government.

American Indian Health Care Status

The average life span of American Indians in the 1950s was 44 years of age. By 1982, 37 percent of those younger than 45 years of age were dying, compared to 12 percent in the United States among the same age group. One reason for this disproportionate mortality figure is the younger

population in American Indians as a result of their higher birth rate.

According to a report by the Office of Technology Assessment (OTA, 1986), Indian health statistics have changed dramatically since the 1950s. For instance, influenza/pneumonia, tuberculosis, and certain diseases of early infancy which were ranked 3rd, 4th, and 5th in the 1950s are now ranked 6th (influenza/pneumonia), 10th (perinatal condition), and 15th (tuberculosis). Gastritis, which was ranked 7th, no longer appears as one of the 15 leading causes of Indian death. Diabetes, which was not included as one of the 10 leading causes of death in 1950, is now ranked 7th. Heart disease and accidents remain the two leading causes of Indian deaths since 1980 (i.e., more Indians die from heart disease than do all the combined races in the United States). However, mortality rates vary by IHS service regions. Indian accidental mortality (due predominantly to motor vehicle accidents) is 3.4 times higher than all other races in the United States. The 10 leading causes of death among American Indians as compared to the United States (all races) in 1986 are listed in Table 1.

Infant mortality, which was one of the major threats to the health of the Navajo, has substantially improved as shown in Table 2. Navajo infant mortality is lower than the IHS rate as a whole but remains slightly higher than

Table 1

Top Ten Leading Causes of Death Among American Indians in 1986

Rank	Cause	American Indian Age Adjusted	U.S. All Races Rate	Ratio
1.	Heart disease	166.7	195.0	0.9
2.	Accidents	136.2	39.8	3.4*
3.	Malignant neoplasms	98.4	131.6	0.7
4.	Liver disease/cirrhosis	48.1	11.4	4.2*
5.	Cerebrovascular disease	33.8	38.1	0.9
6.	Pneumonia/influenza	22.6	12.3	2.2*
7.	Diabetes mellitus	27.8	9.8	2.8*
8.	Homicide	21.2	10.4	2.0*
9.	Suicide	19.4	11.5	1.7
10.	Perinatal conditions	9.8	9.2	1.1
All	All causes	778.3	568.2	1.4

*Ratio is at least 2.0 as compared to U.S. all races

Source: Office of Technology Assessment. (1986). Indian Health Care (OTA-H-290). Washington, D.C.: U.S. Government Printing Office.

Table 2

Infant Mortality Rates: Navajo Area, IHS (1980-1982), and U.S., All Races

	Navajo	IHS	U. S. All Races
Neonates, Post-Neonates and Combined	12.8	13.3	11.9
Neonates (0 - 27 days)	4.2	5.8	8.0
Post-Neonatal 28 days - 1 year	8.6	7.4	3.9

Source: Office of Technology Assessment. (1986). Indian Health Care (OTA-H-290). Washington, D.C.: U.S. Government Printing Office.

the United States rate for neonates and post neonates. The higher post-neonatal mortality is due to Sudden Infant Death Syndrome (SIDS) associated with low-birth weight infants born to young mothers who are 19 years or younger.

Diabetes

Type II diabetes is one of several major chronic diseases increasing in morbidity and mortality among the Navajo and other Indian people (personal communication with IHS providers; Gohdes, 1986; OTA, 1986). Among outpatient visits recorded throughout IHS facilities between 1982 and 1983, diabetes is the second leading clinical impression recorded among patients older than 15 years (Gohdes, 1986). Diabetes ranks sixth among the 25 to 44 year-old age group who were seen in outpatient clinics.

Hospitalization data indicate that utilization rates are highest among the 45- to 64-year-old age group and again document diabetes as the first diagnosis (Gohdes, 1986). Microvascular and macrovascular diseases such as lower-extremity amputation, chronic renal failure, and ischemic heart disease accounted for most diabetes-related hospitalizations. In the Navajo Area, diabetes was associated with 60 percent of total amputations performed, 27 percent of ischemic heart disease discharges, and 18 percent of renal failure discharges between October 1982 and September 1983 (Gohdes, 1986).

The age-adjusted mortality for diabetes throughout all IHS service areas exceeds the overall United States' rate by at least twice (Gohdes, 1986; OTA, 1986). Age-specific rates show that American Indians, in age group 55 to 64 years, experience three times the mortality of all races in the United States. In the Navajo service area, the age-adjusted mortality is about 1.5 times that of the U.S. rate. Although the problem of diabetes and its complications is not as high as other IHS areas, it is becoming a major health problem within the reservation.

Summary

In general, the health of the Navajo people, as well as other American Indians, remains poorer than that of the general United States' population as indicated by mortality and health care utilization patterns within the IHS system.

Since the 1950s, major achievements have been made by the IHS to eliminate or decrease contagious diseases to manageable levels. However, Navajo people today are faced with an increase of chronic diseases (i.e., hypertension, diabetes, and heart disease) as they experience changes in economic and sociocultural conditions. Navajo health problems related to diabetes may be considered intermediate as compared to other American Indian groups; however, diabetes morbidity and mortality are becoming serious health problems.

It is this growing threat which provides an impetus to this present research. Chapter 4 describes the process taken to develop this study.

CHAPTER 4

RESEARCH PROCESS

Introduction

This writer's interest in diabetes was piqued in 1980 while working in a hospital-based teaching unit providing care and instructing people with diabetes how to face the challenges of this devastating disease. Between 1982 and 1985, I was involved in a public health project whose purpose was to decrease the effects of diabetes among a tribal group in Utah. During this period, the serious problem that Type II diabetes is among American Indian tribes became evident. After participating in a small research study to identify how this tribal group viewed diabetes, my interest turned toward exploring health/ illness beliefs and practices of the Navajos. It is hoped that this research process contributes to various aspects of Navajo patient care and education from the perspective of a Navajo health professional.

Research Approval

Approval to conduct research among human subjects was first granted by the University of Utah Health Sciences Institutional Review Board (IRB). Next, the proposal was submitted to the Navajo Area Research Committee (Appendix

A) which consists of representatives from both the IHS and the Navajo Tribe. Simultaneously, permission was sought from the Service Unit which has local jurisdiction over health-related matters among residents of Elbow Creek. In April 1986, a presentation was made to the local Health Board which represents 22 chapters within the service unit. The Health Board membership was exclusively Navajo, hence, the presentation was presented in the Navajo language.

Once approval was granted from all the above-named entities, local people needed to be informed. After moving to the reservation during the summer of 1986, this writer sought out the chapter officials of Elbow Creek requesting permission to be placed on the agenda for the next chapter meeting. Approval was provided without difficulty at the chapter meeting in July 1986.

After two weeks in Elbow Creek and upon becoming familiar with the people and the land, selection of informants to be interviewed began.

Protection of Privacy and Confidentiality

To maintain the anonymity of informants and places, pseudonyms are used throughout the text.

Informant Selection

Navajo informants were selected using a convenience method. It was discovered that the field clinic did not maintain a formal roster of people with diabetes. Names

and locations of people were culled from separate lists kept by the local clinic, community health nurse, and the service unit clinic. Because Elbow Creek was in the midst of a three-month diabetes screening campaign, several names provided were of people who had randomly-drawn elevated blood glucose levels but were not yet diagnosed. These individuals often stated that they were not told they had diabetes. These individuals were later excluded from the interviews.

Informants with diabetes were interviewed once in their homes (n=26), place of employment (n=2), or the Senior Citizens Lunch Center (n=2). Each interview, which was conducted in Navajo, took approximately 1 hour. As most informants were older, traditional Navajo people who spoke only Navajo, each gave an oral consent which they preferred over a written formal consent. Most were not literate and were not involved in wage work outside the home. Each informant received explanations of the study as outlined in the consent form (Appendix B) and each received a written copy of the consent form.

In addition to 30 informants with diabetes, six relatives were interviewed. Except for two, relatives of the diabetic person (primary informant) were present during the interviews. This writer initially expected to interview one or two relatives of each diabetic informant; however, most of the time in the field was consumed in

identifying and locating the primary informants. When relatives were present during the interviews, both individuals expressed their views, stating that they both share the experience of living with diabetes. No attempt was made to isolate primary informants from relatives during the interviews. One woman and one man agreed to be interviewed at their place of employment; they each had a sibling with diabetes and were willing to share their experiences.

Ten health care providers, one-half of whom were Navajos, were interviewed in their place of employment (clinic or hospital). These individuals had responsibilities in the service unit diabetes program. Two were employed in the small field clinic located in Elbow Creek. Each gave a written consent and received a copy of the consent form. These interviews took 30 minutes to one hour each. All interviews with health care providers, except one where the recorder malfunctioned, were tape recorded and later transcribed. Taped interviews were not attempted with Navajo informants due to their cultural beliefs that they would experience a sense of "loss of voice/words." Their suspicion of governmental tactics also was taken into consideration.

Additional data were collected via interviews with two medicine men, the local trader, and two school officials. One medicine man was a young apprentice who was learning

the art and skills from his father. The second medicine man was an older man who was a diagnostician. The younger man attempted to arrange an interview between his father and this writer, but the older man's extremely busy schedule did not allow for a meeting. The local trader, a young Anglo man, willingly agreed to provide information about his relationship with and observations of local people, including common business practices.

In addition to interviews with Navajo people and health care providers, data on community-level activities were collected utilizing the participant-observation method. This writer attended two community business meetings (chapter meetings), a political rally, a women's conference, a funeral, and an adolescent girl's "initiation" ceremony called Kinaalda. Observations were also made of the diabetes education and clinic sessions held at the service unit clinic, 25 miles away. All Elbow Creek people with diabetes received appointments for medical check-ups and education at this facility. The local field clinic did not have its own formal diabetes clinic/education program.

The trading post and convenience store served as daily observation sites, as well as the Senior Citizens' Center. The Senior Center's staff was extremely helpful in providing logistical orientation. In fact, the Center's

bus driver pointed out landmarks, names of each settlement, and Navajo names of people living within Elbow Creek.

All interviews with informants and observations were recorded on note pads immediately following the events but out of sight of informants. A review of all daily interviews was conducted every night. All interview notes were later transcribed by a typist. Nightly reviews served to generate further questions which were then asked in future interviews.

Demographic Characteristics of Navajo Informants

Table 3 shows the age and gender characteristics of the Elbow Creek informants. The average age of the informant is 57.3 years and median age is 57 years. The informants range in age from a 32-year-old female to a 74-year-old female.

In this population where unemployment and illiteracy rates are high, it is somewhat ironic to ask specific questions about occupation and education. However, it is important to provide some demographic information for the reader, as shown in Table 4. There were nine individuals who considered themselves "too old" or incapable of continuing their previous lifestyle which provided some income. These individuals receive governmental assistance. Five wage workers (all male) receive their income exclusively from their employment. Among the group, only

Table 3

Age and Gender of Navajo Informants

Gender	N	Average Age	Median Age	Age Range
Male	12	54.75	55.5	40 - 75
Female	18	58.94	59.5	32 - 74
All	30	57.26	57.0	32 - 74

Table 4

Selected Characteristics of

Navajo Informants

	Occupation					Some Formal Education	
Gender	Retired/ Inactive	Herder	Weaver	Gardener	Wage	Yes	No
Male	3	2	0	3	5	7	5
Female	6	8	6	3	0	3	15
Total	9	10	6	6	5	10	20

Retired = 9 (6 females, 3 males)

one spouse was also employed. The remainder of the 16 people reported occupations of herder, weaver, and gardener, which provides some income but not enough to earn a sufficient living. Women often are involved in a combination of herding, weaving, and gardening, while men may do some gardening and herding. Weaving is an exclusive female activity.

Older Navajo people do not normally discuss education levels or achievement; therefore, education is listed as either yes or no. One-third of the sample has some education, none of whom completed high school. Three of the informants with some formal education have children who speak English as a primary language. Navajo was the preferred language spoken by all informants, including those with some education.

Interview Schedule

Interview schedules (Appendix C) were designed for both Navajo informants and health care providers. These schedules were used informally and contained open-ended questions. Although in this type of study, pretesting is unnecessary, the questions were reviewed with four Navajo individuals to "test this writer's Navajo language skills" and to see if the open-ended questions would elicit a discussion.

In the interviews, these questions were only used as guides or points of entry. Other subquestions emerged

throughout the course of the discussion. For instance, when discussing various foods, the informant provided an example of a summer food, or foods considered strong to attain health.

Appendix D contains the questionnaire which was used for Health Care Provider informants.

The Researcher as a Tool

In a study utilizing techniques of participant observation, and particularly when studying one's own society, questions of objectivity must be faced. As discussed in Chapter 1, this study elicited the subjective experiences of Navajo people with diabetes.

One important advantage in studying one's own culture is that the researcher does not have to try to become "like the natives." Messerschmidt (1981) states that the "extent of relative 'insidedness' and 'identity' between researcher and subjects is best conceived of as a continuum from virtual oneness to a marginal nearness" (Messerschmidt, 1981, p. 8). At one end of the continuum, the researcher may have no difficulty being accepted by and identified as one of the local people. At the other extreme, the researcher, while identifying with the social background of the informants, may encounter much difficulty in actually breaching the philosophical or subtle class boundaries of the informants.

As a research tool (Pelto & Pelto, 1978), this writer's purpose was to tap the subjective experience of Navajos with diabetes. Thus it was important for me, as a Navajo who speaks the language, to observe acceptable local etiquette. Although I introduced myself as a nursing student, it was equally important to introduce myself by clan. This introduction established my kin and clan relationship with the informants, which made the rest of the encounter go smoothly. Through this type of identification with "kin," I became a "daughter," "grand daughter," "sister," or "aunt" to most informants. Through these newly established relationships, I was not only able to "get to" the subjective experience of my informants with diabetes, but to reaffirm my "nativeness" and view the world from the Navajo perspective.

Field researchers may become their own key informants while studying within their own culture (Hennigh, 1981). By doing so, one provides a proper perspective through comprehension of the entire system and objectivity by testing reality and responding significantly to social stimuli. Accordingly, I attempted to place the phenomenon of diabetes as an illness within its proper perspective in the Navajo worldview within Elbow Creek. Although objectivity is difficult to achieve, whether in natural or experimental settings due to the influence of researchers, it nevertheless is present because researchers must

confront it via cultural critique (Marcus & Fischer, 1986). Researchers must be self-critical to the origins of their own ideas and arguments while interpreting behaviors of a society of which they are full members.

Most ethnographic studies are conducted by researchers within a culture different from their own. Studying within one's own culture is a recent movement in anthropology. It has both advantages and disadvantages and may pose some difficulties. Because of subcultural differences, conformity to local norms may be difficult. On the whole, this was not the case for me. In only one instance was my role as "learner" of the local culture questioned by one middle-aged male Navajo informant. When explaining my learning about diabetes in the Navajo, he remarked, "I can't believe that someone who is a nurse and with that much education would not know about diabetes. You should tell us about it." Once he understood that people have varying experiences and perspectives, he agreed to talk to me.

Summary

This chapter outlines the research process. Approval for research was sought and granted at six levels. Selection of informants from Elbow Creek was based on a convenient method of obtaining names from three different sources. Informants were described by age, gender, occupation, and education. An open-ended interview

schedule was designed for both Navajo informants and health care providers. The advantages of a Navajo professional as a research tool is presented.

Chapter 5 provides a discussion of sociocultural factors which provides a background understanding of the diabetes problem in the Navajo community.

CHAPTER 5

SOCIAL CONTEXT OF ELBOW CREEK NAVAJOS

To better understand the health beliefs and practices of a cultural group, one must first examine the socio-cultural context within which people live. Health and illness occur within this framework and form only parts of the sociocultural whole as illustrated by Leininger's (1985) theory described in Chapter 1.

This chapter describes the residential pattern, leisure activities, political structure, religion, food patterns, trading posts, and formal education in Elbow Creek. Data were collected through participant-observation as well as formal and informal interviews with residents of Elbow Creek. The words Navajo and Dine' will be used interchangeably. The former is a name given them by the Spaniards, while the latter is an indigenous tribal name.

Residential Patterns

Traditionally, Navajos or Dine' lived in matrilocal residences which were headed by a grandmother and composed of her daughters, their spouses, and children. Anthropologists referred to the physical grouping of homes as camps, a label which Navajo people have come to resent. To the Navajos, camps connote temporary and unstable living

arrangements which are contrary to the Navajo views of home as a permanent dwelling tied intricately to one's birth place and maternal lineage. Prior to the introduction of wage work, families often resided in two or three locations depending on the season of the year and the availability of grass for sheep and horses. Winter homes were more permanent while summer mountain homes were typically temporary settlements which more appropriately resembled camps. Some Navajos also claimed ownership to agricultural lands which they worked part of the year and also provided temporary enjoyment during the harvest season.

With the introduction of wage work and changes within the larger socioeconomic Navajo world, residential living patterns are undergoing transition toward a more sedentary lifestyle. Older Navajo residents of Elbow Creek are continuing the traditional lifestyle of taking their herd of sheep to the nearby mountain in the summer and living most of the year at their permanent desert homes. Younger Navajo residents, who are engaged in wage work, find it more convenient to move into modern homes with electricity and running water either in the community center of Elbow Creek or off the reservation in border towns, closer to their places of employment. Several informants proudly noted that their children bought a home within a subdivision in a nearby bordertown.

Of the 30 Elbow Creek informants, five had moved from their "desert" homes and moved into housing units located within the community center. Three of these five informants were involved in various jobs in the community. Two older couples lived in the local tribal mutual help housing unit for two different reasons. One retired couple with some formal education and retirement income found it easier to move out of their old "cramped" mobile home into a newer larger house. The other couple who still had a home in the desert and are more traditional moved into this house with their single daughter who works in the community. The man receives disability income. This couple often returned to their desert home with which they maintain traditional and emotional ties; however, they find it physically easier to live in a modern home.

The remaining informants live in desert dwellings with or close to other relatives. They are content with the traditional way of life. Their homes are either hogans or modern ranch style homes without electricity, running water, or modern appliances. Hogans vary from mud-covered structures to newer types with wood frames and shingled roofs. Most have a herd of sheep and/or cattle which provide most of the food and minimal income they have.

Most of the people living in housing units have families still living in outlying desert dwellings; many see advantages of living "out there." Some of these

advantages are privacy, open area, a place to prepare traditional meals, and closeness to relatives. Thus, poor health and access to employment were two reasons Elbow Creek residents moved from traditional matrilocal residences in the desert to modern houses in the community center.

Leisure Activities

One way of finding out how people spend their time is to ask them, "What is a typical day for you?" The first five informants offered three different responses, "We go after the sheep, that's all," "We work everyday," or "Everyday is different, I don't plan what I will do." The first response was typically made by older people who have a herd of sheep, while the second response was made by younger wage workers. The third response came from those who were neither herders nor wage earners.

For the most part, people rise at approximately 5:00 a.m. in the summer so they can complete their morning chores before the temperatures reach 90 degrees or so. The morning meal is prepared and consumed by 6:30 a.m. and those who have sheep take them out to graze for about four hours. Butchering of sheep for a special event takes place early in the morning when the sheep's gastrointestinal system is fairly empty. The mutton is then distributed among relatives who attend the local event. Typically, the

legs and ribs of the animal are donated to the potluck dinner if the event is sponsored by the community.

When sheep are herded home at mid-day, they are either left within the vicinity of the home or they are returned to the corral. During this time, the herder and the family prepare a light hot lunch or wait for the Senior Citizens' lunch delivery. All the elderly who receive these lunches tend to accept it without any complaints but eat selectively. I interviewed one couple during lunch in their home. They added their own tortillas (left from the morning meal) to the salisbury steak, mashed potatoes, and cooked vegetables and made a small pot of freshly brewed coffee. They did not eat the rolls and the tomato juice that were delivered.

Following lunch, a 2 to 3 hour rest period is taken. Women who are weavers spend this time carding, spinning, or weaving. Visiting from relatives may take place during this time or in late afternoon once it has cooled off. Although sheep are sheared in the late spring to remove the winter wool, they do not graze when taken out in the middle of the hot day. Thus, both the herd and the herder rest until about 2:00 p.m.

The herder takes the sheep out again for three to four hours to graze and water at the closest windmill or spring. Those who consider themselves fit and without arthritis walk after the sheep while most go on horseback. In only

one instance did this writer see a woman and her young children "herding sheep by pickup truck."

Most sheepherders take their sheep to the mountain camp for about a month at a time during the summer. Relatives who live in border towns may "come home" to assist with the herding or may haul supplies including food, water, and bedrolls to the mountain camp. Small lambs and stragglers may be transported by pickup truck. Mountain homes consist of either a sheepherder tent, or small shed or hogan, as well as a sheep corral. A large, sturdy dwelling is not possible because the area is primitive and narrow dirt roads are rough and impassable following thunderstorms.

Summer events of importance to sheepherders (but not considered leisure) are horse branding, sheep dipping or spraying, and the move to and back from the mountains. This writer wanted to know what sheepherders did from fall to spring and inquired about the activities that sheepherders consider important during the remaining seasons. Lambing season takes place during March and April, sheep shearing occurs in April and May, and sheep dipping is taken care of in May or June. Sheep branding or the marking of lambs' ears is done in the late spring in case they are lost in the mountains. In the winter, those who can afford it hire a sheepherder to follow the flock everyday. Hired herders are paid about $100 per month with

room and meals provided. Hay and grain are purchased and stored in case of a heavy blizzard. Those who are unable to afford hired help take care of their own flock. In the fall, most Navajo families go on pinon (pine) nut-picking trips, either locally or off the reservation. In the fall of 1986, pine nuts were plentiful locally so this writer accepted an invitation to go on a nut-picking day trip.

Political Structure

Within the Navajo tribal political structure, Elbow Creek is one of 22 small communities designated as a political unit called a chapter. Chapters elect a council representative to the Navajo Tribal Council. The Navajo Tribal Council is the governing body of the Navajo Tribe. Chapters have elected officials who oversee decision-making and planning, and provide leadership to the community. Chapter managers are administrative personnel who manage day-to-day activities of the chapter operations. Many chapter officials are elected, based on their wisdom and traditional thinking rather than their education. Thus, it is prudent for hired chapter managers to have a high school background so they can read and write official documents and translate them for elder elected officials who are leaders of the community.

Besides the chapter president, vice president, secretary, and council, additional important elected officials are representatives for the grazing committee,

health board, land, and livestock. Through these organized monthly meetings, local residents vote on issues which are then taken to the Navajo Tribal Council by their representatives for further discussion or approval. During the course of this writer's research in the area, the Elbow Creek Chapter had posted a list of identified community needs which were under consideration. They were as follows:

1. Economic Development.
    a. Shopping center, motel, restaurant, and other services and shops (at nearby tourist center).
    b. Recreation center.
    c. Multi-purpose building.
2. Community Development.
    a. Powerline extension.
    b. Waterline extension and water development.
    c. Housing and home improvement.
    d. Adequate health facilities.
    e. Irrigation system and farm improvement.
    f. Veteran memorial.

This list of items was identified by officials and favorably voted on by Elbow Creek residents. The extension of powerlines and waterlines was discussed at one of the chapter meetings this writer attended. Some families had requested power and indoor plumbing but there were not enough requests to make the project "cost effective," so

more names were solicited to strengthen their request. Housing and home improvements are on-going projects which require a written request and public approval by the chapter before tribal funds are dispersed. Some home improvements are necessitated by ill health and funds come from nontribal sources to provide assistance. Most services and materials used in these projects are not totally free to all people. Some people purchase their own building materials and request labor provided by tribal funds.

At the time of this study, political campaigning for the Navajo Tribal Chairmanship was highly evident throughout the reservation. Following the primary elections (in which this writer voted), two candidates emerged, one of whom was known in Elbow Creek as "our own son." A political rally and feast was sponsored by the chapter to honor him. Much of the discussion centered around the removal of Navajo people who lived in the disputed land jointly used by the Navajo and Hopi tribes. Although the people of Elbow Creek were geographically removed from this area by at least 100 miles, the emotions and reality of evacuating people who have lived on the disputed land for almost a century were foremost in Navajo minds. Other issues pertained to the necessity of available educational assistance for all high school

graduates regardless of grades, and the making of social services more readily available to veterans.

Religion

The traditional Navajo worldview does not isolate religion from daily activities. Religious beliefs and practices are closely integrated into all daily activities. Today, as more interaction takes place with outsiders across the reservation boundaries, Navajo people are facing exposure to religion as a separate entity from daily life. The influence of various religious affiliations and denominations present since the early days of missionaries have also made a strong impact on how Navajos view the world.

Kunitz (1983) speaks of three distinct religious persuasions present on the Navajo reservation: (1) Navajo traditional practices, (2) the Native American Church, and (3) the Pentecostal Church. In addition to these three, a fourth representation, a combination of Navajo and Native American Church or Navajo and Pentecostal practices, was also found in this study. These combined practices are described later in this paper.

Older informants in this study, who continue to live a more traditional lifestyle, continue to practice sacred religious acts and rituals (the Navajo Way) on a daily basis. This includes such things as sprinkling corn pollen or corn meal before sunrise and offering prayers of

appreciation for food, livestock, and daily existence. Some informants practice these acts only when they are ill, while attending a sing, or when they visit a medicine man. Two men engaged in wage work participate weekly in sweat baths as a purification ritual.

In the community there were three small churches representing the Southern Baptist, Christian Reformed, and the Latter Day Saints (LDS). Only one informant, a 59-year-old woman revealed that she occasionally attends the LDS Church when her children provide the transportation. None of the informants considered themselves regular members of any of these churches. Some have relatives who belonged to the pentecostal groups who hold frequent "camp revivals" throughout the summer. The daily Navajo radio program makes numerous announcements of impending revivals and camp meetings headed by Navajo men trained as evangelists.

Unable to attend a revival, this writer was informed that they last between 4 to 5 hours every night for a week. Interspersed with the songs and prayers, time is designated for personal testimonies and special prayer requests. At the close of the nightly activities, "coffee" is provided. "Coffee," however, meant treats like pastries and punch, or stew and fry bread or tortillas.

Returning at a later time, this writer attended a pentecostal church which had a fairly small congregation.

There were 14 young adults and six older adults besides the two young couples who were church leaders. The church was newly built; in fact, dedication ceremonies were planned for the following week. The people in attendance were actively involved in the services. They stood during prayers and joined hands to form a circle during the "closing prayer." At one point, about halfway during the service, everyone stood to sing and clapped and marched around the arrangement of chairs. The preacher encouraged this movement by stating, "Some of you may have arthritis and do not wish to move; it's good for you to move around." Much of the singing was done in Navajo; however, three young women "songleaders" interspersed the Navajo music with English versions. Most of the older adults only knew Navajo. Following the services, the congregation was invited next door for lemonade and fry bread.

Food Patterns

Darby, Salisbury, McGanety, Johnson, Bridgforth, and Sandstead (1956) wrote, "Communication and transportation facilities and roads are underdeveloped so most residents are isolated and the region is dependent to an unusual extent upon home-produced fresh and dried foods and meats" (Darby et al., 1956, p. 5).

Although modern communication and transportation modes remain a problem for many, the introduction of a variety of foods from outside the reservation has modified the methods

of food production and consumption. Many people depend primarily on store-bought foods and packaged commodity foods donated by the United States Department of Agriculture (USDA) program.

Livestock production and consumption have always been practiced since sheep, goats, horses, and mules were introduced to the Dine'. Although beef production and consumption are practiced, it remains fairly limited when compared to other meat sources. Perhaps this is due to the large amount of forage required to raise cattle on the sparse Navajo reservation. (Forage required to raise one sheep for 12 months is expressed as one sheep unit or one goat unit; one cattle is equivalent to four sheep units, and one horse is equivalent to five sheep units on the reservation.)

Nowadays, some families are either adding a small herd of cattle to their sheep herd or replacing sheep with cattle as an economic base and for home consumption. The amount and type of vegetation available is undesirable for cattle, so families supplement their livestock nutrition with alfalfa bought from the trading post, local Navajo farmers, or Anglo farmers from adjacent border towns.

Overgrazing on reservation land by sheep became a problem in the early 1930s when the United States government instituted measures to protect the land against soil erosion. However, many Navajos disagreed with the

real intent of this governmental regulation and today, many continue to believe that the measure was another way of forcing the Navajo to abandon sheepherding and become more Anglocized by moving off the reservation lands.

During pre- and early reservation periods, the Navajo subsisted on wild game (prairie dogs, rabbit, deer), corn, and a large variety of wild plants. Cultivation of beans, squashes, and melons were introduced by outsiders, primarily Spaniards. To some extent, Navajos continue to use uncultivated foods, both plant and animal. During this study, this writer was served sumac berries (chil-chin) which had been dried, ground into a paste, and cooked with flour and water to a consistency of creamed soup. Pinon nuts (neesh-chee') are also a favorite in the fall. These nuts are roasted, sometimes with salt, and shared with family members during the winter months or sold to the trading post for $1.50 to $2.50 per pound. I was told that those who sold nuts were individuals who need extra income and often had more time to spend picking the nuts.

The Role of the Trading Post

Over the years, trading posts have not only played an influential role in the economics and the exchange of goods, but have also had impact in the realm of social, educational, political, and health needs of the Navajo people. Trading posts may be credited with introducing canned and packaged foods, including some vegetables and

fruit, to the people. Although the variety of these food items are limited, Navajo people have historically relied on the trading post to supplement their home-produced food stuffs. Historically, staple foods purchased from the trading post are potatoes, flour, lard, baking powder, salt, sugar, canned evaporated milk, cereal, and coffee. Canned milk was used in cereals or to feed baby lambs or kids. Potatoes are often fried while flour is used to make tortillas or fry bread. Soda pop, in six-packs or individual cans has become a favorite drink.

Meats are sold in larger quantity from the trading post, although most families continue to butcher their own sheep and goats. Store meats are often locally grown, or butchered and packaged off the reservation. The trading posts this writer visited offered mutton, beef, and chicken (either fresh or frozen). Fish is not usually eaten by the Navajo; therefore, fresh or frozen fish was not seen in the meat section of the trading posts; however, canned fish is available.

One meat market, located about 40 miles away from Elbow Creek, offers mutton and organ meats of sheep. In fact, it became a regular weekly stop for this writer when going into town for food and laundry. My favorite item was Ah-chee', the sheep's small intestine or entrails wrapped around a 12 inch length of fat, resembling a coiled slinky about two inches in diameter. When cooked over hot coals,

much of the fat burned off and the thickness of the entrails was reduced to about an inch in diameter. Ah-chee' is eaten hot wrapped in a warm tortilla.

White flour, and occasionally whole wheat flour, is available in all trading posts. It is a staple introduced during early reservation days and has become one of the most popular items, bought in 25 or 50 pound sacks. Most Navajos eat tortillas with every meal using perhaps two to five pounds of flour per day. During social or ceremonial gatherings, people donate 25 or 50 pound sacks of flour for tortillas or fry bread. The USDA donated food program offers five-pound bags of enriched flour monthly, (a small quantity by Navajo standards).

Breads and other baked goods are available in packages and have become an increasingly favorite food for many young families. Breads such as sliced white bread, french bread, sweet rolls, and coffee cakes are also popular donations for consumption at social and ceremonial gatherings.

Soft drinks of all flavors are available and consumed in large quantity. During the summer of this writer's research, there seemed to be an unusually large consumption of (nondiet) pop by people of all age groups. A pop machine in the field clinic provided a convenient access to children and parents waiting for their medical appointments. The sight of each small child with a can of

pop in hand is all too common. During daily stops at the store, this writer saw older men sitting outside with a can of pop in their hands. This appeared to be the norm regardless of hot or cold seasons. The chapter house had two pop machines. (While writing interview notes and lunching, this writer often requested iced tea, but instead settled for pop as it was the only beverage available. A portable jug of water solved that problem.)

The trading post also serves as a "gathering site" for social interaction among local residents or people from nearby communities. People often stood at the jewelry counter or near the windows, either alone or talking to another person. At one trading post, men regularly sat on a bench outside while women were most often found inside. One male informant, who came to the Senior Citizens Center for lunch, was dropped off daily at the trading post. In accordance with Navajo custom, this writer jokingly stated one day that he must have a lot of money to spend. The man laughed and replied that this is how he kept current of local social events and for the purpose of Keh', an expression of friendship and kinship.

The frequency of "shopping trips" varies with the distance, transportation, weather, or road conditions. Those with available transportation stop three or four times weekly, particularly at the store that also serves as a "post office." Elbow Creek has a U.S. Post Office so the

frequency of "shopping trips" to the trading post was less. The trading post of choice is determined by distance, amount of cash on hand, credit account, and quality or type of food desired. Often, older individuals shop primarily at the local trading post where they can purchase items on credit. Accounts are paid by selling livestock, rugs, jewelry, wool, hay, or monthly checks received from Social Security, General Assistance, or Supplemental Security Income (SSI). One local woman purchases meat and potatoes from another trading post 30 miles away when she has extra cash. People may pawn a piece of jewelry at the local trading post for cash which is spent to purchase foods in town or even to secure another piece of jewelry on pawn elsewhere.

This section provides an overview of the role of trading posts in the introduction of popular foods and its relationship to the economic, social, and health aspects of Navajo people. Whether trading post owners realize it or not, they play a role in the health of the people by the very nature of the types of food they sell. From early Navajo history, trading posts have played an important role in Navajo life as noted by Iverson.

> The trading posts character becomes more understandable in the light of the sheep-raising economy, the quiet limited geographical area in which Navajo families worked and lived, the lack of motor vehicles and paved roads, and the percentage of Navajos who did not speak English (Iverson, 1981, p. 168).

Thus, the trader became the main intermediary between the Navajo and the outside world in addition to being the grocer, trader, translator, buyer, and postmaster. Due to their multiple roles, criticism mounted against traders who withheld monthly retirement or welfare checks from Navajo patrons who were then forced to spend their entire paycheck as payment on their credit. The trading posts encouraged Navajo dependency on the system and discouraged economic development. Navajo women took their rugs to the trader who determined the price and stated his design preference. Exorbitant interest charges, price fixing, plus other unfair and unethical business practices became common among many traders in recent history (Iverson, 1981).

The institution of trading declined substantially, thus breaking its monopoly over the past few decades. Through this system, Navajo people traded sheep, rugs, jewelry, and other products for food and household goods marked at inflated prices. Before automobiles, Navajo people accepted whatever goods the trading posts offered--often, these goods were of poor quality.

With the introduction of pick-up trucks and boarding school education for the children in the 1950s, the history of the trading post began to change. By 1960, 21 of 137 trading posts were operated by Navajos (Iverson, 1981). Today, the few remaining trading posts compete with convenience stores which the younger population prefer. In

Elbow Creek, the trading post, located on one side of the highway, is frequented by older individuals, while a convenience store, located on the opposite side of the highway, is frequented by younger patrons.

Food Preparation

Navajo people prepare their food by drying, roasting, baking, boiling, and frying. Mutton, immediately after butchering, may be dried, to be fried or roasted later. Ribs are roasted over hot coals or placed in an oven. The vertebrae of the sheep are usually cut into small portions and boiled alone, or with any combination of potatoes, home-made noodles, and vegetables (carrots and corn). Meat may also be sliced into small thin strips and fried with potatoes and/or onions for meals at any time of the day. Hanighae', a favorite dish in the winter, is a mutton and dried corn stew boiled overnight or all day and eaten when tender and all the flavors have blended thoroughly.

In the Spring, people grow their own corn or purchase fresh ears from individuals who sell their produce along the road or at the markets. Firm Navajo corn is preferred over store-bought corn which is considered too soft and "sticky." Fresh corn is roasted over hot coals or the kernels are fried with potatoes and squash. If a woman is ambitious, she grinds the kernels, wraps them in husks, and bakes them in the ground to make kneel-down-bread. This is an all-day process. People with large gardens or those

willing to forego a large winter stock of corn products will sell kneel-down-bread for $1.50 or $2.00 apiece (approximately three by six inches in diameter). Freshly baked kneel-down-bread is eaten alone with a drink or may be dipped in hot lard sprinkled with salt or hot pepper. One woman mixes in ground beef and pepper to her kneel-down-bread and sells each piece for $2.00. A winter's supply of this traditional bread is prepared by cutting it into bite size pieces, drying and storing it. In the winter the pieces are mixed with a small amount of water or milk and eaten as cereal.

Cooking methods vary slightly by season although frying is preferred for such items as potatoes, eggs, mutton, and bacon. Cooking outside over an open pit is practiced primarily in the summer or mild winter weather and when families butcher a sheep or goat. Liver, fat, intestines, and ribs are usually roasted as part of the process of butchering. Eating utensils are not used; the common practice being to make a sandwich with a tortilla and eat the items while they are hot. Forks and spoons are used when eating fried potatoes, soups, and cereals. Bones are given to the dogs.

History of Formalized Navajo Education

During the Long Walk Era (mid 1800s), no Navajo had any formal education. All the so-called chiefs involved in

negotiations with Government officials in Basque Redondo, had "signed" the treaty with an "X" or a thumbprint.

In the late 1800s, shortly after their return to previous homelands, during the period called the "Reorientation of Navajo Culture," mission schools were established by various religious denominations throughout the reservation (Bailey & Bailey, 1986). Reservation-based boarding schools were opened by the government to "bring civilization to the Indians." Later, off-reservation boarding schools were established by the Bureau of Indian Affairs to assimilate Indians to American society by removing them from the traditional settings which nurtured their Indian identity and lifestyle.

Initially, Navajo parents resisted sending children to these schools because children were sources of economic security--they assisted with sheepherding and learned the ways of traditional people. Sheepherding was the primary source of economic stability and it required the cooperation of tightly-knit extended families. Children who went away to school often found themselves at odds with the Navajo way of life upon returning home. In addition, many lost their recognized birthright to livestock and grazing lands (Bailey & Bailey, 1986).

Because of parental dissatisfaction with boarding schools and the increasing population of school-age students, day schools were opened in the 1950s. Navajo

parents voiced concern about the school officials' neglect of not allowing parental participation in the selection or placement of teachers.

During the 1960s, two community demonstration schools were established in fairly isolated and traditional parts of the Arizona reservation. Consistent with the pan-Indian movement across the country, the schools' philosophy was to integrate Navajo language, culture, and history into a curriculum taught by Navajo elders and teachers. The community-based schools advocated control and involvement by community leaders and parents in order to make formal education more personal.

By 1969, the first American Indian-operated college on a reservation was established with the opening of the two-year institution, Navajo Community College (NCC). By establishing NCC on the reservation, it was hoped that an increasing number of post-high school students would enroll without the disadvantage of leaving their homeland and families. Previously, many who left the reservation for college often returned without completing their education, due to the distance and time away from home. Sometimes, the few who successfully completed college remained in distant off-reservation cities for employment. The philosophy of NCC was consistent with community schools, in that local people controlled the school at a college level.

The 1970s saw an increased enrollment in public schools and a move toward closure of off-reservation boarding schools. This change was precipitated by a burgeoning number of trained Navajo teachers, increasing school-age population, improvement in roads, and a greater participation by Navajo parents in the formal education of their children. Emphasis in bilingual education was supported by federal policies and foundation funds.

Congruent with the rapid changes in the school systems, the Navajo Tribe created a "Navajo Nation Division of Education" which developed a college scholarship fund for Navajo students. In addition, the Division was involved in bilingual curriculum development, construction of new schools, school board training, alternative school programs for "drop-outs," and a Navajo Teacher Education Program. The latter program provides training to potential graduating Navajo students through on-site and summer residency coursework.

Iverson (1981) writes of the Navajo people's desire and persistence in effecting changes in the educational system:

> . . . they were part of a beginning that sought to alter a pattern of outside control a century old. . . . it was reasonable to anticipate escalating and often conflicting hopes and expectations among Navajos for their schools . . . but they presented a united front in their insistence upon their right to decide, in the end, these and other educational issues for their schools (Iverson, 1981, p. 154).

The Navajo people's desire for an educational system which maintains cultural values while simultaneously

teaching basic skills required for literacy remains an ideal goal. Although progress was made in many respects, the Navajo people still face many challenges (i.e., an increasing school age population, crowded conditions, and dwindling funds for education).

Formal Education in Elbow Creek

At present, most of the Elbow Creek children attend the local boarding school operated by the Bureau of Indian Affairs. It is one of the few boarding schools remaining on the Navajo reservation. The school has a total of 480 students enrolled from kindergarten through the eighth grades. A total of 90 employees work in areas of janitorial or food services, teaching, administration, and as dormitory attendants. A Navajo woman holds the assistant principalship, while the principal is an Anglo man. Only 12 employees are non-Navajo.

About 25 percent (112) of the students live in two dormitories. "Walk-in" or "bus" students, who live at home, comprise the remainder of the student population. Students are not exclusively Elbow Creek residents, but come from three surrounding communities.

Because it is a BIA school, Elbow Creek Boarding School's educational standards are established and audited by federal representatives from Washington, D.C. Although the school year is 180 days, a minimum of 160 days of instruction is required. The California Test of Basic

Skills (CTBS) is given to all eighth graders twice a year. Elbow Creek is proud of their students who, on the average, tend to score higher than other students from BIA schools.

Since 1980, changes in curriculum have been made so that emphasis is on education rather than recreation. The rationale used to justify this major change is that, "education will stay with them everywhere. Students should be judged by academic performance rather than how well they bounce a ball" (Elbow Creek informant, personal communication, 1986).

Although recreation is deemphasized, the program continues and the recreation staff realizes that academics are also valuable. One such example is that, "recreation aides will come to the principal's office to ask whether one of their best performers in basketball is also doing well in the classroom" (Elbow Creek informant, personal communication, 1986). Allowances are made for those not performing at their academic ideal and counselors are assigned to them.

One major excuse for not completing homework in the past was that homes did not have electricity. Today it is estimated that approximately three percent of the student population comes from homes without electricity. The school provides "quiet hour" for students to complete assignments. In addition, one of the dormitories has a policy which allows time for homework completion. It was

noted that one dorm was not, at the time of interview, allowing "study hour" for its student residents.

A recently implemented promotion/retention system is based on a point accumulation system which considers CTBS battery performance, mastery of minimum grade objectives, attendance, excessive absence, over-age students, prior retention, and teachers' rating. Students are informed about the promotion/retention recommendation so that they are aware of their responsibility in this system. Parent participation is encouraged. Monthly meetings are held with parents and an open house is held each quarter. Parent involvement is considered moderate, but an improvement from previous years. Traditional parents without formal education often state "I'm not the teacher, you are," when they are asked opinions in teacher-parent conferences. Formal education remains a foreign experience for them. Most parents accept retention when it occurs and offer their children support. One such girl who was retained had a traditional blessingway ceremony performed for her. Upon completion of the eighth grade at Elbow Creek, students transfer to public high schools in border towns, a BIA school 150 miles away, or a private school 40 miles away.

When asked whether the school had a health curriculum, school officials stated that a curriculum did exist which covered five areas: personal growth, interpersonal

relationships, nutrition, safety and first aid, and prevention and control of disease. Lessons in personal growth emphasized prevention of drugs and alcohol use which are serious problems among contemporary Navajo youth. Sexual abuse and child abuse sessions are taught by the agency's juvenile officers, while alcohol program representatives teach sessions on alcoholism prevention. The interpersonal relationship component covers similarities and differences in people, group activities involving peers and families, and mental health. Nutrition lessons are conducted by the physical education teacher who discusses the four basic food groups, food preservation, planning menus, and malnutrition. Safety and first aid cover basic measures for minor injuries and safety precautions in the home, school, and playground. Lessons on prevention and control of disease discuss communicable diseases, immunizations, and the responsibility of community health workers.

Inclusion of instruction regarding drug and alcohol prevention in the curriculum is a recent occurrence. Additional areas of emphasis relevant to contemporary Navajo health status (i.e., chronic diseases, self-care issues, need for more Navajo health professionals) are absent. The number of hours spent in health education and the extent of student involvement are not known.

Higher education is valued by the Elbow Creek residents. Those with children having a high school education are proud of their achievements. No records are kept locally of statistics on high school completion or post-high school education. However, there are three local residents who completed college; two are pursuing careers in teaching and one is a physician. The teachers are two sisters with whom this writer attended grade school; both returned to Elbow Creek to teach. The physician is involved in work among another Arizona tribe.

Summary

This chapter describes specific sociocultural factors operating within Elbow Creek, including some references to the issues present on the larger Navajo reservation. A sociocultural context is necessary in order to lay a foundation for a detailed description of Navajo health/illness beliefs and practices which follows in subsequent chapters.

This chapter also describes the changing residential patterns for the traditional matrilineal extended family structure to a nuclear family orientation which is necessitated by the younger adults' attraction to wage work. Leisure activities consist of wage work by younger informants, sheepherding by older informants, and varied home-based activities by older informants who were not involved actively in either activities. Elbow Creek

residents send delegates to the Navajo Tribal council to represent their interests in political affairs. Chapter goals are identified locally and developed by elected officials and hired personnel. Food patterns are changing from a traditional use of more fresh produce to more use of store-purchased items and donated commodities through the USDA Food Program. Trading posts, however, remain active in the introduction of food from "outside" and a strong social force influencing change within the community. Formal education is valued by Elbow Creek residents as shown by their participation on the school board and school social functions. Christianity has been introduced to Elbow Creek, but is not practiced exclusively by informants. The Navajo religion remains a factor in how people view the world. Informants practice a combination of Christianity, Peyotism, and/or Navajo religion.

CHAPTER 6

HEALTH BELIEFS OF NAVAJO PEOPLE WITH DIABETES

Most of the informants in this study believe in the traditional Navajo Way. There were four main categories which emerged from their responses: (1) The principles of harmony or balance, (2) the belief that food is natural and good, (3) a definition of health, and (4) a developing concept of diabetes. This chapter describes the first three themes to answer the question of "What are health/illness beliefs of Navajos with diabetes?" Health/illness practices or Navajo people with diabetes are discussed in detail in Chapter 7.

The Principle of Harmony or Balance

The Navajos generally believe that all things, animate and inanimate, have supernatural power endowed in them. People, nature, and the supernatural forces strive to achieve a balance in the universe. All social, political, economic, and religious endeavors have rules and traditional Navajo people know their responsibility to maintain balance by avoiding excesses and adhering to these rules. If violation of taboos occur, such as improper contact with supernatural forces, illness occurs. To

correct the supernatural disharmony, a specific ceremony is prescribed by a diagnostician, and a "singer" is hired to perform the rituals to appease the spirits.

Reciprocity is one important way of maintaining balance and harmony among people and the supernatural. If a person performs a favor for another, a favor is expected in return. If a person is injured by another, compensation is expected, otherwise injury will be returned. It is believed that if the people take care of the land, water, and livestock which were provided them by supernatural beings, they will in return be blessed with food, water, health, and happiness.

An example of reciprocity is portrayed in a prayer offered by one of the informants during a women's conference. She appealed to the spirits for their continued provision of all good things in life even though people have not reciprocated in full by observing the Navajo Way (Beauty Way) of life.

> Father sky, Earth Mother, Spirit of Fire, Spirit of Wind and Air, Spirit of Darkness, Spirit of Rain. . . .
>
> Thank you for our mothers, father, grandmothers, and grandfathers.
>
> Thank you for providing prayer objects such as corn pollen, corn, and fire,
>
> You provide all these things so we may use them in our prayers, our lives.
>
> We are thankful for the land, sheep, cattle, school, our leaders.

> All children come from women. Today, they [children] do not listen to us like they should. If they knew well the Navajo Way as they also learn the Anglo Way, they would provide a better life for themselves.
>
> Let's talk to our kids and say, "Sha-ah-wee," "Shi yaazhe" (my child, my offspring). Perhaps in this way (with love) they will follow the Navajo way and the better way.
>
> Beauty is the way
> Beauty is the way
>
> In beauty it is finished
> In beauty it is finished

Aberle (1966) states,

> . . . gifts and offerings have compulsive force: they require a return. Even if the relationship is not one of equality as respects relative power and wealth, reciprocity is the rule, even if it is asymmetrical (Aberle, 1966, p. 48).

One example of how reciprocity works in the relationship between people and the supernatural world is exemplified in the experience of Mr. Begashi who is probably suffering from diabetic retinopathy. He states he saw the doctors in a specialized hospital where he received treatment (laser therapy) when he began to have trouble with failing eyesight. About the same time he saw a medicine man who told him that the cause of his problem originated many years ago when he performed as a Yei. Yeis are supernatural beings who are personified in a curing dance.

> I used to dance as a Yei many years ago. I was told [by the medicine man] that I did not place the mask correctly on my face. I believe it's true--I made a mistake. That's why my eyes started to hurt and I had to have some treatments to my eyes.

> I really should have a ceremony done to correct the mistake, but it's expensive to have it [the ceremony] performed.

Another woman who was diagnosed with diabetes two years ago, suffered from Bell's Palsy during the winter. She saw a private physician who treated her with weekly cortisone injections for some time. After a 2-week period she also saw a diagnostician who informed her that she needed a 5-day sing to correct her taboo transgression which took place when she used a tree previously struck by lightening for firewood. Prior to the ceremony she consulted all her grown children who positively affirmed her desire for a sing. The ceremony cost about $1,000 in materials and cash paid to the medicine man. This woman firmly believes in the strength of supernatural powers which need to be respected, or violation may result in further physical suffering. The woman, who weaves rugs, will not do Yei designs, since she recalls that she had not woven the eyes into one figure correctly in one of her Yei rugs. Kluckholn and Leighton (1962) write:

> The notion of locating the cause of a disease in physiological processes is foreign to Navajo thought. The cause of disease . . . must be traced back to some accidental or deliberate violation of one of the thou-shalt-nots, or to contact with ghost, or to witch activity. It follows logically that treatment consists in dealing with these causative factors and not with the illness or injury as such. The supernaturals must be appeased (Kluckholn & Leighton, 1962, pp. 192-193).

Thus, the belief that the supernatural forces are ever-present and powerful remains a strong belief among many

Navajos. The ultimate aim of a ceremonial is to restore the harmony between the ill person and the supernatural by finding the cause of physical suffering.

The principle of harmony continues to reinforce within the Navajo mind that they [the people] are a part of nature and must respect all creations by following proper behavior and thinking.

Food is Natural and Good

When asked about their beliefs about the nature of food (i.e., whether there were good or not-so-good foods), Navajo responses were generally positive in that foods are products of nature and they are created for consumption. There are, however, rules governing the intake or withholding of food during various rituals, rites of passage and illnesses. For instance, a young girl undergoing the Kinaalda Ceremony is forbidden to eat anything sweet, including her own cake which is baked the final night. On the other hand, a pregnant woman is advised to practice moderation in the use of salt and sugar in her foods. Organ meats are forbidden in the diet of certain individuals. One middle-age man who attended the Kinaalda ceremony, in which this writer participated, was known to have diabetes. When he expressed a strong desire to eat ah'-chee, (fat wrapped in intestine), his relatives reminded him about the medicine man's advice against eating such foods. He stated that he realized consumption of ah'-

chee was prohibited, so to avoid supernatural repercussions from his taboo violation, he sprinkled ash on his food before eating it. It is believed that ash "frightens" away evil or lessens the potential effects of supernatural power pervasive in certain objects. Another important theme relevant to food beliefs is the symbolism of food as a natural product, its importance in rituals, and its value in social circles.

Most informants state that food is a natural product which is considered good for health and well being. In concert with traditional ideas of moderation, most believe it is undesirable to consume excess amounts of one kind of food. Although many individual Navajos do not offer "thank you" prayers following each meal, as was traditionally practiced, many state that having food is a blessing bestowed upon them by the spirits. Prayers are frequently observed in larger social gatherings. Salt, sugar, pepper, and coffee are considered foods but, again, it is stated that one shouldn't consume too much of these. What is considered moderate by Navajo people, however, is considered excessive by non-Navajo health care providers. For instance, two or three slices of fry bread and/or tortillas are consumed about three times daily. Frequently, if there is scarcity of other foods, bread and coffee may serve as staple foods until a shopping trip to the trading post is made. One fry bread contains about 200

calories, while one tortilla has about 150 calories. Even without other foods, a person may consume 850 to 1,000 calories from eating bread alone throughout the day.

Strong Foods

Although all foods are considered good and natural, there are certain foods which are considered "stronger" than others. Strong foods often refer to Navajo staple foods (i.e., coffee, mutton, stew, fry bread, tortillas, fried potatoes, and traditional corn products). Strong foods are given this quality due to their virtue of producing a full feeling and providing strength for heavy work, preventing illness, or hastening recovery from illness. Infants are fed broth from mutton stew to strengthen them and to promote growth. Strong foods are served at community social functions and ceremonial gatherings. Strong foods are donated to kin and acquaintances in times of need and events such as funerals and sings. Ironically, what Navajos consider strong foods are deemed to contribute to the obesity problem, which in turn contributes to the development of diabetes and heart disease.

Today, the list of strong foods now includes such items as hamburgers, steaks, fried chicken, carbonated beverages, and pastries. Except for corn, vegetables and fruits are not traditionally considered strong foods. They

are consumed more frequently today; however, they remain seasonal supplementary items.

Donated foods provided through the Food Distribution Programs of the United States Department of Agriculture (USDA) are also excluded from the strong food categories. They are confined to an exclusive category of "fillers" or food "substitutes." Some foods which are useful as fillers are cheese, evaporated milk, canned meat, certain canned fruits, oatmeal, and beans. Commodity foods may be added to a meal or eaten alone when strong foods are not available. As "fillers," they are never donated to participants in social or religious events but may be shared with close relatives. Donated foods also do not count as gifts to others because they did not come from the givers. Although the Food Distribution Program has been in existence for over two decades and many families depend on them for nourishment, they are not widely accepted as choice foods. Canned meat is referred to as "artificial" meat. Instant milk, mashed potatoes, and butter may be fed to the dogs, primarily because older people do not know how to prepare them or have not acquired a taste for them. Canned vegetables may be thrown away or used in stews to disguise their taste. Corn meal, spaghetti, noodles, macaroni, and rice may be given to relatives who "know how to cook them" by older, usually more traditional, Navajos.

Thus the Navajos continue to believe strongly that foods are natural products provided by spiritual beings to maintain well-being and promote growth and happiness. As such, food is not used as "treats," but generously provided or donated to those in need during ceremonial occasions or social gatherings. The belief that some food is detrimental to health is a new idea which has not been widely accepted by many.

Informants were divided between those who did as they were told by their physician or nurse and those who did not. These newer ideas will be explored later with respect to health provider beliefs.

Health Beliefs

Staying healthy and preventing disability requires, to a certain extent, personal actions, some of which are learned from allopathic medicine but mostly actions which were passed down through the generations. Several themes emerged when informants were asked to define the concept of health. These themes are related to physical well-being, emotional well-being, spiritual well-being, and family support.

Physical Well Being

Those who define health in terms of physical well-being talk about their ability to remain active in sheepherding, weaving, gardening, and working around their

home. Mr. Peshlakai is a 70 year old who has a below-the-knee amputation and lives alone with his wife. He spends most of his time in his wheelchair during the day while his wife is out tending the sheep. They do not have electricity or running water.

> We had a piece of land for a garden but its too hard for us physically now to plant and tend it. We haven't planted for a few years. We are not very healthy anymore. I find it very difficult to get around even though they [the doctors] have tried hard to fix my leg so I can walk again.

Others define physical well-being as "keep myself moving, or feeling well throughout my whole body." A young medicine man apprentice talks about physical well-being in terms of running in different weather conditions.

> When running in the cold, it [the spirit of the cold] will get to know you. That way you won't be so cold after awhile. You should run in different weather all year round. When hot, the heat will also get to know you. You won't turn on your air conditioner [as is done in many homes today]. Run in the heat of the day. You won't get heat stroke when the spirit of the heat gets to know you. Another way is to sit in the sweat lodge. The use of heat purifies your body and mind, making everything clearer.
>
> We're supposed to run at the beginning of a new day. Before the sun rises--run, throw rocks, and be happy. Don't let your veins and blood "go to sleep." It makes you feel better about yourself--happy, feel lighter, and energetic when you run. Everybody is supposed to run.

Another reference to physical well-being is made by the same man in explaining the role of food in health maintenance.

> Too much fat solidifies in the blood and closes off the veins, eventually. Eat natural foods like corn products. Corn was made for us to eat and use in many

> ways. Work and don't sleep--don't be lazy. We are supposed to take herbal tea in the morning, about one cup every day, to keep our veins from building up fat. People have abandoned these ways. Now we hear about diseases like heart disease, lung disease, and diabetes. When people do all these things I mentioned, their mind will also function smoothly, without trouble. Navajo medicine knows about these diseases and teaches about how not to get them but there aren't cures for them because they are diseases foreign to us.

Drinking herbal tea and sweating are thought to purify the body, spiritually, emotionally, and physically. One man describes his experience:

> You drink sage tea while in the sweat lodge. Tea is a cleanser, too. It also works on the muscles. Sweating will eliminate wastes from the body. It's good for arthritis. Many people around here have arthritis. Ideally, we should drink tea three to four times a day, but people don't do it anymore.

Emotional Well-being

When Navajos state, "I am well (hozho)," they invariably refer to the harmonious balance between mind, body, and spirit. One informant gives her definition of health as follows:

> It's to be well, without pain, and to be "hozho" all over from the feet to the head. The person knows and others know. It means that the mind works well and the person thinks well of others around him or her.

One man explains that to be emotionally healthy is like experiencing the last day of a ceremonial when the mind is free and happiness and beauty abound all around.

> The day of Bi-jiih, the last day of a sing, everything turns out beautifully. This is because we follow all sacred ways and do not violate taboos. There were many things in life that are dangerous. Things we see, touch, say, think, or wish have taboos. The

> Nizhoni way of life (or Saa' keh-atiin) or corn pollen way of life should be the Navajo's way. It is our philosophy. If we do things right, live right, we will all live beautifully and live a long full life. This is the way of beauty, Hozho, and Nizhoni.
>
> Words, thoughts, actions, self care all matter--we should pay attention to them. But it's hard to go about these things today, there are so many temptations. Many were introduced to us from outside. When we were on foot or rode horses long ago, it was easier to take care of our selves and our surroundings. Now we depend on cars a lot and that makes it hard to live the way we were taught--the Nizhoni way of life. Medicine men know that there have been many changes which contribute to illness.

Emotional well-being is not restricted to one's immediate surroundings, but to larger social and kin network, as well.

Spiritual Well-Being

Many actions, dreams, and thoughts are believed to be controlled by external forces more powerful than people. Navajo people are traditionally taught to respect these external and supernatural forces in order to maintain balance and harmony among themselves. Explanations of health are deeply intertwined with spiritualism as explained by 47-year-old Mr. Nez:

> We who are called Dine' [the People] have always been thankful for the sun, the earth, light, and other natural forces. But we are also afraid of them like lightening, rain and darkness. We have been taught to live with them harmoniously because they provide food and life. If lightening strikes something, we don't use those foods. We have prayers that maintain harmony among living things. From food we gain strength and health and happiness.

Mrs. Yazzi is a 64-year-old woman who lives in an isolated place near Red Buttes. She discusses spiritual well-being by explaining health in terms of her dreams and state of mind.

> The problem [diabetes] has affected my thinking. I'm forgetful now. Before, my dreams were pleasant and I always remembered them. Now I can't think back on what my dreams were about. It [diabetes] ruins people's thinking. It's not good at all. It makes us very humble. I started to think about what good things Diyin (Creator) makes such as light and air. Light makes daylight so we can see and work. Air we breathe every day. I thank the Diyin for these.

Mrs. Yazzi, explains health in relation to ill health by describing the change in her thought and dream patterns. She then reflects on the meaning of health via spiritual well-being and expressed her appreciation for the harmony bestowed by the Diyin.

Another man explains spiritual well-being as follows:

> We as Navajo were placed on this earth for a reason by the Diyin (the Great Spirit), that's why our skin is the same color as the earth. Diyin gave us breath, our wind. Prayers, songs, and ceremonies were made for us because life was given us in a sacred way. We are supposed to use these prayers and ceremonies as we go about things in life. Every morning we are to enjoy the new day and sing while we run or use corn pollen or white corn meal while we offer prayers. We don't do these like we should anymore.

Family Support

Traditional Navajo families are large and consist of extended family and clan groupings. Within these networks, the term Keh' is pervasive and expressed among all to maintain a balance. When any two or more people feud or

place a strain in the network, people feel these tensions described as "not being well." Thus, to be well or healthy also means that there is family support. Today, Navajo families do not often live in extended family units but have moved more toward single family units necessitated by wage labor. The definition of health, however, remains influenced by family support. Many informants were older people with grown children and young grandchildren. Some examples of how family support is expressed may be helpful.

Mrs. Sahni, 72 years old, speaks fondly of her grandchildren who come to visit often. She states, "they come by to see me, to check on me. I'm glad when they do." The walls of Mr. and Mrs. Smiley's front room of their modern A-frame house are decorated with photographs of their two grandchildren and daughter. Their daughter, who lives out of town, visits on weekends, again, "to check on us and to bring the grandchildren so we can see how they're growing."

Although the family residential pattern is changing from a matrilocal and matriarchal type, families remain close and visit whenever possible. When adult children don't visit, this may be perceived as not being in good health or harmony.

Summary

This chapter presented the health/illness beliefs of Navajo people with diabetes. Four dominant categories are

identified which describe how Navajos with diabetes view health and illness. Three of these categories (harmony, food beliefs, and health beliefs) are summarized and highlighted in Table 5. Beliefs specific to diabetes are presented in the following chapter.

The concept of harmony is a powerful belief pervading all Navajo actions and thoughts. However, in this discussion of harmony as viewed by Navajo people with diabetes, the themes of reciprocity, taboo violation, and expression of Keh' are identified as intricately related and important.

Food also has a strong influence where health and illness beliefs are concerned. Navajo people with diabetes believe that foods are natural, and therefore good. In addition, foods are not bad, but some foods are better avoided to respect natural forces. Also, some foods are identified as "strong foods" which provide nourishment for the ill, and growth for the young. The use of symbolism in food and dietary patterns remains a powerful force among Navajo.

Health is defined as physical, emotional, and spiritual well-being, and family relationships. Physical well-being is defined in terms of ability to maintain work and mobility around the home, freedom from debilitation and pain. Emotional well-being is defined by thought patterns,

Table 5

Navajo Health Belief Themes and Examples

Navajo Beliefs	Example
A. Harmony & Balance (Hozho)	Respect for people & nature
1. Reciprocity	in human relationship &
2. Respect	with supernatural forces
B. Food is natural and good	Food rituals & symbolism
1. Products of nature	present in ceremonies,
2. Provided by Creator	rites of passage
3. Rules govern food use	Navajo foods are strong while some store-bought foods are weak
4. Sharing of food	Social and family feasts are frequent, foods are donated to those in need
C. Health is:	
1. Physical well-being	Remaining actively involved in herding, weaving, gardening; freedom from pain
2. Emotional well-being	Harmonious balance between mind, body and spirit; relationship with family and kin
3. Spiritual well-being	Respect for supernatural; good dreams
4. Having family support	Expression of Keh' to and by others and visits by family members

or the state of the mind, and, generally, the balancing relationship between the mind, body, and spirit. Spiritual well-being is an important aspect of health because it pertains to one's relationship with natural forces as well as thought and dream patterns. Family support is defined by the expression of Keh' among close and distant relatives. Visits or presence is a desired expression of family support as well as sharing of food and laughs.

Chapter 7 provides a detailed discussion of the developing concept of diabetes as a detrimental chronic illness.

CHAPTER 7

NAVAJO PERCEPTIONS AND EXPERIENCE WITH DIABETES AS AN ILLNESS

In this chapter, Navajo perceptions and experience with diabetes are elucidated upon. As mentioned earlier, Navajos traditionally describe illness in three ways as, "hurt or fever throughout my body (shi-tah honez gah)," "I am not well (Doo'-yah-taa dah or Doo' yah-ashn taa da)," and "I have caught a contagious disease (naal nih)." The second category, which is an ill-defined condition and which describes many illnesses, is probably the closest cover term for diabetes. The third category is sometimes used by a few individuals to question whether diabetes is contagious. In no instance was diabetes described as a fever (the first category). However, a possible fourth category, "Sugar is killing me," emerged from this study.

Developing Concept of Diabetes: Sugar is Killing Me

To understand how Navajos referred to diabetes and the Navajo word [if there was one] for the illness, this writer spoke to Navajo health care providers and listened for references to this problem during the early period of this research.

There is not an indigenous name for diabetes but most refer to it by its relatively newly coined term, ashiih-likan sha nitiih (sugar bothers me) or ashiih-likan shi' nitl hih' (sugar is killing me). These terms are interesting in the sense that they provide an insight into how Navajo people with diabetes view their experience, one in which they are victims of the illness. In their analysis of the Navajo language, Kluckholn and Leighton (1962) identified similar speech patterns when people express their relationship to inner feelings and outside influences. For instance, when hungry, a Navajo will say "Hunger is killing me" while the English version places emphasis on the speaker, "I am hungry." They noted, "Hunger is not something which comes from within but something to which the individual is subjected by an outside force" (Kluckholn & Leighton, 1962, p. 253). Similarly, diabetes is not personalized by the Navajo. The English version states "I have diabetes," but the Navajo feels subjected to the disease by an external force. Again, this idea is contrary to the beliefs of allopathic medicine to which Western-trained health providers subscribe. This point is discussed in detail later in this paper.

In a discussion of subject-object inversion, which the notion of diabetes exemplifies, Witherspoon (1977) explains that an object may act on the person as stated by the

Navajo; however, the subject (always a person) is always in control of the situation. For example, the English sentence, "I am thirsty," is translated into Navajo as "Thirst is killing me." Witherspoon (1977) states that it is not possible for thirst to overcome or kill the person, and the speaker doesn't mean what he states. Further, thirst, as a condition or feeling, can only "kill" the person if the person allows it. The person is more intelligent than to yield to a condition or object to the extent that it controls him. He states that the person is always in control of his situation rather than controlled by external forces (Witherspoon, 1977). In the situation with diabetes, however, Witherspoon's argument is questioned. The Navajos' fear of uncertainty concerning the presence of diabetes creates feelings of helplessness, not control. Kluckholn and Leighton (1962) reinforce the importance of speech patterns as an explanatory means of representing the Navajo mode of thinking: ". . . nothing is more human than the speech of an individual or of a folk. No clues are so helpful as those of language in leading the ultimate, unconscious psychological attitudes" (Kluckholn & Leighton, 1962, p. 254). The idea, that "sugar disease is killing me" is pervasive among all the informants and evident in those with vision loss and amputations. This belief is integrally related to diabetes as a new and chronic disease which many are trying to

understand but currently feel they are subjected to by external forces.

Having diabetes, as these informants are experiencing, varies from "feeling fine" to an extreme amount of agony among all family members. Following are two examples of these extremes. The last example perhaps summarizes more vividly the experience of most informants.

When asked how a person with diabetes feels, one 72-year-old woman replied, "Whol-lah (I'm not sure). I don't feel ill--nothing hurts inside. Even when they tell me sugar in my blood is measuring high, I feel fine. The only thing is, I am tired all the time." In contrast, her 89-year-old husband described their agonizing experience as one of constantly seeking the real reason for the illness, including the sore on her foot which later became gangrenous and was surgically removed. This woman has suffered from diabetes for almost 20 years. While she states that she "feels fine" but "tired all the time," her husband and children express a different perspective. Her husband states, "We suffer together. It is very hard on all of us."

Origin of Diabetes as a Disease

Most Navajo informants agree that diabetes is a fairly new problem, a disease different from other illnesses with which they had previous experience. It is perceived as a problem because many do not understand exactly how it was

introduced to them; there are conflicting reasons given by health care providers, and the Navajo do not know of a cure or medicine for it.

Many give different perceived sources of diabetes. Some of these individuals believe that diabetes is introduced through the use of fertilizers or insecticides used on agricultural crops by Anglos or Bilagaanas.

> I think it comes from fertilizers that Bilagaanas use to treat all plants which we eat. Even though we are told that vegetables and fruits are cleaned before they are sent to the stores and we wash them again when we buy them, they are still contaminated. Today, most of the food we eat is bought from stores. We don't grow our own so we don't know what's been used on them. Years ago we grew our own [native] foods but never treated them [with fertilizers and insecticides]. We ate a lot of corn foods. Today we have [wage] jobs so we don't have time to grow and prepare our own food.

Mr. Tsosie's statement may be viewed as denial by most health care providers; however, it illustrates his personal view that diabetes comes from 25 years of exposure to fertilizers.

> I am not bothered by sugar. They tell me about sugar every time I go to the clinic. I don't believe them. I know it's from the work I did long ago, working on irrigation projects. I hurt in my knees, legs, feet, and here [pointing to groin area]. I've been to many doctors and hospitals for this. I think sugar disease is something the doctors invented to describe things they don't really know about.

In addition to his refusal to accept the explanation given by the physicians, Mr. Tsosie expressed his lack of confidence in local physicians. His beliefs about exposure to fertilizer and perhaps his anger toward lack of

information about potential long-term effects override any explanations given by others. In addition to peripheral neuropathy, Mr. Tsosie also suffers from respiratory disease. He uses Navajo and peyote ways and an occasional use of allopathic medicine to deal with his conditions.

One man identified specifically that the use of instant foods, which come from the white people, cause the problem of diabetes.

> It's very simple what caused the problem [diabetes]. It's from instant food that was introduced by the Bilagaanas. We Dine' like "fat pouring into our mouths" all the time because we have been brought up that way. The old people ate that way--they're used to it. This diabetes disease came only recently, within the last 10 to 20 years. People weren't bothered by diabetes before because our own foods were good for us. When we began to eat instant food on top of our own foods, we got into trouble.

To this person, instant foods are ice cream, popsicles, and pop.

One woman attributes diabetes to the disruption in food preparation or fuel sources used. She states, "All Navajo foods were cooked by fire long ago. Now we cook foods by gas and it's not good." Foods cooked by campfire are considered natural. The change to gas cooking is not only considered a change in tradition, but also a change toward ill health.

Although taboo violation is not inculcated directly for precipitating diabetes, it is considered a reason for the onset of complications, such as retinopathy, stroke or skin ulcers. Mr. Tohtso explains his ulcers as follows:

> I had all these sores all over my hands and arms. It felt like they were burning my skin. The medicine man said that I had burned a snake and that a ceremony would correct the disharmony. I had done that [burned a snake].

The origin of diabetes is attributed to five sources which are summarized in Table 6. Bilagaanas, however, are thought to be the main culprit for the introduction of diabetes. Attribution of diabetes or its complications to witchcraft or sorcery is not stated by any of the informants. Witchcraft (Kluckholn & Leighton, 1962) is a social control mechanism to maintain a system of checks and balances and to strengthen various social inhibitions for the good of the whole society. Accusation of witchcraft may be directed against individuals who exhibit outlandish behavior. They are accused of causing ill health to fellow tribal members. Because of its precariousness, witchcraft, as a cause of diabetes, may not have been shared due to the researcher's short stay.

It's Very Different Today

Many informants talk about the relationship of diabetes to changes taking place in their world today. These changes relate to traditional medicine, disease patterns, eating patterns, and activity patterns. One informant relates his perceptions as follows, "I don't use Dine' medicine anymore. There aren't any medicine men left around here. All the older men who knew Dine'-keh' (Navajo

Table 6

Perceived Origin of Diabetes

Sources of Diabetes	Examples
Fertilizers and insecticides used on agricultural crops	". . . native foods were never treated (with chemicals)"
Instant foods (i.e., ice cream, popsicles, pop)	". . . it's from instant food introduced by Bilagaanas (white people)"
Change from camp fire to gas cooking	"All Navajo foods were cooked by fire . . . now we cook foods by gas . . ."
Introduced by Bilagaanas	"It was brought in (into reservation) by Bilagaanas
Taboo Violation	". . . because I put on a mask wrong"
	". . . because I burned a snake"

way) have passed on. Now the younger men don't know [the curing rituals]."

Mr. Peshlakai points out that changes in activity patterns and foods consumed have something to do with the presence of diabetes.

> "Things are different today. A long time ago people walked after sheep and horses. They walked to the store or to the mountain. They didn't have the sweet foods available in the stores now. It's all very different today."

Another type of change experienced by Mrs. Zonnie is the move she made from her traditional home to her daughter's mobile home. This transition was necessitated by Mrs. Zonnie's frequent episodes with insulin reactions.

> They [the children] want me to live here where it's easier to take care of myself and for my daughter to watch me carefully. I have a home out there (in the desert). I lived alone out there and when I pass out nobody would know what happened. From here they take me to the clinic here [Elbow Creek] or to the hospital.

Changing times are also evidenced by the change in disease or illness patterns as Mr. Tohtso perceptively explains: "Years ago we used to talk about fever. Now everyone is told that sugar is killing them. I wonder if they [doctors] have started to label those old illnesses as sugar disease. It's different now."

One woman, known for her weaving, explains the changed lifestyle in this way:

> It's a bad disease. I feel sick all the time--I'm tired, my feet hurt, I can't walk a lot of times. I used to plant and hoe in the garden. This year my family didn't plant a garden again.

> When I'm not feeling so sick, I weave. It takes me two months to finish a rug that size, [eight feet long by six feet wide] but this one is taking longer.

One woman reported that she was a sheep rancher until her husband died and she became ill with diabetes. She "turned over" the sheep to her son who is young and healthy. Her whole way of life changed drastically when she was diagnosed with diabetes and began to "pass out" due to insulin reactions.

Changes were noted on personal and societal levels. Person/level change relates to a change in living arrangement or a change in economic pursuit. At the societal level, people note changes in dietary, physical activity, and illness patterns. They note that more store-bought foods which contain large amounts of sugar are consumed, people are more sedentary, and that doctors were no longer concerned with fever (attributed to infectious disease). These changes and examples are outlined in Table 7.

It is a Bilagaana Disease

Although informants identified factors they believe influenced the cause of diabetes among them, the overpowering source is attributed to the white people (the Bilagaanas) who introduced diseases such as tuberculosis and small pox. Navajo people now believe that diabetes was introduced in a similar manner. "There isn't a Navajo

Table 7

Personal and Societal Level Changes

Noted by Navajo Informants

Changes Observed by Informant	Example
1. Personal Level	
a. Change in living arrangement	Move from own home to children's home
b. Economic pursuit	Stopped sheepherding and weaving
c. Role change	
2. Societal Level	
a. Dietary changes	From traditional to refined foods
b. Physical activity	More sedentary--stopped going after sheep or horses and walking to store and gardening
c. Illness patterns	More talk about diabetes, less about fever (and infectious diseases).
d. Use of traditional medicine	". . . the younger men don't know (the curing rituals)"

explanation except that it is a new thing among us. We never heard about it when we were young. I didn't know any adult who had it when I was a child." This sentiment is echoed by most informants. Mr. Nez mentioned that the local media coverage on diabetes is widespread:

> It must be a problem because we hear about it on the radio; and we see papers posted on the walls here (chapter house), the stores and the clinics, and the health care people are always testing blood for sugar. We also hear of people who have had their foot or both feet removed because of too much sugar.

In spite of the publicity, which is aimed at increasing awareness among the population in an effort to control the effects of diabetes, people who have had the disease for some time maintain a pessimistic view. Mrs. Nizhoni has the following perspective:

> We hear about it all the time today. But, there's nothing that will make us better. There's no medicine for it. I get all kinds of medicine from the clinic but they make me nauseous even when I take them with food. I can't stand it. I take two pills for the sugar, one shot a day also for the sugar, and a pill for arthritis. That's too many medicines--no wonder I don't feel well all the time.

The attention to diabetes is so intense that Navajo informants feel other problems may be overlooked and considered secondary problems by health care providers. One woman relates her experience:

> I was told last year that I was bothered by sugar when I went to the clinic for hip pain. Once they told me about sugar, they seemed more concerned about it and never looked at my hip. My hip still hurts.

Several informants related incidents about when they visited the clinic for respiratory infections and requested

"shots." "I went, expected to get a shot for the fever and cold. They took my blood and said I have high sugar. I'm not sure if that's true."

Influence of Diabetes on the Family

As mentioned earlier, having diabetes is not a singular experience for the patient, but it affects the family as well. One older man describes the family experience as follows: "All of us [family] are affected by it [diabetes]. It's like all of us here have the disease and we suffer together. That's how it is when one person is sick--everybody is affected--we all don't feel well.

Summary

This chapter provides a description of how Elbow Creek Navajos are formulating ideas about the appearance and consequences of diabetes (see Table 8). The three traditional descriptive categories used for illness do not easily describe diabetes. The three categories are, "hurt or fever throughout my body," "I am not well," and "I have caught a contagious disease." However, the description of ill-defined condition, "I am not well," is the closest cover term which may be used to clarify the experience of the Navajo person with diabetes. A fourth illness emerged from this study.

Navajos use the term "sugar is killing me" to refer to their diabetic condition; however, they clarify this by

Table 8

Additional Views and Examples

About Diabetes

Other Beliefs Surrounding the Presence of Diabetes	Examples
It is a Bilagaana disease	They also brought tuberculosis, small pox, and diabetes
It is a problem--we hear about it all the time	On radio, in papers, clinic, store, amputations
But, there's nothing that will get us better-- no cure	No medicine for it
Diabetes is pervasive	We (as family) suffer together

stating, "They tell me that . . ." or "I am told that . . ." This statement offers an interesting worldview that the disease is powerful and they are subjected to it by an external force. When viewed in this manner, a health care provider may readily foresee the potential problems of acceptance and adherence when self-care management is prescribed.

Informants are attempting to explain the origin of diabetes and have attributed them to: (1) "The unnatural" practice of using fertilizers and insecticides, (2) to store-bought foods, (3) consumption of "instant" foods, (4) change in cooking fuel, (5) introduction by Bilagaanas, and (6) taboo violation.

Navajo informants are also beginning to juxtapose the problem of diabetes to changes in their world. These changes are at the personal level (in living arrangements and economic pursuits) and at the societal level (in dietary, physical, illness, and medical use patterns).

Finally, additional explanations of the cause of diabetes have to do with the ever-presence of the Bilagaanas who have introduced other diseases, as well as pessimistic views that it is pervasive and there is no cure for diabetes.

Chapter 8 presents health/illness practices of Navajo people with diabetes.

CHAPTER 8

HEALTH/ILLNESS PRACTICES OF NAVAJO PEOPLE WITH DIABETES

This chapter describes the health practices discussed by informants, as well as practices observed by this writer in Elbow Creek. Health and illness practices fall into six major categories: (1) Expression of Keh', (2) food practices, (3) use of biomedical health care, (4) use of traditional health care, (5) family support, and (6) physical activity patterns.

The ideals of sharing and reciprocity which are pervasive in all aspects of Navajo lifeways form an over-arching framework for practices related to health and illness situations.

Health/Illness Practices

Expression of Keh'

As diabetes becomes a more serious health problem, Navajo people are beginning to realize the devastating complications which may result. As in other illnesses, the family and clan networks are activated to assist those in need or to visit and "be with them." Assistance is given in various forms. For example, Mrs. Nizhoni, whose brother was hospitalized with a sore foot assisted him by caring

for his cattle. As a result, she cared for both the sheep and cattle herds jointly owned by the family; however, she later "turned over" the sheep to her brother's family.

Another way of helping or expressing Keh' is to visit the sick person. The rule of reciprocity works in full force here. People state that, "You never know when you, yourself, will be in need, so while you enjoy health, you should help those who are less fortunate." The expression of Keh' is thought to also serve as a healing factor. During periods of mourning, the expression of Keh' is considered a source of strength to the bereaved. Relatives and acquaintances of the survivors visit, bring food, offer words of encouragement, and provide solace, by visiting during conditions of health, illness, and death.

Traditional Navajo expressions which continue to operate among the informants are, "to be healthy is to have many kin with which one maintains a reciprocal relationship." Mrs. Nizhoni expresses this as follows:

> It means when a person doesn't have worries about physical condition, children, and other things that make up the home. My children come regularly to visit. I also have grand kids and great-grand kids. I like that. My brother lives nearby. My father lives here, but he is away now at my sister's.

When asked if there were other ways people with diabetes attempted to stay healthy outside of following the teachings of allopathic medicine, one 59-year-old man with a below-the-knee amputation states:

> I try to get around to visit people for Keh's sake. I like to go to the Senior Center to visit. Then, I stop at the trading post everyday. It makes me feel good. I also like my grandchildren to visit me.

To this man, who has an amputation and is losing his eyesight to retinopathy, staying healthy is not necessarily defined by exercise and keeping to a diabetic diet. Instead, emotional health in terms of kinship expression seem to be more important as he receives greater satisfaction from visiting others and vice versa.

Although the Navajo kinship structure is in transition, expression of Keh' remains a dominant traditional value expressed through acts of visiting others during well and ill days, sharing tasks and food with kin, and offering words of encouragement.

Foods are Natural and Good

In general, Navajo people are confused about how and why foods are classified as bad by some health care providers. Most Navajo people view food as natural and good to eat. However, they believe that the amount of food eaten may be detrimental to health. In addition, they tend to believe that traditional Navajo foods are healthier than foods bought in trading posts and grocery stores. Some comments concerning the relative merits of good or bad qualities of food are given in the following female informants' statement:

> We eat traditional Navajo foods every now and then. I buy foods like chil-chin, tohl-cheen, and other corn

> foods. But people who sell these foods ask for very expensive prices. It's hard to get them [traditional foods] now. All foods are good for people. We just seem to eat too much of the sweet foods and fatty foods. We also drink too much pop.
>
> All foods are good but we should eat mutton and sweet foods once in a while--not every day. We do that here. We have meat [mutton], fry bread, and tortillas once in a while.

When asked about their role in teaching the young, the informants state that it is up to their children to teach grandchildren to eliminate consumption of pop, sweets, and potato chips from their diet. Due to changing living patterns, grandparents appear to be losing authority in teaching grandchildren about proper eating habits. Food preparation and the amounts consumed seem to be changing in relation to people cutting down on how much sweet and fatty foods they eat. However, community feasting remains a widespread practice in which people set aside all modesty in observing serving portions or type of food eaten.

Community feasting. This writer observed and participated in public feasts on five separate occasions: (1) a chapter meeting, (2) political rally, (3) a funeral, (4) a first laugh celebration, and (5) a Kinaalda. The first two events were held in the chapter house, with feasting followed the conduction of business.

After sitting through two hours of nonstop political endorsements at the rally, the people were told that a side of beef had been donated for the event and for all to enjoy. Everyone instantly rose from their seats and formed

a line to the kitchen. While waiting in line, this writer had the opportunity to observe others who had been served and were seated at tables inside the winding line of would-be diners. Some people had two or three plates with them. Invariably, the second or third plate was taken outside once the person had finished the first plate. Those extra plates were taken home for family members who were unable to come. The menu at the political rally consisted of fry bread and tortillas cut in half, mutton stew or beef with potatoes, boiled zucchini, canned baked beans, watermelon, and fruit punch or coffee.

Community feasting serves many purposes. It follows major social or political events or a rite of passage. In social or political events, feasting occurs in a social context and those attending enjoy the good food and socialization. Feasting marks events such as birthdays, graduations, holidays, or reunions, as well as tribal celebrations and political rallies.

In smaller family gatherings such as the Kinaalda (female puberty rite) and first laugh ceremony, the foods prepared have religious significance because they are blessed by the novices undergoing the ceremonies and the symbolism of the food pervades the entire event. To mark her rite of passage, the Kinaalda or young female novitiate uses corn throughout the entire length of the ceremony. She sprinkles corn, marks herself with corn, grinds and

prepares corn cake in the underground oven, and serves the cake to those attending as a gesture that she respects them as kin. Similarly, in the first laugh ceremony, the food prepared is passed through the hands of infants symbolizing the values of generosity and sharing which they will possess throughout life.

Feasting following a funeral serves to provide physical and emotional strength to the mourners. Those who donate and prepare food do so as a gesture of Keh' and continued support. Feasting associated with sings during healing ceremonies serves similar purposes.

Thus, in the community-oriented Navajo world, feasting occurs frequently and regularly to mark special events, extend kinship, and provide nourishment as well as emotional strength.

Senior citizen meals. Most informants receive lunch from the Senior Citizen's Lunch Program. These lunches supplement other meals and provide the elderly with one well-balanced meal daily. All informants who are 60 years of age or older receive a lunch. All are pleased with the food provided. The Center staff try to include Navajo foods in the menu occasionally. One such menu consists of mutton stew with hominy, Navajo pancake, potato salad, broccoli, canned pears, and milk or Navajo tea.

Navajo foods from this type of menu are very popular and usually consumed first. Leftovers are often taken home

for later consumption. This lunch program is seen as another occasion by informants to socialize, receive nourishment, and keep current on local news. Informants view the lunch program as a kind gesture by community leaders to provide for the elderly in the community. Occasionally a nutritionist speaks on nutrition for the elderly or a community health staff may conduct some health education.

Home meals. The type of home meal prepared depends on who is home and their physical capability. Fried potatoes and tortillas are popular and prepared when the informant's family members are present.

Beans, obtained through the commodity program, are cooked by one woman who lives alone with her elderly mother. She has a pot of beans simmering all morning while she is herding sheep. Another woman who lives alone prepares kneel-down-bread. Tortillas left over from the morning meal are often saved and eaten later. Generally, mid-day meals are simple, consisting of fried potatoes, canned beans or meat, tortillas, and coffee. If children are present, soda pop is provided by their parents. Fresh fruit or vegetables are rarely eaten in the home except during harvest time by those who have a garden.

While Navajo informants continue to use traditional foods, they are unable to grow their own due to their ill health or diminished physical capability; if the foods are

available for purchase, they are too expensive. Informants all agreed that Navajo foods are more healthy than foods available in trading posts or stores today.

Dietary practices and cooking methods are undergoing changes as a result of what informants learn from health care providers and their children's exposure to outside influences. Informants are making some dietary changes, primarily by reducing their serving sizes and eating fatty and sweet foods only on occasion. However, these practices are not observed in community feasting practices which are held regularly and rather frequently.

Use of Modern Health Care Systems

In general, Navajo informants report using private and IHS facilities for allopathic medicine. Usually multiple sources are used, as exemplified by Mrs. Nizhoni.

> I've been to the doctor in Y place. They checked me out all over three years ago. Two years ago I was checked out completely in Z place. This year I'm going to A place. It's okay with me--I've given up my body to them to check out as they wish. The only thing is they told me in A place to come to the X clinic for diabetes from now on. I guess it's because they can't cure me--the disease is getting worse.

Reinforcing the belief that diabetes is not treatable by Navajo medicine, one male informant states:

> We use Navajo medicine but not for sugar disease. It came from the Bilagaanas. The Navajo way is different. It takes care of personal mistakes that people have made. If a person kills or hurts an animal, then the person gets sick and needs Navajo medicine to correct that mistake. It's different.

More traditional informants use the Navajo ceremonial way before attempting to use the Western-oriented health care system, as stated by Mr. Bitahni.

> I use the Navajo way, the corn pollen way. I also use the way of the Native American Church. In fact, when I was first told that sugar was bothering me, I went to medicine men who performed ceremonies for me. Ceremonial prayers were offered to keep me from getting sicker.

Those who can not afford Navajo ceremonies are limited to using herbs which they prepare themselves. Preparation of herbal teas by an herbalist is considered costly today.

> I use the Dine' way for other things but I've never tried it for the sugar disease. It's expensive and requires a lot of work. All I use now is herbs. I might use the Dine' way of treatment later if nothing else works.

Fewer people tend to use other means besides Navajo and Bilagaana ways to obtain health care. Some Navajos report "trying" a combination of the Native American Church, Pentecostal church, the Navajo Way, and allopathic medicine.

> I used the peyote way [Native American Church] last year when my sister died. I was very distraught--I couldn't eat or sleep. I tried going to the Pentecostal Church but it didn't help. I tried the peyote way, and it helped me get over it [the loss].

Pentecostal revivals are becoming fairly popular on the reservations. Navajos are probably attracted to this movement for its claims of healing the sick and answering prayers of those living with stressful conditions.

> I don't go to all those [revival] meetings. One of my daughters goes to church a lot. Three of my grandkids were raised by Mormons but they have moved back here

> [to the reservation]. Sometimes I go to church, but I can't use it much. I guess its okay to use it.

Some informants tend to use herbs to correct the symptoms of diabetes, in combination with allopathic medicine.

> I don't think this kind of disease can be helped by Dine' medicine. It's simple; the clinic says food causes the problem. But, I do hear there is an herb that can be used but we don't know anyone who prepares it.

Use of Herbal Medicine

Most respondents are aware of the use of herbal medicine (i.e., sage tea) to treat diabetes and high blood pressure. Many report hearing of a nonresident Navajo woman who travels through Elbow Creek to sell herbs. A local man is also known to prepare and sell herbs for a variety of conditions. In spite of this, people do not take the opportunity to try herbal medicines, often due to the expense involved. One woman remarks:

> I hear that there's a man who knows about chil (herbs). There's also a woman who has chil for sugar disease and high blood [pressure]. People say it's good and works but I have never tried it. It costs too much.

Some people were skeptical to try herbs that are sold because of the belief that herbs are natural products and were not intended to be used through the exchange of currency. Some, such as Mr. Nez, have had an herbalist prepare a tea for them.

> I went to an herbalist and he made me some medicine. He told me to boil it and drink it everyday. I put it

> [tea] in a large glass bottle and took it wherever I went. Even when I'm driving around I drank it. When I finished it, then suddenly, it seems that my knees and elbows were no longer stiff and painful.

Another example of this is given by Mr. Bitahina.

> There is a difference between the medicine man and those who sell herbal medicine at the flea markets. When you buy from the flea market, it is like buying medicine from the drugstore. They sell medicine just to make some money. They don't keep it sacred anymore. I bought some medicine like that [from the market] and used it when taking sweat baths, but the medicine didn't work at all.

Another reason given for not using herbal Navajo medicine was the lack of knowledgeable herbalists now available. One woman had tried herbal tea but "it didn't help her" diabetic condition. She was also skeptical of using the clinic.

> I used to boil sage and drink the tea. I must have done it for two months. It didn't help me. I guess we're all individuals. Some people will get better using a certain medicine, others will not.
>
> . . . The Bilagaanas don't really know how to treat sugar disease. They tell people to take medicine which people do, but they don't get better. Some people use both Bilagaana way and the Navajo way, and these are the ones who say they feel better.

Medicines from the Clinic

Although most informants claim they take their medications as prescribed by physicians, the practice of "pill-taking" does not occur daily as instructed. Instead, informants "experiment" with medications and may substitute herbs if pills are deemed "ineffective." Two informants relate:

> I'm not well and the round medicines I take can't help so I had some Dine' medicine (herbs) prepared for me. It's real bitter, but I put it in water almost every day and drink it. I feel a little better now.
>
> I eat the round medicines I get from "the place where medicines are made." I don't have any problems with them. I take them every day.

Few stated they honestly take medications daily as prescribed. Others use both medications received from the clinic and herbal teas, while some remain skeptical of oral hypoglycemics. Table 9 outlines the use of medications by informants.

Navajo informants use multiple sources of health care including the Indian Health Service, multiple private providers in border towns, Navajo ceremonies and herbs, Native American Church (peyote ways), and Pentecostal Church meetings.

The type of health care used depends primarily on the person's belief and finances, as well as family support and previous experience. Navajo ceremonies are considered very expensive and time consuming while the use of herbs is practiced more frequently. If herbs are prepared by informants, it is less expensive; however, this requires proper knowledge and respect for its use. Herbalists may prepare teas; however, it is expensive and herbs sold in flea markets are often considered to be commercial products, therefore, less sacred. Few informants use the Pentecostal Church meetings for their healing appeal or to have prayers offered for them. Two informants report using

Table 9

Use of Medicines from the Clinic

1.	Round pills from the clinic.
	"I take all the round pills they give me from the clinic. It [oral medicine] makes me feel better."
2.	Herbal Navajo medicine.
	"The medicine from the clinic doesn't help me. I feel better with herbal medicine.
3.	Use of both medications: From the clinic and herbs.
	"Sugar disease [diabetes] is not treatable by Bilagaanas. "Sugar disease is not a Navajo disease." "Use of both types of medicine . . . and feel better."

the Native American Church, in both cases to alleviate emotional stress.

Table 10 summarizes sources of health care and their reasons for use by Navajo informants from Elbow Creek.

Family Support

When informants were asked how their family supports them and if this differs from previous experience, there are three forms of support offered: (1) encouragement to adhere or not adhere to recommendations by health care providers, (2) physical support, and (3) presence (or visiting). A few state that their family requests them to adhere to medical prescriptions they receive from the clinic. One female informant expressed the following:

> For sugar disease, they [the family] tell me I should keep taking the medicines. But I tell them the medicines make me sicker. They tell me to rest when my feet and legs hurt and when I can't walk. I enjoy my family, especially my grandchildren. My only daughter lives nearby, and it's nice for them [daughter's family] to come see us often because we're alone.

Another woman states that her children are supportive in the sense that they are concerned that the diabetes doesn't worsen, but cautions her against running. Running is an activity which she understands the health care providers to consider important. She gave the following account:

> I'm concerned about what I eat. I also try to tell my children about which foods are better for them. I also started running and was doing it almost every day, but I fell one day. I fell forward and hit the

Table 10

Sources of Health Care and Reasons for Their Use as Reported by Navajo Informants

Source of Health Care	Reasons Used
1. Allopathic Medicine	
a. IHS	Belief that diabetes is Bilagaana disease
b. private care	Greater trust in private physicians who have been in the area longer
2. Navajo ceremony	Usually when diabetes complication is present which is associated with taboo violation, when allopathic medicine "doesn't work"
3. Navajo herbs	Alleviate diabetes symptoms of fatigue, weight loss, and frequent urination
4. Pentecostal Church	Healing and answer prayers
5. Native American Church	Alleviate emotional distress

> ground hard. My children were very concerned. They said "Mother, please don't run anymore--you may hurt yourself seriously. Let them [health care providers] talk about running. We're more concerned about you." I stopped running.

Another example of family support was shown by a spouse who removed his wife from the nursing home to care for her in familiar surroundings.

> She suffered there [in the nursing home]. She said they didn't feed her Dine' food and only gave her food that had no taste and was mashed together. People stole from her a lot. They [the staff] didn't care for her well but tossed her around. I don't understand them--why [do] they do that to old women and men. I can take care of her now when it's warm. When it gets cold it will be hard because I can't chop wood fast enough to keep the house warm. I cook for her and feed her now. I even wash her clothes. She's better off. She's happy now. Her grandkids just came to see her. It's too far to travel to see her at the nursing home.

This family voiced similar concerns which Navajo families share when loved ones are institutionalized. Many have negative perceptions of what nursing homes represent; often they are thought of as the final place where elderly people live before dying. Physical support is provided by family members through daily physical care and attention to activities of daily living.

Family support is shown by children and other relatives (1) visiting the person with diabetes, (2) by either encouraging what they consider total or selective adherence to the instructions given by health care providers, and (3) by providing total care to the person with diabetes as shown in Table 11.

Table 11

Family Support Practices Reported by

Navajo Informants

Practices	Practiced by	Examples
Visiting and being present	Children, relatives, other kin	I like my children and grandchildren to visit me
Encouraging total adherence	Children	My children tell me to take all the medicine
Encouraging selective adherence	Children	". . . please don't run anymore, you may hurt yourself seriously."
Providing total care	Spouse Children	"I'll cook for her, and wash her clothes . . ."

Physical Activity Patterns

Exercise is an important concept shared and taught by diabetes' educators because it is thought to contribute to weight loss, stress reduction, and promotion of overall well-being. Exercise is an important American value and has, in a sense, become commercialized with the burgeoning fitness centers and "exercise" equipment. Because exercise is considered by diabetes educators to be one of three components in the diabetes treatment triad (along with medications and proper nutrition), informants in Elbow Creek were asked if and how they exercise.

Exercise, as most commonly viewed by health care providers and the general American population, consists of aerobic activity such as jogging. However, this writer was uneasy discussing "exercise" with people who have known harsh physical conditions throughout most of their lives. Therefore, discussion centered on physical activity--what they do to keep physically active, rather than how much or when they exercised.

Most informants discuss physical activity in relation to what health care professionals tell them about exercise. Exercise and physical activity are not synonymous. One man with a wage job, who spends a great deal of time on his feet.

> They [clinic providers] give us confusing instructions. They said I should exercise every day. Well, I walk from here to the main office about three to four times every day. I also walk around in here

> while working. Then I go home and use the pick and shovel. I call that exercise but they say it's not exercise. It's very confusing. Now I don't know what they're talking about.

Informants expressed concern that health providers considered them to be lazy because they did not "exercise" as instructed. One woman states that sheepherders are hard workers and do not have time to be lazy. Even when a sheepherder goes out on a horse, they "bounce" on top of the horse all day because sheep and goats don't graze peacefully. Those who use horses do so in inclement weather or because of physical limitations [usually arthritis]. Others who walk after the herd do so because (1) they don't have a horse, (2) they are physically capable, or (3) they have some physical problems but keep the herd close to the home.

Many discuss the traditional Navajo practice of running at dawn and to "never let the sun catch you sleeping." Many older informants practiced this ritual in their youth but do not attempt it anymore. Running and hard work are considered ideal to maintain hardiness, health, and mobility. Some continue sheepherding but others state that they are getting old and are unable to continue the physical activities they previously enjoyed as sheepherders. Two informants explained their situations as follows:

> Exercise is considered good by both Dine' and Bilagaana. We used to run before sunrise every morning long ago. We were taught not to be lazy.

> It's true that when you sit and rest a lot during the day, you will begin to get lazy. Today, they [health care providers] tell us that exercise is good to bring down the sugar. But I don't know what kind of exercise. I wonder if it means I can't rest or if I should be moving all the time. I can't run anymore. I'm too old and not strong either.
>
> I walk from my house, up the road toward the mountain everyday. I also lift some weight. I feel better when I do these things. If I don't do them, I feel tired and lazy.

This last man was a sheepherder and cattle rancher previously. Although he and his wife no longer depend on this type of livelihood, they visit their children regularly at the summer mountain sheep camp. Lifting weights and trips to the mountain camp are activities which replaced his active sheepherding lifestyle.

Many speak of the changing practices in lifestyle--how the young do not run at dawn like their elders did, but are increasingly dependent on motorized vehicles. They are concerned but accept the fact that "things are very different now."

Table 12 identifies six main forms of physical activity which informants from Elbow Creek follow: (1) Walking, (2) running, (3) sheepherding, (4) horseback riding, (5) gardening, and (6) weight lifting. All except running and weight lifting are considered activities that are part of daily life rather than scheduled activities. Horseback riding is associated with sheepherding and cattle driving in the desert or when moving to the mountain home.

Table 12

Forms of Physical Activity Performed by

Navajo Informants

Forms of Physical Activity	Places
Performed as part of daily living	
Walking	At work, to windmill
Gardening	At community gardens
Horseback riding	Desert and mountain homes
Sheepherding	On foot and horseback
Scheduled Activities	
Running	In privacy Usually at desert home--never in community center where neighbors may watch
Weight lifting	By few men, in home

Weight lifting is mentioned only by two middle-aged men who have equipment left in their home by their adult children.

Summary

This chapter discusses practices related to health and illness as experienced by Navajo informants with diabetes. There are six main categories which describe the practices reported by informants. The expression of Keh' which is integrally related to sharing and reciprocity pervades much of Navajo social activity, including relationships between individuals. Expression of Keh' is considered a strong healing factor during times of illness as well as a health promoting factor.

Food practices are discussed in relation to community feasting, a Senior Citizen's program, and home-based meals. Community feasting, which is frequent, is not consistent with the preparation and meal patterns practiced in the home by informants. Community feasting is considered health promoting for all community members; therefore, any food restrictions previously observed are set aside to participate fully in order to gain essential benefits.

The use of the biomedical health care system involves using either IHS or private care providers. One reason given for using the biomedical system is that diabetes is not treatable by the Navajo way. In many cases, biomedical care may be tried before informants try the Navajo way.

Those who use Navajo ceremonies may also use herbs, the Peyote way, or combine all these with biomedical health care. Two deterrents to the exclusive Navajo way are the expense and the loss of traditional practitioners today.

Family support consists of total or selective encouragement to adhere to medical advice, visiting by children and grandchildren, and provision of care given by spouse and children.

Physical activity is the last category reported which is considered an important health-promoting factor. Unlike "exercise" which providers promote, Navajo informants report physical activity as activity performed as part of one's daily lifestyle. These activities are sheepherding, horseback riding for the purpose of herding sheep and/or cattle, walking, and gardening. These activities are contrasted to those of running and weightlifting which require a special time and place. The latter are less popular activities which are more congruent with the ideals of exercise promoted by health care providers. However, running at dawn has been a traditional Navajo practice deemed to promote health and hardiness.

Chapter 9 discusses the beliefs and practices of health care providers and juxtaposes them to Navajo beliefs and practices. Congruent and incongruent beliefs and practices between the Navajo and health providers will be highlighted.

CHAPTER 9

HEALTH CARE PROVIDER BELIEFS AND PRACTICES: INTERFERENCE OR CONGRUENCY WITH NAVAJO BELIEFS AND PRACTICES?

Chapters 6 and 7 discuss the beliefs of Navajo informants. Chapter 8 discusses six major categories of Navajo informant health/illness practices. A strong belief shared by informants is that diabetes is a disease introduced by Bilagaanas; therefore, treatment should primarily be instituted by Bilagaana ways, although Navajo medicine was instituted when Bilagaana ways were considered ineffective. Paradoxically, many Navajo believe that diabetes is a disease which is difficult to treat or cure even by Bilagaana medicine. They express concern about diabetes and relate how diabetes has affected their lives. They ask many questions about diabetes and try to formulate the meaning of the illness and attempt to understand it through their cultural language.

This chapter explores the beliefs of health care providers and discusses whether these beliefs are complementary or incongruent to Navajo held beliefs and practices. As stated, a total of ten health care providers are interviewed. Their background varies (two physicians, three nurses, one pharmacist, one physician assistant, one

health educator, one dietitian, and one aide). Five were Navajo, while five were Anglo.

The health care providers believe that important information necessary for patients falls into six main areas:

1. Diabetes is a serious problem among the Navajos.
2. Diabetes is not contagious as some people may suspect.
3. Diabetes, particularly Type II, runs in the family.
4. "You have diabetes because you are overweight."
5. Exercise, diet, and medications are equally important in diabetes management.
6. "I can't help you, it is up to you to control your diabetes."

Diabetes--A Serious Problem Among the Navajo

Most providers state that in an attempt to increase Navajo awareness, they try to inform their patients that diabetes has become a "serious problem" among the Navajo people and that it is a disease associated with their sedentary lifestyle. Some use specific examples (i.e., changes in eating and activity patterns). One physician explained:

> If they are first-time patients, I tell them a couple of things. One thing is that they didn't catch diabetes from anyone; they just developed it. Second, it's becoming a big problem with people in general, mainly because it seems as though the diet has changed

> and the average weight of people has risen. As a consequence, they will always have a tendency for diabetes. But especially if the new ones lose weight, 15 or 20 pounds, most of them can come off medications altogether. But, if they gain weight again in the future, their diabetes would come back.

Another physician states that heart disease, as a complication of diabetes, was rarely documented in patient records 10 years ago; now, the frequency of heart disease is higher.

Diabetes is Not Contagious

Because of the many years of experience Navajo people have had with infectious diseases, patients ask if diabetes is contagious. Health providers inform patients that this is a different era and that diabetes, as a chronic disease, is not contagious. One Navajo provider states:

> Some patients will ask questions like "Is this contagious?, Can I give it to my husband or my wife?" We tell them it's not contagious--it doesn't spread like a cold. It is hereditary and I tell them that maybe your mother or father was diabetic. We ask them what their parents died of and they usually don't know.

Almost all Navajo providers state that patients pose questions about whether diabetes is "catching." Anglo providers do not report a similar experience probably because all use translators. Most patients communicate through Navajo translators (often nurse's aides or community health representatives) during their encounter with Anglo providers. Whether these questions are asked

and not communicated is not known and was not explored in this study.

When told that diabetes is hereditary, informants are usually puzzled, stating that their parents were never told about diabetes nor were their deaths attributed to diabetes. "Back when my parents were living, sugar disease was never mentioned. They were not told that they were bothered by diabetes."

Diabetes Runs in the Family

In accordance with medical literature which associates Type II diabetes development with risk factors such as obesity and family history, health providers hold these same beliefs which they convey to their Navajo patients. One Navajo health provider attempts to clarify the hereditary nature of diabetes by using an analogy which his patients may find easier to understand.

> When I explain family history, I use the analogy that people say when they see a new baby. "She looks like her mother." I tell them that those similarities in physical characteristics are also true inside the body. That just like a person's mother or father, the offspring may get a disease like diabetes.

An Anglo physician addresses family history more directly.

> I ask them about their families--if everyone in their family is overweight, especially new diabetics who may have children. I tell them that diabetes runs in the family; and sometimes in the next generation, it starts even earlier. They can do their children a favor by teaching them good habits they won't have to break later and protect their children from developing diabetes if possible.

Thus, the hereditary nature of diabetes is communicated to patients but in different ways by Navajo and Anglo providers.

Overweight Contributes to Diabetes Development

Most providers attribute the problem of diabetes to their patient's overweight condition. One nurse stated:

> I try to weigh the patient to see whether they have lost weight because primarily, diabetes is a disease of overweight people. We talk a lot about weight loss and we talk a lot about how to change the diet or how to lose that weight without changing entirely their way of eating.

Along a similar line, but adding the concept of high blood sugar, a health educator explains about her patients that:

> The primary reason they are having high blood sugar is that it is related to the food they eat and that more people are diabetic because they are overweight than any other reason. I tell them that to control their blood sugar and maybe eliminate the symptoms of high blood sugar, they are going to have to lose weight.

Another Navajo provider begins her discussion with patients by focusing on blood sugar levels and gradually adding the problem of overweight, realizing that weight is a cultural issue which should be dealt with in an acceptable manner.

> I tell them about the sugar level in their body. The sugar goes higher than it should when the body cannot control it or bring it down to a normal level. Usually, they respond by saying, "I have sugar in my blood?" I then tell them that they should watch the foods they eat--food becomes sugar. They then talk about all the problems they see with diets and eating

> foods we tell them to eat. Overweight is a difficult thing--most are very stubborn when it comes to that.

The issue of overweight is a current Navajo cultural problem, only showing up about 20 to 30 years ago when Navajo people increasingly accepted a modern lifestyle. Where feasting and food sharing are present even during times of scarcity, overweight was never a previous issue nor was it attributed to health problems. With the introduction of automobiles and wage work, dependence on home food production is now replaced by consumption of large amounts of what health providers call "junk foods." Heaviness is a cultural norm today from childhood onward. The issue of overweight, as reported by the health providers, is not given in this context, rather, their beliefs tend to attribute the onset of overweight and diabetes directly to the individual's behavior. Generally, obesity is considered a behavioral and physiological problem as perceived by health care providers; however, Navajos view it as a condition with social and cultural implications.

Diabetes Management

As noted previously in Chapter 8, patients report that their range of adherence to medical advice varies between "total" adherence to selective adherence. Those who report "total" adherence stress that they take all their medications, while those who report selective adherence

choose what they consider to be more reasonable and acceptable and often are dictated by their family's acceptance. Total adherence does not necessarily mean balancing exercise, diet, and medications equally to achieve an acceptable range of blood glucose as perceived by providers. To informants, total adherence often means casual observance of all three parameters without the strict standards of measurement promoted by providers.

On the contrary, health providers report that diabetes management or control means "people should eat less food, eat less fat, lose weight, exercise, and take their medications." To follow these activities on a regular basis requires a knowledge of nutritional content and calories in food, knowledge and agreement of an ideal body weight proportional to body build, and knowledge of actions of oral hypoglycemics. In addition, one physician states there are other parameters which patients are expected to learn and perform.

> There are certain things that people who have diabetes need to check on themselves just to make sure complications aren't developing . . . teaching them about checking their feet, making sure when they get sick that they come to the doctor soon rather than later because they are more susceptible to complications.

As indicated by this physician's orientation, his expectations of patients are not only to "manage" all the parameters deemed important on a daily basis--management of diet, exercise, medications, and overall physical care; but

patients are expected to think in future terms in order to understand that by doing all these things today, they are preventing future complications. Providers tend to emphasize diabetes as a pathophysiological entity.

Navajo people, as well as other Native American people, are often past and present oriented rather than future oriented. Consideration of Navajo orientation was not reflected in the responses or beliefs of health care providers. Navajo informants tend to reflect on "what was" in the past and what they are currently experiencing. Minimal consideration of the future is presented. Most Navajo informants talk about "long ago when we didn't have cars," "my parents were never told about sugar disease," "when we had men who knew medicine," or "when I was young, I ran at dawn."

I Can't Help You--It is up to You to Control Your Diabetes

Most providers agree that teaching Navajo people with diabetes about self-management is difficult. One physician describes his frustrations concerning the lack of Navajo patient concept of self care:

> . . . There's not much that physicians can really do other than tell patients what they can do themselves. In other words, the medicines are much less significant than most patients seem to think . . . but really it is a case where the person who has diabetes really has to take responsibility for it, and it's difficult to do because it's more than they can do.

Others comment that what they try to teach are considered "novel or foreign" ideas by their patients. One physician comments that "walking for the sake of walking is a foreign idea to them." Patients see physicians in the clinic setting who tell them to walk independent from sheepherding or cattle herding. Needless to say, this is confusing and doesn't make a lot of sense to many informants. An example will clarify this point. The Peshlakais, both in their 60s, have diabetes, live alone, for the most part, in a traditional hogan, and have a herd of sheep which they tend on a daily basis. The Peshlakais are up by 5:00 a.m. to prepare and eat breakfast. Mrs. Peshlakai follows their sheep till 11:00 a.m. and again between 2:00 and 6:00 p.m. By this time, the summer temperature ranges between 90 and 100°F. At 11 a.m. she brings the sheep home so both she and her herd can get out of the mid-day heat. She and her husband receive lunch delivered by the Senior Citizens' lunch program. If told to take between 30 minutes to one hour during the "lunch hour" to walk and exercise, Mrs. Peshlakai would definitely write it off as ridiculous. Mr. Peshlakai lived a similar lifestyle until his leg was amputated as a result of uncontrolled diabetes. Now wheel-chair bound, he spends most of his time alone at home while his wife continues the sheepherding lifestyle they enjoyed together for the past four decades.

The Peshlakais are a typical example of the older and traditional Navajo family. To them, the concepts of diabetes self-care as health care providers view it is indeed "foreign" and a "circumscribed" time to exercise is unthinkable.

The seeming lack of "self-care" concept in the Navajo repertoire is explained differently by one community health nurse. She notes that she has great difficulty in helping patients understand the idea that "they are the ones who are ultimately responsible." Rather, patients expect the health care providers to "have all the answers or expect us to make them better." This nurse explains this type of "dependent" patient behavior by noting that similar behaviors were expressed in earlier history when Navajo people were plagued by infectious diseases. The prevailing attitude and behavior was that "shots" would take care of illnesses (i.e., strep throat, pneumonia, tuberculosis, otitis media). At that time, health care professionals also encouraged these behaviors by stressing consistent clinic attendance and active patient participation. Today, when infectious diseases are virtually eliminated, preferred behaviors which were acceptable then are continually expressed when dealing with chronic diseases. Both patients and providers are having difficulty understanding one another. Rather than being expected to come to the clinic, they are told to "take care of

themselves" at home, too, and to come to the clinic monthly.

Lack of patient motivation is the reason given by one health care provider for patients not exercising or eating "appropriately." She states that her instructions are specific enough that they should be easily understood and carried out. She states:

> I try to be specific when I'm talking and tell them when I say exercise. I usually use walking because to walk all they have to do is put on a pair of shoes and go. Still, I have a hard time getting people motivated.
>
> . . . I try to plan with them a specific amount of exercise, like walk every day to the water pump or windmill and back at a fast pace, to walk slowly for five minutes and to walk fast to make your heart beat 20 minutes and then walk slowly for five minutes. I'll have to admit I haven't been entirely successful in getting people to do that.

The seeming lack of patient participation is interpreted as disinterest when one physician compares Navajo patient behavior to those of non-Navajos.

> Diabetes control here is different than with other (non-Navajo) patients because many of my patients are not quite as interested in real tight control of diabetes and doing every single thing they can do to be absolutely normal. They [Navajo patients] would just as soon not really think very much about it, nor devote a lot of time to changing things and taking responsibility.

To explain self care to patients, one Navajo provider compares the analogy of keeping one's house clean to that of "taking care of your body." She explains:

> To have a nice home, you have to take care of it to make it look nice. You sweep the floor, dust the furniture, and wash the dishes. The Lord gave us

> bodies and it is up to us to take care of them. I also illustrate that if you cut a cord to the lamp, the light will go out and our body is just like that. We have to take care of our eyes to be able to see.

The idea of maintaining control of one's own blood glucose level as a self-care behavior is undoubtedly a foreign idea and perhaps an impossible task, as perceived by Navajo patients. As previously stated, Navajos do not believe that the problem of diabetes is brought upon them by internal forces. Rather, they believe that diabetes was introduced by outside influences, namely Bilagaanas. Therefore, to expect older Navajo patients to readily assume or accept self-care measures is too idealistic and such expectations would end in futility for both providers and patients. Another factor which complicates assumption of patient self-care among Navajos is their traditional illness belief that the medicine man's role is to find the cause of the illness which is attributed to such explanations as taboo violation, witchcraft, or spirit/object intrusion rather than the alleviation of symptoms. The reasons given as causes of diabetes are not acceptable to the majority of the Navajo informants.

Teaching Methods Used by Providers

One obviously important method used to teach diabetic Navajos about their disease and to improve their self-care skills is through didactic instructions in a classroom setting. Patients are given appointments between 7:30 a.m.

to 9:00 a.m. without eating so that their blood glucose, urine protein, and body weight will be evaluated prior to instruction. Between 9:00 a.m. and 10:00 a.m. they receive instructions on various aspects of diabetes care. Much of the instructions are given in Navajo by the Navajo instructor and occasional sessions are given by non-Navajo providers, who use translators. Occasionally, a film is shown and copied written information is distributed. Many of the illiterate patients are instructed to take this information home and ask their children or grandchildren to explain it to them. The subject of whether or not adult children live with elderly parents is not addressed. However, most grandchildren now speak marginal Navajo, and technical information contained in the brochures is not always easily translated.

One exercise instructor states that patients are taken on a short walk of one-half mile and instructed on how to palpate their pulse and time and record their heart rate. One patient returned a piece of crumpled graph paper on which he marked his week's activities. He was praised by one of the clinic's physicians who stated that those who are motivated usually take the time to exercise and record their activity, as well as their heart rate. The man who brought his graph paper to show the physician was not literate, but made note of his progress by using symbols for distances he ran or walked.

The first issue of an informal newsletter contains information about food, blood glucose screenings, and foot care. Information on foot care is simply done with illustrations of the toes and a calendar instructing people to cut their toe nails and wash their feet. The lesson covers one page and lists four simple steps. It is anticipated that the newsletter will be distributed widely so that not only people with diabetes but nondiabetics can benefit from the information as well. The newsletter covers very few topics so the technical content is not overwhelming.

Another method of informing the Navajo public about diabetes is to post notices about screenings in the trading posts. The effectiveness of this method is questionable. Two heavily frequented trading posts have bulletin boards which are cluttered with other notices about community events (i.e., revival meetings, social services programs, and sheep dipping). Many of the flyers are outdated and should be removed.

The use of public service announcements on the daily Navajo radio program is probably the most acceptable and effective method of "teaching" the public about diabetes. The radio has traditionally linked the Navajo with the outside world. Almost every Navajo home has a radio (battery powered or otherwise) and the people regularly listen to one of two Navajo programs.

The health educator notes that a health fair is held in the community during the year. Community participation is moderate, with attendance by school-age groups more apparent than general adult community members. The extent of the health educator's involvement is limited to a brief survey and a small display at the fair.

A nutrition presentation to high school students is reported by the health educator and nutritionist. The "sugar program" compares the sugar and calorie content of soda pop to other drinks containing less sugar. It also compares various nutrients available in one desirable food item to another less desirable food. The health providers report that students actively participate in this program although their answers do not agree with the instructor's when asked if they would choose orange juice over pop. This is the only attempt wherein high school students are included in a diabetes-related preventive education session.

Another nutrition class for diabetes patients is a food preparation class in which fresh fruits and vegetables are introduced and discussed relative to their nutrient content and ease in preparation. Although this also is an alternative experience which allows for patients' and instructor interaction, it remains a passive mode of learning.

It seems that although providers stress the role of weight control through nutrition and exercise, actual participative activities are not consistently provided in reported teaching methods. A variety of methods are reported but the primary mode of patient teaching is the didactic approach in a classroom setting in which patients are passive recipients. There exists an incongruency in the emphasis on patient self-care and the passive modes used by providers to teach patient participation.

Eating the Right Foods

Several providers, primarily Navajo providers, report that patients ask many questions and state their concerns about how to obtain the "right" foods because they are frequently not found on the shelves in the trading posts or because they are considered costly. The "right" foods are such items as vegetables, fruits, unsweetened juices, fish, wheat bread, and cereal. One provider who teaches nutrition states:

> They always say they have no money and fruits and vegetables are too expensive. Sometimes when they are shopping I watch to see what they put in their baskets and they get pop and sweet rolls. These should be extras. They can afford those, but they can't afford vegetables. When I mention that later, they just laugh. They think it's funny.

Another provider addresses the socioeconomic situation differently, relative to patient reactions.

> I haven't had anybody just come right out and say "I can't afford that kind of food." We don't recommend things that go to the extreme of what they are eating

now. It's more on changing food preparations like cooking without frying, trimming off the fat, buying a can of orange juice instead of pop or an apple instead of candy. I think the socio-economic level cannot be used as an excuse for not changing the way they are eating.

Contrary to beliefs of the above provider, one physician gives an example of one man's experience in which socioeconomics does influence his decision to obtain what is considered the "right food."

> Some of the people who are on government assistance or have fixed incomes are often times worried about getting the "right kind of food." In fact, there was this fellow in here just a few minutes ago who was discouraged because he lives way out and has to drive 70 miles to get here. The trading post near him just sells junk food. They (traders) make a lot of money off of junk food and don't offer more wholesome standard-type food. That upsets him and he has complained to Window Rock but nothing has really happened.

This example is indicative of patient concerns (i.e., distance, time, and transportation costs) to obtain foods recommended to stay healthy. This example also illustrates that patients are beginning to assume some responsibility in seeking tribal involvement, as well as a change in the type of food offered by trading posts.

The health care providers' beliefs about "right" foods are incongruent with Navajo beliefs about "strong" foods. "Right" foods are often judged by calories and nutrients; whereby, the lower the calories, the better and the more varied the nutrients, the more acceptable and "nutritious" the food. In contrast, "strong" Navajo foods are those used traditionally, such as corn products in addition to

some newer foods including meats and those that tend to contribute to weight gain. Fruits and vegetables are not necessarily considered "strong" foods. Melons and cantaloupes which are grown and consumed in large quantity seasonally are the only widely used fruit. While "strong" foods may be purchased in large quantity and inexpensively, "right" foods are considered expensive by Navajo people with diabetes. Cost and lack of refrigeration are major considerations, as well as cultural acceptance. These considerations are not shared consistently among providers when introducing "foreign and novel" foods to their patients.

Exercise

Patient responses to exercise varies by age category. This is congruent with beliefs of patients reported earlier. One Anglo provider makes the following comments in reference to patient acceptance of exercise:

> I think the older person or middle-aged person will look at you like "me walk?" They look at you like exercise is not something that's a desirable thing. It's not socially accepted. It's for the young athletes who get out and jog. I think there is some resistance to exercise probably from about age 30 and up. Young people are much more receptive to exercise.

The same provider reports observations of changing attitudes and behavior among younger individuals.

> I really feel that the general response of people is changing because we have young people like in their 20s on several occasions come in to see me without having a referral by a physician, telling me that their parents or some member of their family had

> diabetes and they saw what happened to them. They didn't want it to happen to them, too. They ask what they could do to prevent becoming diabetic. So, I think the younger generation is more receptive to advice like exercise, keeping the weight down, eating less fat and sugar, and that sort of thing, than some of these older individuals.

When providers speak of exercise they tend to be concerned about what type of activity is performed, how long, how often it is done, and whether the activity is done for a purpose. Classes on exercise stress that walking, jogging, or activities which promote a cardiovascular workout are desirable. Walking is stressed over other forms of exercise, mainly for patient's convenience. A certain amount of time (at least 20 minutes) is mentioned as an ideal time to make the exercise worthwhile. In addition, patients are told to set aside this time which should be independent from any other activity so that walking is done for the sake of walking. These beliefs and practices are recognized as "foreign and novel" to patients. Navajo people with diabetes express their beliefs that physical activity is desirable and they perform strenuous activities as part of their daily lives. Exercise for its own sake is not congruent with the beliefs and practices of most older people; however, it seems to be more acceptable to younger Navajo people. These differences in beliefs and practices of Navajo people and their providers are listed in Table 13. Similarities are noted in Table 14.

Table 13

Differences in Beliefs/Practices of

Navajo Informants and Health

Care Providers

Provider Beliefs/Practices	Navajo Beliefs/Practices
1. Time is a commodity. -clinic appointments must be kept -medications must be measured and timed -exercise is timed & measured -meals are eaten three times a day	Time is forever. -there's always another day
2. Measurement oriented -walk one-two miles every other day -eat a 1500 calorie diet or servings are defined -eat certain servings from each food group -walk fast for 20 minutes and slow for 5 minutes	Quality rather than quantity "I walk and work everyday." "I have cut down on fatty and sweet foods."
3. Internal control Diabetes can be controlled through self care or individual responsibility.	External forces influence "Diabetes is killing me." It was introduced by outsiders.
4. Thinness equals health.	Heaviness equals health.
5. Blood glucose control and prevention of complications are goals. Pathophysiology is stressed.	Wholeness is health--all parts working to achieve happiness and harmony.
6. Future orientation	Past and present orientation

Table 14

Similarities in Beliefs/Practices

Provider	Navajo
There is no cure for diabetes (but one can control it).	There is no cure for diabetes (it will kill us all).
Diabetes management is a balancing act between diet, exercise, and medications.	Harmony between nature and people is the ideal goal.
Jogging and running are good forms of exercise to achieve and maintain health.	Running at dawn was the Navajo way to maintain health and hardiness.

Weight Control

Most providers relate their frustrations with Navajo cultural acceptance of obesity as a desirable body image. Anglo providers compare Navajo measurements to standardized scales used elsewhere. One physician's experience is related here.

> Some people don't see weight as being a problem and they think they are too often skinny. Women will say their husbands think they're too thin even if by average standards their weight is 20 or 30 or 40 percent over what it should be for someone their height. And that's okay. I used to yell at them, but I don't yell at them anymore because it doesn't make any difference.

A more practical approach used by another physician is to suggest weight loss in small increments and to stress the physical benefits of weight loss.

> I'm not asking them to go from 250 to 150 pounds. I tell them that they will be healthier and, if they have joint disease, it will be less painful; they will be cooler in the summertime, and things like that. I ask them about their families, if everyone in their family is overweight, especially new diabetics who may have children.

Patient responses from the interviews vary. Some patients feel better once they lose weight and others prefer to remain heavy. For the most part, heaviness is tolerated within the community. Most people state that they were told by health care providers to keep their weight below 200 pounds. When asked the rationale behind this advice, many do not understand why, nor have they asked their provider.

One 47-year-old sheepherding woman explains that she lost a substantial amount of weight during the previous year:

> I was told that being fat was not good--because it makes the person sicker. I was a big person but lost a lot of weight over the last year. I did it by eating less and moving around more.

The same woman has arthritis but is told to walk to the windmill (about one and one-half miles away) daily to exercise and maintain her current weight. "Some days I ache too much and can't walk. I say, how am I to walk to the windmill if I can't even walk with the aid of a cane?"

One man reports that he lost weight on his own when it became very difficult for him to move around, particularly when he was frequently fatigued.

> I was very big. I lost weight because it was too uncomfortable for me, I was always short of breath, besides I had a sore on my foot. It's too hard. If I had still been big, it would have been too hard for me to hop around like this today (referring to his amputation).

Frustrations Expressed by Providers

Many frustrations expressed by providers deal with incongruencies between their own and Navajo cultural values and practices. Frustrations are divided into five main areas: (1) chronicity of diabetes, (2) cultural acceptance of obesity, (3) cultural eating practices, (4) cultural interpretation of teachings, and (5) communication through translators.

Chronicity of diabetes is an issue previously identified as puzzling to patients. Similarly, providers identify it as a difficult area to deal with in patient care. The chronic nature of diabetes is considered "controllable" and its complications preventable if only patients assume responsibility for themselves. This theme is echoed throughout most interviews with providers.

> The biggest frustration is that it (diabetes) is not a disease that doctors can take care of by themselves--not something you can give a pill for and it gets better or stays under control. It's something that a person has to want to do for themselves.

> People have a very difficult time understanding chronic disease. I try to tell them that this type of disease is not like respiratory infections which are immediately amenable to medications. They ask if shots will take care of diabetes. It [chronic diabetes] is really hard to deal with. I try to tell them that they have to do certain things for themselves and that [oral] medications will only help the body to effectively use sugar.

Cultural acceptance of obesity is a second area of concern. What most Anglo providers don't realize is that obesity became a cultural norm within the last 20 to 30 years. One physician reports a changing attitude in which he diligently teaches weight control, yet feels almost helpless.

> A major frustration is that being obese is not considered to be negative and people who are obese by medical standards don't think they have a problem. That's a cultural thing over which I have no control and know that I'll lose every time.

Obesity is reported to be a medical problem by providers, while it is perceived as a social/cultural issue

by informants. Eating practices or feasting, which represents cultural values of sharing, reciprocity, happiness, and health, are identified as a third area of frustration for health providers. Ironically, eating practices have symbolic meanings associated with health as discussed in Chapters 6 and 7. A Navajo provider states:

> The biggest problem seems to be with food. It seems like everywhere you go there is food available. Every little social function in the community offers food. I guess it's just Navajo courtesy for people not to refuse food when it's offered or when made available. People won't say, "No, thank you, I just ate." Even when relatives come they are supposed to be fed before they leave.

Preventive teaching against complications are misunderstood as wishing these conditions on a person. In an effort to caution against the devastating development of diabetes which is associated with the increasing mortality among Navajo people, providers are compelled to tell patients that prolonged elevations of blood glucose levels will result in amputations, renal failure, or blindness. However, Navajo orientation interprets this to mean that such admonishments by providers "wish" these bad events on their health.

> It is difficult to explain in detail the consequences of things in this culture without appearing as though you are either really yelling at the patient or wishing on them that it will happen.

> Another frustration is that as long as it [diabetes] is not symptomatic, they don't want to do anything about it. Once the inevitable symptoms result from not doing all the other things we have been asking them to do for years come on, then they

> are real concerned about it and expect the physician to do things that are impossible to do.

Communication problems are inherent in situations where patients, as lay people, encounter the medical health system. This problem is compounded in a culturally diverse setting where Western-trained providers meet people who do not speak or understand their language and their world view (or vice versa). Translators are frequently used in encounters between patients and providers; however, translators are not always effective cultural brokers. As a result, both patients and providers sometimes feel uncomfortable during the encounter, as noted by an Anglo provider who uses translators to communicate with patients.

> We have to work through translators and, frankly, I have no idea what they are saying. I know for a fact that a lot of times they [patients] don't hear what I ask the translator to say, but there's no way I can know what they really think.

Summary

Health care providers can be viewed as having a culture of their own, as they are socialized into their professions to act and speak in certain ways and to believe certain things (Spector, 1979; Leininger, 1985). Their new-found knowledge, beliefs, and behaviors vary to a certain degree from their past cultural belief system. Spector (1979) notes that health care providers

> . . . adhere rigidly to the Western system of health-care delivery. With few exceptions they do not publicly sanction any methods of prevention or healing other than "scientifically" proved ones. They

> ordinarily fail to recognize or use any sources of medication other than those that have been "proved" to be effective by scientific means (Spector, 1979, pp. 78-79).

If health care providers continue to rigidly adhere to the Western system of health care delivery, particularly when they encounter cultural groups whose beliefs and practices are dissimilar to the providers, problems with communication and cooperation will occur as indicated in this study. Health care providers infrequently expect and demand an authority-subject relationship with clients or patients. They have standardized definitions of health and illness, as well as preventive behaviors to avoid illness which are often not commonly shared with their clients. Their belief is that epidemiology based on science explains reasons for why a disease exists and supercedes explanations that clients may hold.

In general, providers are socialized within their own professional world which often is congruent with socio-cultural factors present in the larger Westernized society. Providers who come to the Navajo reservation are given a brief orientation and a few articles to read about Navajo people. Most of what is learned about cultural values and practices is learned on the job and perhaps from Navajo personnel. Ongoing education or discussion sessions on cultural aspects of health care is not available or requested. Many professionals often stay for 2 years and leave when their governmental pay-back obligation period

expires. Although the volume of patients seen daily may be large, time actually spent with each patient is limited to 10 minutes or less. Many of the frustrations voiced by Anglo providers have to do with their lack of understanding of Navajo cultural beliefs and practices. Similarly, concerns of Navajo people are related to their lack of understanding of provider health care practices and the health care system as a whole.

Kane and Kane (1972) report the opinions expressed by Navajo patients when asked if what they consider the most important health problems affecting them are consistent with those of their providers. However, when asked about problems encountered in seeking care, almost one-half of the patients focus on waiting time for service, while the rest voice opinions about several factors such as shortage of physicians, poor language translations, attitudes of the staff, and loss of medical records. Thus, when given a chance, Navajo patients make known their judgments about Western medical care. Kane and Kane remark:

> It was eye-opening for the hospital staff to realize the extent to which they were silently condemned by an apparently stoical group. . . . This data shows more anger over the manner of care than the ability or inability to cure (Kane & Kane, 1972, p. 50).

This chapter presents similarities and differences in the beliefs and practices of Western-trained health care providers and Navajo people with diabetes. Cultural conflicts surround issues of perceptions of weight control,

exercise, food preparation and consumption, and teaching/learning methods. Preparation of new professionals assigned to this community to provide care is lacking. Concerns expressed about the current health care system are not new. Communication between patients and Anglo providers are complicated by the seeming lack of training by Navajo interpreters who are often aides or lay personnel.

CHAPTER 10

MAKING DECISIONS TO SEEK CARE AND TO FOLLOW OR NOT FOLLOW MEDICAL ADVICE

Decision making is a systematic process involving several steps by which information is gathered, problems identified, choices identified and weighed, and a course of action selected and acted upon (Prescott, Dennis, & Jacox, 1987). Theoretically, decision making requires several steps but basically addresses three fundamental stages: problem identification, consideration of choices, and acting on a course of action. The Navajo informants follow a roughly similar pattern when they make decisions to seek care or follow advice as indicated in Table 15.

The initial stage of problem identification usually involves the appearance of symptoms which are considered not normal. Often these symptoms create discomfort (i.e., tingling in the feet) and cause inconvenience in the performance of daily activities (i.e., fatigue and "not feeling well"). These symptoms are identified as problems for which something has to be done.

Table 15

Steps in Decision Making and Factors

Influencing Decisions Identified

by Navajo Informants

Problem Identification Phase	Consideration of the Alternatives	Factors Influencing Course of Action	If No Resolution of the Problem
Symptoms of polyuria Tingling in feet Fatigue "Not feeling well"	IHS care Private provider care Herbs	Belief that diabetes mellitus is Bilagaana disease Economics Family support Transportation H.C. systems problems: -waiting time -provider communication -provider behavior	Simultaneous use of 2 or 3 systems or Drop out of IHS or private care
Onset of complications chronic fatigue neuropathy visual difficulties insulin reactions	Navajo Way Herbs Christianity	Economics Transportation Strength in belief system Association with taboo violation	Simultaneous use of 2 or 3 systems or Drop out of traditional ways
Emotional difficulties Doubting Diagnosis	Peyote way Christianity	Transportation	

Five individuals state that they sought biomedical care when they first experienced symptoms of polyuria and undue fatigue. One 57-year-old woman describes her experience.

> It's been about 15 years now. I was always going outside [frequent urination], it seemed like I wasn't going to stop. I went to the clinic and they told me that my blood had too much sugar. It frightened me. They told me to stop eating sweet foods and fatty foods. I cut down on all these foods right away and I felt better--I stopped going outside. I drank a lot of pop before--I stopped doing that even though it was hard to stop. I thought that's probably how it is for people who drink alcohol--it must be very hard to give up drinking.

Another person, 57-year-old Mr. Betahni, related a similar experience in which he was symptomatic but did not go to the clinic directly. He initially attended a screening held at a fair.

> I went to the fair where they were checking blood and they told me I was measuring over 200, almost 300. I went to the clinic shortly afterwards because I wasn't feeling well. It seemed like my body just didn't hold water--water just ran through me [polyuria]. When I went to the clinic they told me the sugar level in my body was at 378. They said if it had gone up to 400 I probably would have fallen over. My weight was at 228. Shortly after this I began to lose weight even though I was hungry all the time; I was too sick to eat. My feet were tingling, too.

Informants who initially were nonsymptomatic often reported they had made the clinic visit for another condition, such as a respiratory infection or arthritis, when they were told they had hyperglycemia. For these informants, diabetes was not identified, initially, as a problem requiring further action. When told to return to

the clinic they frequently did not do so. The problem for which they made the visit was perceived by providers as a secondary problem. Often the patients resented this change in priority. Only two informants who were told to return did so because they were extremely concerned about their condition. These individuals reported having relatives who had diabetes and had heard about the devastating complications of the disease.

As mentioned previously in Chapter 8, Navajo people use multiple systems of health care. The choices available include biomedical care from IHS or private providers, herb use, traditional Navajo medicine man methods, peyote way, and prayers and "healing" offered by Pentecostal churches. Choices are made solely by the informant when using the IHS system or by eliciting family support when traditional systems or private providers are considered. Use of traditional medicine and private providers invariably involved monetary compensation; family is generally relied upon for support. However, individual autonomy is permissible and activated in many situations. Other factors that influence the consideration of choices are beliefs about the nature of diabetes (i.e., it is a Bilagaana disease) and access to or availability of Navajo practitioners. Those who strongly believed that diabetes is a Bilagaana disease will seek care through the IHS or private provider or will later resort to traditional means

if these treatments are considered ineffective. As Table 15 outlines, a variety of factors influence decisions to seek health care, whether traditional or Western.

A 70-year-old man is given two reasons for keeping appointments: Nurse attention and encouragement.

> I visit the doctors in Z place. It's different there. The nurses are very nice, they hug me when I come and are very caring. They say they'd like me to get better soon. The nurses here don't do that. I guess these nurses are here to translate for doctors only.

Previous Family Experience

A few informants knew of close relatives and family members who died from complications of diabetes. Such experience may influence individuals to seek care and follow advice or, in some cases, may deter them from care.

A 53-year-old woman with several children explained that her husband had diabetes for many years and finally died of kidney failure in 1986. She was told shortly thereafter that she had high blood sugar and one of her daughters had gestational diabetes. She describes her experience.

> The man I lived with [husband] was told he was affected by sugar disease for many years. It affected his kidneys and we spent a lot of time taking him to all kinds of clinics and hospitals before he died. It's a bad disease.
>
> My daughter was told she may have it too because her sugar was reading high with several of her pregnancies. She hasn't gone in to be checked. I guess she doesn't believe it. I was told that it (sugar disease) tends to be passed on to children, so I tell my children to take care of themselves by not

> eating too much sweets or fatty foods, but they do not quite believe it.

This woman reports that she has not been to the clinic for a year, but describes herself as one who uses the biomedical system and adheres to medical advice. Adherence behavior for this woman consists of watching what she eats, teaching her children to eat fewer sweets and fatty foods, and maintaining her physical activity by herding sheep.

Impractical Advice Given by Providers

The difficulty in adhering to medical advice concerning the content amount and timing of meals is described by Mrs. Redshirt, who has frequent episodes of insulin reactions. Meal patterns followed in the hospital are not translatable to the Navajo home situation.

> They tell me to eat three meals a day--in the morning, at midday, and evening as well as small amounts in between these meals. They say this way I won't get so hungry. When I stay in the hospital they fix me food like that. I get used to eating like that, but when I come home I find that I can't eat that way.

The high cost of fruits and vegetables and lack of refrigeration are reasons given by most informants for not eating "what they tell us to eat." One woman's response is indicative of the reasons given by the majority for the difficulty in adhering to dietary advice.

> Chil (vegetables) are very expensive and you have to keep going to the store every few days to keep buying more. We're not like Bilagaanas, who have cars, refrigerators, and money for all these things.

Another reason for not conforming to medical advice is that the physical discomforts are worsened by exercise for those who have arthritis, neuropathy, and "old age." This response also suggests that providers expect Navajo patients to have similar resources available to non-Navajo people.

Paradoxical Situations

Several informants who were on insulin found it difficult to understand why they are told to reduce their consumption of sweet foods, which cause blood sugar to rise, yet they "pass out" with insulin reaction because they don't have sugar in their blood. Similar paradoxical examples are related by Mr. Nez and others.

> When we don't eat sugar or sweet foods, we are told that we'll get sick because we need sugar in our bodies. Some people with anemia are told to drink water and milk so they can be strong. Others are told not to drink these things because they'll get sick. I'm not sure how it all works, but it's very confusing. This is the reason I tell my kids to finish high school then go on to college.

> Back then [when first diagnosed], I walked and I felt better. Now I continue to walk after the sheep, but I can't do much walking. I need help with it [herding sheep]. Old age interferes with walking now and my feet and legs tire easily and hurt. I think they [health providers] blame sugar for almost everything now. They tell me I ache because of too much sugar. I think some of it has to do with getting old.

> I take those big blue pills for sugar. Sometimes I forget. Sometimes I say I don't like them and wonder if it's true that these pills cut down the sugar, or if I actually have sugar in my blood.

Problems of Health Care Systems

Navajo people have seen many IHS providers come and go; hence, they continue to experience frustrations with the current health care system. Many have begun to use private providers in border towns because these doctors have stayed in place longer. Often the patients associate physician longevity with greater knowledge and tend to question medical advice given by the IHS physicians. One woman:

> He (the husband) goes to Z place, where he pays money to be seen. I wonder if the medicine he gets for sugar is different--if it's stronger or works better. I wonder if those [private] doctors know more or the same as the doctors here.

On the contrary, some informants who use private and IHS providers have heard and accepted consistent messages given by both providers. These are perhaps informants who strongly believe that since diabetes is a Bilagaana disease, care should be sought from biomedical sources.

> I think we should listen to what doctors tell us because they all say the same thing. I know because I use both the IHS here and private doctors. They tell us to eat less and stay away from too much sweet and fatty food.

> I agree with what the Bilagaanas tell me. They told me that sugar disease is caused by eating foods that are sweet and have lots of fat. I ate a lot of meat, fried potatoes, cookies, and drank pop. It was hard for me to give up pop because I liked it a lot. They also said when people are fat for a long time they will come down with sugar disease. That's true because I was big. You can't do much when you are big. You can't even run or work. I believe what they say must be true because they went to school and studied all these. I can tell when my sugar goes too high. I get thirsty. I go to the bathroom a lot and

> my feet tingle. If I feel this way for very long, then I'll go to the clinic or hospital.

Several informants welcome home visits from community health nurses, their words of encouragement, and positive feedback. "She came to see me regularly, which I like. She measures my blood and tells me I'm doing well." These informants identified such nursing behavior as positive feedback rather than admonitions; this perception facilitates their willingness to follow advice.

Informants identified inadequate communication between patients and Navajo clinic aides and community health representatives as a deterrent to seeking care and following instructions.

> They don't speak Navajo--we're not Bilagaanas. I don't understand why they say they speak both Navajo and English when they apply for the job. But when they come around they speak only Bilagaana to us.

Clinic aides and CHRs often are much younger and prefer English over Navajo unlike their patients who are older and only speak Navajo. One man stated, "We need bilingual workers in the clinic--those who understand and speak both Navajo and English."

Several informants identified communication problems that occur among health care providers but ultimately affects patients.

> They don't communicate well among each other. If someone tells me to go to X place and writes me a note to take from here, the clinic over there never knows why I'm there. They don't know anything about me or don't have papers on me. I sit all day [waiting] when this happens.

This response was confirmed by one community health nurse, who on several occasions referred individuals requiring evaluations from the "field" to the outpatient clinic, only to be told by the physicians that this is not the proper practice. She spoke of the need to better define the roles of the two clinics used by patients.

Lack of transportation, especially for elderly patients, was identified by both informants and a few providers as a factor in not keeping clinic appointments.

> CHRs should provide transportation to those who need it. They don't give people rides when they really need a ride to the clinic. They say that only people who are very sick can ride in their cars. I say then they shouldn't drive these cars around since they aren't sick themselves.

Concerning the practice of appointments and attention to time, one informant reflected that

> They [providers] should not be upset when someone cannot keep an appointment. Things come up at home which make it impossible to keep an appointment. We're not like Bilagaanas, who live hour-by-hour according to the clock. Even if we do keep an appointment we have to sit and wait all day. Why do that?

One individual, a 47-year-old male with a wage job, suggests:

> Patients with appointments and those who walk in should be handled separately. That way those with appointments are seen right away when they are told to come. It takes too long the way it is now, when we have everybody waiting together.

The concerns about long clinic waits were voiced by the vast majority of informants. Some added that they are instructed not to eat in the morning so they could have a

fasting blood glucose drawn. Many stated that they experience symptoms of weakness, palpitations, or hunger while waiting more than 2 to 3 hours in the clinic while fasting.

Decisions to Follow (or Not Follow) Medical Advice

The extent of traditionalism did not seem to have a strong influence on whether people are more or less receptive to advice given by medicine men or Western-trained providers. For example, three middle-aged men holding wage jobs and using both health care systems reported being very traditional in their beliefs and practices. One man took weekly sweat baths and used herbs, another used Navajo Way ceremonies for many illnesses and spoke negatively of his experience with the local health care system, and the third utilized a combination of the two systems with equal respect. Apparently, "traditional" people who speak only Navajo, were without formal education, wore traditional clothing, and pursued weaving and sheepherding rely on traditional medicine infrequently and are using and adhering to Western medical advice more closely. The way in which Western medicine is used, however, may not be congruent with the provider's expectations.

Table 16 highlights factors that affect informants' decisions to follow Western medical advice.

Table 16

Factors Influencing Decisions to Follow or Not Follow Medical Advice

Enabling Factors	Barriers
Positive provider practices a. Caring attitude/behavior b. Offering encouragement c. Individual attention d. Regular visits by nurses	Negative provider practices a. Lack of respect b. Irregular visits by nurses
Prev. exper. of fam. member a. Lived experience/ recognition of devastating complication b. Improvement in well-being	Prev. exper. of fam. member a. Failure to believe that diabetes may affect them b. Fear of negative experience (amputation, death)
Practical advice a. Eat foods in moderation	Impractical advice a. Difference in meals between hospital and home b. Expensive vegetables/fruit c. Lack of refrigeration d. Physical discomforts worsened by exercise e. Differences in meal patterns in same household
Acceptable messages a. Private & IHS providers have same messages	Confusing, unacceptable messages a. Paradoxical messages about blood glucose levels being high or low b. Diabetes blamed for aches & discomforts, some associated with old age c. Communication problems among providers
Consistencies a. Food taboos b. Activity encouraged	Inconsistencies
Systems Advantages	Systems Problems a. Waiting too long b. Appt. system doesn't work well c. Aides/CHRs don't speak Navajo

The difficulty in adhering to medical advice is explained by this 40-year-old man. His response suggests that nonadherent behavior is not an intentional or isolated behavior, but one which is closely associated with the behaviors of others within the person's home or community environment, or that other needs supercede requests made by health care providers.

> We have different foods that were given to us [by the Great Spirit] and always eaten. Some people are concerned that they are now being told to stop eating them. Some of us don't understand what it is the health care providers are telling us. It's very hard to stop eating certain foods completely, especially with all those social gatherings around us, like birthdays, first laughs, kinaalda, ndaa' (squaw dance), and church meetings. It's also hard to eat differently [from my family], because even though I work, I don't have the money for vegetables and other "proper" foods we are told to eat. I don't think people intentionally refuse to cooperate, I think they have certain needs that must be met first. The same thing is true with appointments. Sometimes we just forget. Sometimes we have work around the house that needs to be done. Sometimes there's no transportation.

One man describes in detail the differences between Navajo and Bilagaana ways that account for people's preference to adhere to Navajo ways.

> The Navajo way has been around for a long time. The Bilagaana way has been among us for a short time. Also, the Navajo way is very different. The medicine man serves as the middle man between the ill person and Diyin (the Creator and Divine). The words of the medicine man come directly for the Diyin; therefore, the words and acts of the medicine man are sacred and real. Not just anybody can learn the knowledge of the medicine man. It takes years. The patient understands that the medicine man performs sacred acts and chants sacred songs. The patients then keep things sacred by doing what they were told.

> On the other hand, the words of the Bilagaana doctor can be learned by anyone who wants that knowledge. One can pick up a book to look up what to do just like the doctors do at the clinic. When they aren't sure or don't know, they immediately grab a book off the shelf and look up what it is they want to know. So it's very different from the Navajo way. Anyone can use the Bilagaana knowledge because it's all written down. What patients are told does not seem real or sacred, therefore they don't do as they are told.

Summary

Factors influencing decisions to seek care and whether or not to follow medical advice varied in informant responses. One man summarizes the experience many informants face when confronted with decisions to seek care and follow advice. Again, in many instances individual autonomy is called upon when making decisions about adherence.

> There are people who don't believe in the Bilagaana way, but those who prefer the medicine man or other ways. They have their own beliefs. I think it's up to the person individually. A person may feel well if advice of others is combined with their own. If a person is strong-willed and thinks their own beliefs are better, others' beliefs will not be considered.

Because diabetes is perceived and experienced differently from other illnesses, primarily due to its chronic nature, most informants express difficulty in understanding and living effectively with it. Most find it difficult to adhere to biomedical advice even if all positive factors noted in Table 16 are present. Where diabetes is viewed as a gestalt illness experience by Navajo informants, providers view it as a disease process

in isolation which can be managed physiologically on a daily basis.

CHAPTER 11

NURSING CARE IMPLICATIONS

Introduction

Recommendations made here are specifically relevant to nursing; however, some generally apply to other health care disciplines. Nursing recommendations are made in the three areas of nursing concern: practice, research, and education. Two important themes pervade all three areas: (1) Therapeutic health care assessments and judgments should be based on cultural data derived from patients and their families as well as those from professional providers, and (2) health care provider assessments, decisions, and actions should be contextually-based in the Navajo people's values and social structure background. As Leininger states, "The social structure framework provides the most comprehensive and holistic perspective for knowing and understanding human health and caring behavior" (Leininger, 1985, p. 214).

Implications for Nursing Practice

The findings from this study suggest that the role of nursing needs to be clarified and strengthened in both clinic and community settings. In the clinic, patients perceive the nurse's primary role to be that of the

translator, while the community health nurse is viewed as a visitor. Both roles should not be underestimated because they are valuable particularly in situations in which a Navajo nurse understands medical terminology better and facilitates communication between patients and providers. In addition, community health nurses visiting homebound patients are seen as supportive because of the value patients place on provider "presence" during times of ill health. Nurses need to expand their role, at least as perceived by patients, to include more visibility in the community and during patient encounters within the clinic. Nurses are in an ideal position to conduct holistic cultural assessments because they have access to patients, their families, and the community. They can serve as patient advocates, facilitating interactions between patients, providers, and community service agencies or programs. For instance, several informants in this study are concerned about their deteriorating homes, which they are unable to repair themselves due to their physical disabilities (i.e., amputation). They reported requesting local assistance but the much-needed help was refused or delayed. Improvement in the patient's physical environment would improve emotional well-being and encourage mobilization, two factors related to the informant's definition of health. Similar situations exist in which

holistic assessment calls for nursing involvement at a greater community level.

Generally, Navajo people are frustrated with the frequent turnover among providers: Physicians stay an average of only 2 years. This personnel turnover has a negative impact on provider-patient relationship and care. The problem has no immediate solution; however, nurses who stay longer are in a better position to establish communication patterns and trust between patients and the health care system. Communication may focus on specific patient-care situations or social-cultural situations in the community which are associated with certain patient behaviors.

Health promotion is practiced by Navajo people as revealed in this study; therefore, identified practices should be reinforced or reintroduced as indicated in some cases. Health promotion practices such as use of traditional Navajo foods; increasing familiar physical activities such as walking or running at dawn, sheepherding and gardening; and recognition that spiritual and emotional well-being is as important as physical well-being should be performed consistently among all providers and at all levels of patient contact (i.e., individual, family, and community).

Furthermore, findings from this study indicate that the influence of the community is much stronger

particularly where food consumption is concerned. Thus, nutrition education should be coordinated among all nutrition-related programs to provide pertinent information consistently and appropriately. For instance, the same message about fat or sugar should be provided to participants of programs for senior citizens, USDA Commodities, women, infants, and children (WIC), and diabetes. If all four programs teach the "four basic food groups," coordinated information and inclusion of traditional Navajo foods should be the rule. Similar Navajo terminology should be used to describe calories, starchy foods, fiber, or artificial sweeteners. Every effort should be made to encourage increased use of traditional foods containing adequate nutrients (Wolfe, Weber, & Arviso, 1985).

All informants who have Type II diabetes misunderstood the term "diet" as used by the providers. The words "meal plans" should be emphasized rather than the word "diet" when discussing foods considered healthier for the whole family. When "diet" is used, informants are led to believe that they and their family members must eat differently and with minimal flexibility. "Meal plans" allow for a more positive approach and stresses a healthy way for the whole family to eat.

Simplifying the standard dietary teachings of the American Diabetes Association by de-emphasizing the

exchange system and calorie counting may be more appropriate in a cultural setting in which people are less conscious of measuring and recording (Stegmayer, Lovrien, Smith, Keller, & Gohdes, 1988; Tom-Orme & Hughes, 1985). Rather, emphasis should be placed on alternative ways of food preparation. In addition, taking a more positive approach to the labelling of food is suggested. Rather than talking about "bad" or "junk foods," indigenous terms such as "strong" foods, or newer terms--"healthy" or "fiber"--may be used to introduce vegetables and fruits into meal plans. Encouraging consumption of other artificially sweetened beverages may be more acceptable than eliminating all carbonated beverage consumption among young and old. Similarly, rather than discouraging the consumption of large quantities of mutton, encouraging alternate cooking methods to frying should be taught.

Most Navajo informants indicate that diabetes is derived from Caucasians' introduction of various foods that caused disruption in the harmony of the Navajo world. Outside influence is inevitable and will continue, due to the inherent nature of the Navajo people's mobility and curiosity to try new things. However, some of the negative influences may be controlled by the Navajo themselves, or with the assistance of health care professionals. Reintroducing the methods and value of gardening, which would provide physical activity, as well as providing

produce grown without insecticides, and nutrition, is one way of increasing self-sufficiency. This information could be introduced and promoted at the group and community levels. Similar information stressing the health values of Navajo traditions could be included in health classes in schools. School-age populations should be targeted to learn healthier lifestyles and reduce their risk of developing chronic diseases affecting tribal members.

Educational ideas currently used in diabetes classes are admirable; however, current teaching techniques require passive participation of students and need to be made more creative by promoting active participation. Some informants speak of their inconsistent attendance in diabetes classes for several years. Likewise, one provider commented that certain patients have attended classes for as many as lo years, but continue to ask why they can't eat certain foods or don't understand the role of exercise in the treatment of diabetes.

Providers must be more sensitive to the social and religious values associated with food. The values found in this study should be encouraged within the community setting and adapted in the diabetes clinic situation. A "test kitchen," or community nutrition classes in which patients and family are allowed to participate actively in food preparation and testing recipes, may encourage them to continue culturally appropriate behaviors in a more

"therapeutic" atmosphere (Stegmayer, Lovrien, Smith, Keller, & Gohdes, 1988; Tom-Orme & Hughes, 1985). Patients in this setting would be encouraged to interact in small group discussions, plan meals, test new recipes, taste foods not commonly used, and learn the nutrition values of Navajo foods formerly used. Modifications in cooking methods, serving portions, and purchasing practices could be discussed and learned in these "safe" settings. These methods can later be expanded to the home setting so participants can use resources available in the home and plan according to daily activities. Application to the home of activities learned in classes should be highly encouraged because real situations vary. At the time of data collection, a communication link was being established with the local supermarket; similar links should be pursued with local traders so more nutritious foods are made available to Navajo consumers.

Nurses are also in an ideal position to assist individuals and families in adjusting to personal-level changes precipitated by the onset of diabetes and its complications. Nurses may work with adult children of those with diabetes to meet nutritional, physical, and emotional needs. Again, it is important to collaborate with other existing programs to obtain aids that will maintain mobility around the home or provide diversion activities. Lessening the impact of role change may be

achieved by activating individuals to participate in community activities offered through the Senior Citizen program. Home visits, or the "presence" of CHNs, may also add to the emotional well-being of older, sedentary individuals.

Communication and cultural sensitivity are essential in understanding how and why the Navajo make decisions to seek care and comply with advice offered by health providers. Nurses who understand patients and their home situations will be better prepared to communicate patients' needs and behaviors to others and attempt to resolve any misunderstandings in an acceptable manner. Rather than always labelling patients "noncompliant" or "unmotivated," providers must learn to understand the patient's need for individual autonomy and the strong influence created by family and community. Patients consider some of the behavior providers expect beyond individual control; this problem may be dealt with more appropriately at the societal level. For most informants, controlling physiologic functions (i.e., blood glucose levels) is a difficult concept to grasp. The use of analogies with familiar objects or concepts in the Navajo cultural repertoire may be helpful. The concept of balance or harmony, in which everything--people, nature, and spirits--is connected is a strong Navajo belief and could be useful. Contrary to what providers may believe, moderation is a

strong traditional belief and practice. Some informants reiterated this belief in their responses about food consumption, weight, and physical activity.

A written protocol is in order to define educational and treatment approaches to working with the variety of patients seen by providers. Although one may discuss Navajo people and their behavior generically, intracultural variations do exist. A protocol can be designed to address the differing needs and approaches used to work with the newly-diagnosed as opposed to long-term patients, younger and older patients, traditional and less traditional patients, and families and community groups. Newly-diagnosed patients may not be symptomatic, nor might they have the onset of complications that long-term patients would; therefore, the approaches in dealing with these two groups will be different. Likewise, the younger patient may have different needs (how to enjoy meals eaten by the rest of family) than older individuals. This protocol would be updated periodically and would serve to add consistency in therapeutic approaches used by new and continuing personnel. Given the complexity and the variety of possible complications associated with diabetes and the sociocultural ramifications, a multidisciplinary approach cannot be stressed too much.

Incongruities in beliefs and practices between providers and Navajo informants must be recognized and an

attempt must be made to narrow those gaps. Providers need to consider a sociocultural perspective rather than a narrow view of diabetes as a disease process which requires a strict medical regimen to control. The expectations of non-Navajo diabetics should not be applied to Navajo situations; a sincere attempt should be made to understand the Navajo cultural perspective and experience with this chronic illness. Coulehan (1980) poignantly asserts that:

> The meaning of the illness to the individual is not addressed because [Western] medicine does not recognize that symptoms are a language spoken by the whole person, and cannot be understood as simply signs of some textbook disease (Coulehan, 1980, p. 59).
>
> . . . the biomedical system which, because of language and cultural differences, has a minimum of interpersonal content must be supplemented by another type of care, centered in cultural beliefs and social support systems. All patients, not only the Navajo, need both dimensions of care (Coulehan, 1980, p. 59).

Implications for Nursing Research

This descriptive and exploratory study is the first to examine Navajo beliefs and the practices surrounding diabetes in a Navajo community. As such it has begun a line of research to further examine the subjective perceptions and experience with relatively new lifestyle-related health/illness phenomenon, such as diabetes. Similar studies could explore experiences with other chronic illnesses, such as hypertension and heart disease.

Few studies on the Native American experience with diabetes exist although diabetes has become a major threat

to their health. This study describes how health and illness states are intricately related to other social structure features. Similar studies conducted among different tribes could be compared to identify and define similarities and differences. Data of this type will be useful for nurses and other health care providers when working with people of different backgrounds. Further, nursing care constructs and care features associated with chronic illness experiences need to be better defined.

A longitudinal study will be most helpful in identifying the specific processes of coping with chronic illness from diagnosis to the development of complications, interaction and support among patients and their significant others, and decision-making vis à vis compliance or adherence to medical regimen.

Implications for Nursing Education

Findings from this study support the relevance of including cultural data on health and illness beliefs and practices in the education of nurses and other health care providers. The experience of Navajo people with diabetes is very different from people in mainstream American society; thus, Navajo nursing care must also be different. Inclusion of cultural information in nursing school curriculum would acknowledge variations in people's attitudes, beliefs, and practices surrounding health and illness states.

There are long-range implications for the education of nurses relative to the recruitment and retention of Navajo nursing students. Savage (1985) states that Navajo nursing students face many obstacles in their education, including difficulty in passing state board examinations. Educators of Navajo high school students and those in nursing education face a challenge to resolve issues detrimental to successful completion of nursing education and licensure examinations. Preparation for studying and test taking needs to begin prior to college entry so that students do not suffer from culture shock once they enter nursing school. Educators must encourage Navajo students to use all counseling and remedial services available. Because health care services have been fragmented historically and usually provided by "outsiders," the nursing profession must be made more attractive so Navajo nurses eventually can provide care to their own people.

CHAPTER 12

SUMMARY AND CONCLUSIONS

This modified ethnographic transcultural nursing study describes and explores the Navajo experience with diabetes relative to health/illness beliefs and practices of both Navajo informants and their health care providers. The increasing prevalence of diabetes among Navajo people as well as other Native American tribes prompted this research. Studies of the pathophysiological processes and epidemiology of diabetes are found to be particularly abundant among the Pima Indians of Arizona, who reportedly have the highest prevalence in the world. Few studies pertain to the sociocultural aspects of diabetes in Native American populations; such studies are nonexistent among the Navajo.

Behavioral science literature pertinent to the influence of social-cultural factors on health and illness status is cited to provide background information to the study. It is stated that cultural beliefs and practices are learned processes which guide people's decisions in times of illness and may be difficult to change under such conditions. Illness and health experiences vary among people of diverse sociocultural background. Patients tend to concentrate more on the meaning of the illness

experience than on the disease process or the signs and symptoms, as do medical care practitioners.

Leininger's (1978, 1985) theory of transcultural nursing and health care is utilized to guide the study. Culturally derived qualitative data on health and illness states are pertinent to the development of culturally appropriate nursing care and cultural sensitivity in nurses and other health care providers. Further, sociocultural features must be considered because they are interdependent and interrelated with health/illness care values.

A modified ethnographic approach utilizing the techniques of participant observation, field notes, and open-ended interviews is the research tool used. In addition, this researcher (who is a Navajo), serves as an important "tool" in an attempt to describe and explore the subjective experience of Navajo individuals with diabetes. The researcher also served as key informant, an advantageous role for conducting research in one's own culture.

Thirty Navajo people with diabetes and six of their relatives were interviewed. Data on health beliefs and practices of health providers were collected by interviewing five Anglo and five Navajo health providers. Two informants were registered nurses, one was a licensed practical nurse. Three medicine men, a trader, and school officials provided additional information.

Navajo informants range in age from 32 to 74 years, with an average age of 57.3 and a median age of 57.0 years. There are 18 females and 12 males. Twenty informants have no formal education while 10 have some formal education. Informants fall into five occupational categories: (1) herder--10, (2) retired or inactive--9, (3) weaver--6, (4) gardener--6, and (5) wage worker--5. Typically, women are involved in combinations of sheepherding, weaving, and/or gardening.

Health as Defined and Practiced by Elbow Creek Navajos

Food plays an important role in the social and religious realm of Navajo lifeways. Food, which is a gift from the Creator and holy spirits, is considered natural and good. However, certain foods are strong while others are weak, but never bad. There are rules governing food consumption, avoidance, and ceremonial use during states of health and illness. Moderation in the amount and type of food consumed is a general rule; however, the practice of social feasting during holidays, ceremonies, and community celebrations allow moderation to be suspended. The change to a sedentary lifestyle has affected patterns of food production, preparation, and consumption. Traditional home-produced foods have been replaced by newer foods considered strong, such as hamburger, steaks, fried chicken, carbonated beverages, and pastries. Whereas

traditional foods were baked underground or roasted over hot coals, most store-bought foods are now fried. The symbolism associated with food--foods are natural products provided by spiritual beings to maintain well-being and to promote health and happiness--remains a strong belief among the Navajo informants.

Being healthy is defined as maintaining one's well-being in physical, emotional, and spiritual aspects, and having family support. Physical well-being is a primary concern for individuals who depend on sheepherding, weaving, gardening, and wage work for their livelihood. Physical well-being is considered important not only for financial reasons, but for the therapeutic effect of maintaining mobility.

Emotional well-being is described as hozho', or harmony between mind, body, and spirit. Navajos believe in the interrelatedness of all things in the universe; therefore, one cannot be well or healthy unless the whole is balanced. Kin networks, clan relations, and the community support emotional well-being. Spiritualism is practiced by offering thanks for natural creations, foods, having good dreams and thoughts, and respecting people and nature. A Navajo belief that remains extremely strong is expressed in the saying, "To be poor is to be without children and kin." Kinship and family support are symbolized by the expression Keh', which permeates all

Navajo social relationships. Before any business takes place between strangers, Keh' is defined by clan membership. Rules of social obligation are guided by the expression of Keh' among family members and the larger social context. However, family obligations to those in need continue, although extended family residential patterns are orienting toward a more nuclear family.

The Navajo Meaning of Diabetes as an Illness

Although definitions of illness vary, the concept of health/illness in this study refers to the subjective experience of Navajo informants. Their responses describe diabetes as an illness affecting many aspects of their lives, rather than as a pathophysiological disease entity. The occurrence of illness is attributed to a disruption in the balance between Navajo, nature, and supernatural forces. Taboo violations are often identified as a cause for physical symptoms manifested and concomitant with "not feeling well." Although physical symptoms alert individuals to something going wrong, the meaning of the experience is portrayed differently.

The traditional descriptions of illness do not fully describe the Navajo experience with diabetes. Of the three commonly used descriptions, "I am not well" or "It is not well throughout my body" is a general term used for many illnesses and is used by several informants to describe the

disease. Informants also questioned whether diabetes was contagious, particularly when told "it runs in the family." The experience with diabetes as an illness, however, was consistently described using a fourth category, "Sugar is killing me" or "Sugar bothers me."

These statements reflect the Navajo worldview which perceives people as part of nature and being acted upon by external forces. This speech pattern is best understood within the Navajo sociocultural context rather than within isolated psychological categories. "Sugar is killing me" is an experience different from similar speech patterns in which one may state, "Hunger is killing me." Whereas, one can do something about hunger, the experience with "sugar" disease is different and new and therefore not amenable to traditional medical practices. However, Navajo medicine is used when Western medical care does not alleviate symptoms immediately.

In an attempt to understand diabetes, informants give many different perceived sources for its origin. Among these are fertilizers and insecticides used on agricultural crops, instant foods, fuel sources such as gas and electricity used for cooking, taboo violations, and white people (Bilagaanas). Most of the perceived sources are attributed directly or indirectly to food introduced by outsiders. The actions of Bilagaanas, who have historically introduced many foreign ideas and goods into

the reservation, are foremost in many Navajo minds as a primary reason for the presence of diabetes.

The onset of the diabetes problem among the Navajo is viewed either as a precipitating or resulting factor in personal and societal level changes. These changes relate to traditional medicine, disease/illness patterns, eating and physical activity patterns, and role transition. Personal level changes involve moving from one's own traditional home in the desert to a child's home or into a modern house; feeling content with herding and weaving but being forced to stop this way of life; and grandparents who once had the authority to teach and discipline grandchildren, having relinquished these roles to their adult children who live in nuclear family units, often in border towns. Development of complications such as lower extremity amputations, vision problems due to retinopathy, and insulin reactions forced individuals to stop active pursuit of their traditional livelihood.

Societal level changes reported by informants involve dietary changes, more sedentary living, the presence of diseases other than fever and contagious ones, and the slowly diminishing supply of traditional medical practitioners.

Explaining and understanding the appearance of diabetes as a major health problem is a difficult task for Navajos in Elbow Creek. Many times they become pessimistic

and feel powerless, saying "There is no medicine," or "No cure for it." They try Navajo medicine and biomedical care, or other sources in an attempt to "feel better," to regain harmony with their world.

Diabetes as a Disease Process

As may be expected, health care providers emphasize diabetes as a disease process and promote medical actions needed to control the disease. Providers identify factors such as exercise, weight control, diet, and medication as measures to alleviate signs and symptoms of diabetes. These identified treatment parameters are considered self-care measures which should be learned by patients so that further deterioration or complications of diabetes are delayed or prevented. Emphasis is placed on individual action and the future while Navajos speak more of family and community contributions as well as present and past situations.

Providers describe their patients as lacking motivation, concern, or interest in their health. Navajo cultural beliefs, practices, and preference for heaviness and feasting prove the greatest frustration to providers. Traditional Navajo medicine is cited by one provider (in one incidence) as a detriment to proper medical care; otherwise, most providers encourage its use if patients express a desire for it.

All health care providers, Navajo and Anglo, share the belief that diabetes is a disease process which is brought on by factors such as sedentary living, overeating, and family history. They hold views that if patients simply become more active, eat appropriately, lose weight, and keep their clinic appointments, the disease process could be "controlled." All these actions are considered self-motivated and achievable. Hence, providers admonish their patients, saying "you have to control your diabetes." Activities considered detrimental to health have been learned and acquired over many years and ingrained in the social-cultural web of Navajo lifestyles. The meaning of Navajo behavior concerning illness is not addressed by providers.

Decision Making and Compliance

Navajo decision patterns in seeking health care [either traditional or biomedical] are described. Often the onset of symptoms alerts informants that something is not right and action must be taken to correct the disharmony. Individuals who are asymptomatic invariably are told they have diabetes when they made a clinic visit for another condition. Those who are asymptomatic, often do not seek further care because they do not experience interference in their daily activities from their newly-discovered condition. If the idea of "being bothered by sugar" is not acceptable and causes great emotional upset,

help is sought from either the peyote way or Christianity. Those who are symptomatic report using multiple systems to alleviate symptoms or find the real cause of the illness, through Navajo traditions [medicine men or herbs] and/or biomedical care [IHS or private providers].

Although family support is relied upon, individual autonomy in decision making is allowed and activated in many instances. Additional factors influencing decisions to seek care or follow therapeutic advice include beliefs about diabetes and access to or availability of Navajo practitioners and biomedical care. Previous family experience with diabetes may have a negative or positive affect on an individual's decision to seek care or follow advice. Several examples of impractical advice offered by health care providers and problems with the health care system that serve as barriers to adherence are identified.

Compliance [or adherence] refers to patient willingness to follow therapeutic advice offered by medical care providers. Often the word "compliance" connotes a coercive relationship, while "adherence" is used to refer to a negotiated agreement between patient and provider (Hinds-Alexander & Throm, 1987). The health belief model is used to understand the compliance issue; however, it does have limitations.

The expanded health belief model describes how the health decision model can enhance compliance by accounting

for health decisions, health beliefs, patient preferences, experience, knowledge, and social interaction factors (Eraker, Kirscht, & Becker, 1984). The model asserts that responsibility for compliance should be shared between the provider and the patient.

Accordingly, some researchers (Broussard, Bass, & Jackson, 1982) identified three main categories for noncompliance with dietary orders among diabetic Cherokee Indians. Therapeutic and clinician-related factors account for many of the culturally-based reasons given for lack of adherence: Patient disagreement with weight loss, distrust of medical staff, and lack of understanding the dietary regimen. Patient-related factors include lack of support from family and friends, disinterest in the diet, independence, economics, and psychological needs. Cultural reasons frequently relate the patient's preference to eat Indian food and utilize Indian cooking methods. Again, the researchers identify a compromise between preferences of patients and providers as a determinant in improving compliance in therapeutic regimen.

Compliance is a complex, pertinent issue present in all encounters between health care providers and recipients. Compliance may vary from total [or "blind"] adherence to nonadherence in response to individual and environmental cues (Hindi-Alexander & Throm, 1987). Accordingly, the degree of compliance as perceived by

Navajo informants varies in this study. Contrastingly, providers believe the degree of compliance leans toward noncompliance.

Adherence between Navajo people with diabetes and their biomedical health care providers needs to be examined from a larger, holistic perspective relative to factors identified by informants in this study. The relationship between the patient as participant and the health care provider needs to be restructured to permit mutual trust and cooperation. Establishment of trust and cooperation will take time and effort, and must develop in the sociocultural milieu of the Navajo community.

Limitations

This study contains several limitations. Three summer months is not adequate for a thorough study, and provides only a brief glimpse of Elbow Creek life. The number of observations are limited because most of the time was consumed in locating informants.

The findings are not generalizable to most other Navajo communities due to intracultural variations. However, the findings are useful because this is the first study to address Navajo beliefs and practices concerning diabetes. This study can be expanded to examine the experience of Navajo people on a longitudinal basis and to compare and contrast diabetic experience with other chronic health problems.

APPENDIX A

LETTERS OF APPROVAL

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Health Services Administration

Navajo Area
Indian Health Service
P. O. Box 160
Shiprock, New Mexico 87420

Ms. Lillian Tom-Orme
State of Utah Department of Health
Division of Community Health Services
825 North 300 West
P. O. Box 4550
Salt Lake City, Utah 84145-0500

Dear Ms. Tom-Orme,

Thank you for your letter of January 2, 1986 concerning your interest in conducting diabetes research in the Shiprock area. It would be an interesting project both for you and for us at the Shiprock Service Unit. In securing clearances for the project you will eventually initiate, I would offer the following suggestions.

1. Contact Mrs. Ellouise DeGroat, Tribal Affairs, Navajo Area Indian Health Service, P. O. Box G, Window Rock, Az 86515, Phone # 602-871-5811 for instruction on securing approval from the Navajo Area IHS Health Board and from the Navajo Tribe.

2. Secure clearance and support from the Shiprock Service Unit Health Board by contacting Mr. Lewis Tutt, Health Systems Administrator, PHS Hospital, Shiprock, NM 87420, Phone # 505-368-4971 (Ext. 212) to get on one of the meeting agenda.

3. Having approval from my office for access to medical records is not a problem, but we would not be able to provide you with any staff assistance because of our workload situation.

4. You have already received approval from the Navajo Area IHS Area Office (John Breuninger).

I wish you every success in your project.

Sincerely,

Taylor McKenzie, M.D.
Service Unit Director
Shiprock Service Unit

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Health Services Administration

Navajo Area
Indian Health Service
P. O. Box G
Window Rock, Arizona 86515

April 8, 1986

Lillian Tom-Orme, R.N., M.S.
Utah Diabetes Control Program
825 North 300 West
P.O. Box 45500
Salt Lake City, Utah 84145

Dear Ms. Tom-Orme:

Thank you for your submission of the research proposal entitled (NAR-86-07) "Socio-Cultural Health/Illness Beliefs and Practices about Diabetes: A Modified Ethnographic Study in a Navajo Community." We are pleased to inform you that the Navajo Area Research & Publications Committee gave conditional approval to your proposal at their April 3, 1986 meeting.

A copy of the minutes is enclosed which is self-explanatory. A copy of the proposal will also be forwarded to IHS Headquarters for their review and final approval and we will notify you accordingly.

We would appreciate receiving copies of any data collected or report on this study. If you have any questions, please feel free to contact my office at FTS 572-8211 or (602) 871-5811, and best wishes for a successful project.

Sincerely,

Douglas G. Peter, M.D.
Chief Medical Officer
Chairperson, Research and
Publications Committeee

Enclosure

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Indian Health Service
Diabetes Program
2401 12th St. N.W. Rm. 211N
Albuquerque, New Mexico 87102

April 11, 1986

Lillian Tom-Orne, RN, MS
Silver Creek, Box 61
Park City, Utah 84060

Dear Ms. Tom-Orne:

I am writing you at the request of the Navajo Area Research Committee. Your proposal was presented last week and was viewed very favorably. The panel tended to agree with my observations that your health beliefs study was well thought out, and utilized effective ethnographic methodology. They did have two concerns, however, which they asked me to pass on to you.

The first regards the diabetes screening that is being undertaken by the Shiprock Service Unit in the Tec Nos Pos Chapter this summer. They felt that the Community Health Nurses and Representatives who would be doing the screening and yourself might find ways to assist each other. As such they would like a statement that you would be willing to work with the screening program. They in turn might help you in either obtaining some data and/or finding study subjects.

The second concern had to do with sharing your data as you obtained it. The information you hope to obtain would obviously be of significant benefit to the Navajo Area Diabetes Program. One of our most difficult areas to assess has been patient attitudes and beliefs about diabetes and its control. Knowledge of this would help us to form even more effective programs in getting patients to increase physical activity and decrease food intake, the mainstays of Type II Diabetes therapy. Thus, the committee again would like in writing, an acknowledgement that you would be willing to share your information with us as you develop it. This information will only be used to strengthen our program and will not be published by us. If it is noted on any public talks, your development of it would be credited.

Thank you for your consideration of these matters. I look forward to your coming this summer.

Sincerely,

Martin Hickey, MD
Diabetes Coordinator
Navajo Area IHS

LETTERS/TOM-ORNE:amr

cc: Douglas Peter, MD

APPENDIX B

CONSENT FORMS

Consent Form

(Navajo Informants)

I am a nursing student at the University of Utah and am interested in learning about health care concerns of Navajo people. Specifically, I would like to learn from you and others what health beliefs and practices are important; how these are applied to the decisions to seek health care; and how people decide to follow advice given by health care providers (tradition or modern). This type of information is important for nurses and other health providers to know so that better communication and acceptable health care will be fostered.

I would like to ask you some questions. You may agree to answer these questions by stating so verbally or if you prefer you may sign this form. You may also wish not to participate now or later on. Any information you provide will not identify you in any reports I write in the future.

Thank you for your time.

_____ _____

Signature of Informant (optional) Date of consent

Consent Form

(Health Care Provider)

I am a nursing student at the University of Utah and am interested in learning about health care provider's health/illness beliefs and practices about diabetes; how you believe people should seek care; and how you believe health care advice about diabetes should be utilized by patients.

I would like to ask you some questions. If you agree to participate in the interview, you may sign this form. If you don't mind, I would like to tape record this interview so that I can record all the important information you provide. Your identity will not be revealed in this interview or any other reports I may write in the future. It is acceptable if you do not wish to participate in any other interviews later on.

Information gathered from this interview will be written up in my dissertation and possibly future publications to share with health care professionals concerned about improving diabetes management and patient cooperation among Navajo or other Indian people

Thank you for your time.

_____ _____

Signature of Health Provider Date of consent

APPENDIX C

INTERVIEW SCHEDULE

Interview Schedule

(Navajo Informants)

1. What is a healthy person?

   Probe for - How can one tell if they are healthy?

   - How does one feel when they are healthy?

2. What are the biggest health problems Navajo people have today?

3. What kinds of food are good for people to eat?

   Probe for - Are there certain foods that keep you from getting sick?

   - Does the amount of food eaten affect one's health status?

4. What kinds of food are usually eaten in the summer, fall, winter, and spring?

5. What kinds of physical activities do people engage in that are considered good for them?

6. Is diabetes (use Navajo term) a problem among Navajo people?

7. What do people do or think when they are told they have diabetes?

8. What kind of treatment should people get for diabetes?

APPENDIX D

QUESTIONNAIRE

Interview Questionnaire

(Health Care Provider)

1. How serious a problem is diabetes on the Navajo reservation?

2. What is your role in the diabetes program?

3. What do you tell your patients about diabetes?

   a. In your opinion, how do patients view weight loss?

   b. What do you tell them about food? What are their responses? Do they have questions?

   c. How do you discuss exercise? Do they understand your message?

4. What other topics do you discuss with diabetics?

5. How much time do you spend with each patient?

6. Do you mention prevention of diabetes to them?

   a. How do you encourage adult patients to teach prevention to their children or their grandchildren?

7. What seems to be the biggest problem with diabetes on the reservation? What gives you the most frustration when dealing with diabetes?

8. Do patients share information about Navajo cultural beliefs or practices related to diabetes management? What do you think of them? Do you encourage or discourage the use of traditional medicine?

9. How old is the youngest diabetic you have seen?

10. Is the IHS what you expected?

    a. How is your IHS experience different or similar to your expectations prior to entering the IHS?

    b. How long have you been with the IHS?

11. Assuming you have financial resources, what would you consider changing in the health care system on the reservation to reduce the problem of diabetes? This would apply to the social or tribal system as well as the IHS.

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