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NURSING CARE AND BELIEFS OF EXPECTANT NAVAJO WOMEN

by
B. Carol Milligan
(Part 1)

INTRODUCTION

CONFLICT BETWEEN PROVIDERS and recipients of western ethnocentric health-care practices often ensue when the recipients come from different cultural backgrounds. Under utilization of preventive health services and non-adherence to prescribed methods of treatment can often be traced to cultural beliefs and taboos of the patients. Most cultures have their own health values and practices which are often not understood by health professionals. These cultural differences frequently lead to poor communication, hesitation in working effectively with others, and interpersonal tensions. If optimum health care is to be accepted by people of different ethnic origins, health professionals must learn about traditional health practices and other cultural beliefs and taboos of the people they serve.

After working with expectant Navajo women for some time, a group of nurse practitioners became aware of the strong influence of cultural practices on health status outcomes of the pregnant mother and her baby. Due to the inherent dangers of childbearing, numerous cultural prescriptions and proscriptions have been traditionally followed by the Navajo to ensure a successful outcome. These have not always been successful as documented by past infant and maternal mortality and morbidity data. Since 1955 when Congress transferred the responsibility for providing health care from the Bureau of Indian Affairs (BIA) to the Indian Health Service (IHS), a division of the Public Health Service, dramatic improvements in Navajo maternal and perinatal mortality and morbidity have occurred.

Navajo Maternal Child Health Status. Beginning with the inception of the Indian Health Service, Navajo infant mortality rates dropped from 62.5 per 1,000 live births to 14.2 in 1981, a rate approaching the U.S. rate of 11.7 (Fleshman, 1983; NAIHS, 1978; Wegman, 1982, p. 836). The reduction in neonatal mortality which includes the first 28 days of life, has been more impressive with the 1981 rate of 4.1 per 1,000 live births being lower than for the rest of the U.S. (Fleshman, 1983). Neonatal mortality rate tends to reflect maternal factors im-

pacting upon pregnancy problems while the post-neonatal rate which includes one month through the 11th month generally reflects the impact of environmental conditions.

The three major causes of Navajo neonatal deaths during 1981 were congenital anomalies incompatible with life, prematurity and pneumonia (Fleshman, 1983). Post-neonatal deaths were attributed to congenital anomalies, metabolic disease, SIDS, diarrhea, pneumonia, meningitis and trauma. Deaths occurring due to the last four listed causes should be considered preventable.

Although there has been a reduction in Native American maternal deaths whose underlying causes were due to complications of pregnancy, childbirth or the puerperium, the rate is still higher than the 1979 U.S. rate of 9.6 per 100,000 live births. Leading causes of maternal deaths among Navajo women are also the leading causes for the U.S., and include hypertensive disorders, hemorrhage and infection.

Statistical information regarding morbidity diagnoses and incidence rates must be viewed with caution due to the many problems of coding and reporting (Milligan, 1983b).

Keeping this in mind, the leading reported causes of Navajo neonatal morbidity requiring extended hospitalization were related to such perinatal factors as respiratory distress syndrome, low birth weight, and short gestation. The four leading causes of post-neonatal morbidity requiring hospitalization were respiratory infections, conditions relating to the digestive tract (gastroenteritis/diarrhea), infective parasitic conditions including meningitis and conditions relating to the central nervous system (NAIHS, 1980).

In rank order, the five leading diagnoses for ambulatory care visits by infants were respiratory problems, supplemental visits (well baby care, etc.), otitis media, infective parasitic conditions and gastroenteritis/diarrhea (NAIHS, 1980).

Although prevalence and/or incidence rates for congenital anomalies is unknown, the most frequently observed conditions among Navajo infants are congenital hip dislocation, cleft lip, alone or in conjunction with cleft palate, Down's syndrome, cardiac abnormalities and central nervous system defects. The number of infants affected is believed to be small, but the actual number is unknown.

With regard to maternal morbidity, pre-eclampsia, infection, hemorrhage, and anemia are the four most common complications of pregnancy, childbirth and the puerperium occurring in Navajo women. In a retrospective study on hypertensive disorders of pregnancy among Navajo women an incidence rate of 23.4 per 100 live births was found compared to a rate of 5-7 for the U.S (Milligan, 1983a). The IHS Perinatal Study which reported similar rates (Carlile, 1980)

identified a four fold increase in neonatal deaths when the mother was hypertensive during pregnancy. Similar results were found for neonates of mothers with anemia. Operative deliveries have been identified as the primary variable associated with maternal infections.

The Navajo diabetes mellitus rate of 9.9 per 1,000 population is higher than the U.S. rate of 2.88 but significantly lower than rates found in other Native American populations (NAIHS, 1983). Rates specific for expectant Navajo women (15–44 yrs.) is unknown but is projected to be the same rate for age as for the general population. The increased incidence of morbidity in offspring of diabetic women is well documented in the literature for the U.S. population (Mintz, et al, 1978). Comparative morbidity data for newborns of diabetic Navajo women is unknown. Health surveillance throughout pregnancy is known to have a positive affect upon pregnancy outcome.

In 1982, NAIHS reported that 88% of all expectant Navajo women who received prenatal care did so by the end of the second trimester. This is data that needs to be viewed with caution because it leads to the false assumption that women continue to return for prenatal supervision once they have entered the health system. Also, the number of women who fail to obtain prenatal care are not identified. A more valid approach to evaluating the frequency of prenatal supervision would be to identify the number of prenatal visits completed. In a recent review of data for 2,155 women delivering in NAIHS facilities it was determined 5% failed to obtain prenatal care, 17% had 1 to 4 visits, 14% had 5 to 7 visits while 55% had more than 7 pregnancy related visits. Data was missing for 8% of this population. When compared to national guidelines this data indicates almost 50% of these women received inadequate prenatal care (Milligan, 1983b). Seven visits are recommended for pregnant women without complications during the third trimester, i.e. 1 visit in the 7th month, 2 in the 8th and weekly visits in the 9th month or until delivery. Patients with complications would require additional visits.

Maternal age also impacts upon pregnancy outcome with the young teenager and the patient over 35 years of age being at increased risk. During FY 1982, age data for Navajo women presenting for the initial prenatal visit shows 24% were below 20 years of age while 12% were over 35 years of age. Ages ranged from 12 to 51 years (NAIHS, 1982).

Parity, or the number and outcome of past pregnancies can also serve as a risk factor in determining the probable outcome of a current pregnancy. Nulliparas and grand multiparas are at increased risk of having pregnancy complications. Navajo Area Indian Health Service (NAIHS) data for this factor is unknown.

In summary, although substantial improvement in the health status of Navajo women and infants has occurred since 1955, evaluation of the morbidity/mortality data presented in this report identifies multiple problem areas which need to be addressed by NAIHS. Quality health care provided in an environment sensitive to cultural values should have a positive effect on patient acceptance and outcomes and thereby further reduce morbidity/mortality rates for Navajo expectant women and their infants.

OVERVIEW OF RESEARCH

Knowing the above maternal/child concerns, and becoming sensitized to Navajo cultural practices as they impinged on childbearing behavior, prompted the nurse practitioners working with expectant Navajo women to explore ways of improving health care delivery to this client group. Group discussions revealed many instances of current nursing practices which were counter to Navajo beliefs. Examples include: disposing of the infant's umbilical cord, the mother's pubic hair and placenta without considering the importance that handling and disposal of body effluvia have for the Navajo; encouraging women to rest, which is counter to the Navajo belief that pregnancy is a normal natural function and that women should remain active during this time; and emphasizing "problems" such as pre-eclampsia when pregnancy is viewed as a harmonious state with nature and a time for positive thinking.

An additional difficulty was the widely varying cultural needs and beliefs of Navajo clients. Demarcations were not clear and much overlapping appeared to exist among the groups, but most individuals seemed to observe or show respect for at least some traditional values.

As a result of preliminary discussions, the study group formally organized to investigate the question: "What nursing interventions are in harmony with the cultural needs and beliefs of expectant Navajo women?". The study had four specific aims:

1. To develop and test a tool to assess the cultural needs and beliefs of expectant Navajo women.
2. To analyze data collected, using the traditionalism tool, in order to determine dimensions of traditionalism and associated patient profiles on these dimensions.
3. To identify current nursing interventions that are related to prenatal, intrapartal, postpartal, and neonatal nursing care, and to develop nursing protocols that are based upon the dimensions of the traditionalism tool, and
4. To evaluate the effect on patient outcomes of using culturally oriented nursing interventions as compared to routine nursing interventions.

The study evolved into two main parts: a Traditionality Field Study and an Experimental Nursing Intervention Study. During the Traditionality Field Study a tool was developed and administered to 479 expectant Navajo women to identify categories of traditionalism and their association with select demographic, socioeconomic, and general cultural practices as well as cultural practices specifically related to the childbearing cycle. Data from this study were used as the experimental variable in the subsequent nursing intervention study, which sought to demonstrate the effectiveness of providing culturally relevant health care to 191 expectant Navajo women.

Cultural Background: The Navajo Tribe of 160,000 (1981) represents 23% of the total American Indian and Alaska Native population. The federally funded Navajo Area Indian Health Service (N.A.I.H.S.) is the primary health care resource for this population. The Navajo reservation's geographic territory of 24,700 square miles in the contiguous states of Arizona, New Mexico, Utah, and Colorado is divided into eight health Service Units. The reservation also is divided for political representation into 105 Chapters, each of which has a Chapter House where meetings and gatherings are scheduled.

Navajos consider themselves Children of Nature from whence they draw a wealth of knowledge, wisdom, and teachings. Relating to the Earth in maternal terms and the Universe in paternal terms, the enduring Earth People have survived centuries of rugged living conditions. Ancestral Holy People established prescriptions for Navajo life by which they could conduct their activities of daily living. For example, the first Blessingway ceremony was performed on the Mother of Navajo people, Changing Woman, during her puberty rite. From then on the Blessingway ceremony was ruled to be conducted for puberty rites, marriages, births, and strengthening life. The Blessingway Ceremony is the blueprint for all Navajo ceremonies. A traditional Navajo person who integrates the concepts of Blessingway for activities of daily living follows the teachings of the Holy People and thus experiences "Sa ahgnaii Bei kee Hozho", the essence of life.

Man's pathway is called "the corn pollen path", symbolizing a balanced and harmonious existence. The goal of healthful living is "Si ahnaghaii Bei kee Hozho", the essence of holistic harmony. The life force of "Si ahnaghaii Bei kee Hozho" is said to be the reason for Navajo being and cannot be fully explained because it also must be experienced.

At a point in the account of genesis according to the Navajo, there were negative forces in existence that gave way to disequilibrium. Illness is a result of these negative forces, manifesting symptoms in the body, mind and soul. The Navajo believe that the causes of illness were due to (1) violating a taboo, (2) doing or saying harmful things

to people and other living things, (3) harmful effects from witchcraft like a foreign object intrusion and soul loss, and (4) absorbing the after effects of an environmental catastrophic event such as being near a tree that lightning struck. At times the individual is aware of his/her cause of illness. Feelings of guilt over breaking a taboo or not following a prescription compounds the illness complex. Other times, an individual does not know what is causing him to be sick. Suspicion of witchcraft usually lingers in the patient's mind and precautions are taken for protection; for example, carrying a sacred medicine bundle or arrowhead. Whatever the cause of illness, the individual yearns and seeks to reestablish peace within himself and with nature.

The Holy People, foreseeing the dichotomy of health and illness to be experienced by mortal man, gave the Navajos the sacred knowledge of healing ceremonies. Thus, for every illness, a ceremony was developed for a potential cure. The power to find out the cause of illness was also given, so that generations could learn the art of facilitating healing processes. Healing takes place when the patient believes in the power of the facilitator; a medicine person and the curing ceremony. The medicine person uses herbs, natural elements symbolizing the power of the spiritual realm, and ritual healing ceremony to help a person regain harmony. When an illness occurs, self-medication with herbs is tried first. If no relief is evident, a Navajo diagnostician is consulted, then a singer (or healer), and lastly a medical doctor. The fee for the curing ceremonies are negotiated between patient and healer. Other things which are not negotiated are items needed for ceremonies, like baskets which make some ceremonies more costly than others. In many cases, the cost of a ceremony seems excessive, a ceremony can cost up to \$5,000, but usually much of the food, labor and cash is donated by kin and family—this brings down the cost for the patient. Many ceremonies are also performed where there is more than one patient, so the cost for the ceremony is then shared by more families. The actual cash given to healers is perhaps more like 50 or a hundred dollars. The rest is the cost of providing food, ceremonial items, and other goods. Free medical care to Indians is provided by the U.S. Public Health Service. In some cases, cost may not be the most important factor. For example, in times of acute illness or accidents, Navajo patients do not hesitate to seek medical care, but when the illness is chronic or not responding to medical treatments by physicians, patients may turn to medicine men or other healers. Medicine men or other healers are also first choice of treatment when the patient's ailment is viewed as a condition best treated by native healers—for example, in cases of recurring bad dreams; again, there is no question the patient will go directly to a medicine man—

if he cannot afford the specific ceremony, he will at least get some form of "first-aid" treatment. First aid treatment may consist of herbs or other forms of temporary therapy until he can afford the complete ceremony. The five and nine night ceremonies are more expensive and definitely lend themselves to cooperation of family support groups. A Navajo person who has been brought up traditionally is informed about prayers, and herbs for self help. For example, if a person has a bad dream or nightmare, he/she uses corn pollen as an offering to pray with at dawn. White and yellow corn meal are also used for offerings at dawn and twilight for daily prayers of self help.

Maternal Child Cultural Practices. When a Navajo woman finds herself with child (pregnant), she shares this information with her husband. An expectant woman is said to re-live the creation story as she prepares to bring forth into the world an earth boy or girl. The couple must observe prescriptions and proscriptions governing their thoughts, speech and actions. Anything they think, say, or do, will be "heard" by and affect their unborn child. The Blessingway ceremony is usually performed for a Navajo woman early or late in pregnancy and/or after delivery to promote a peaceful growth of the fetus, an uncomplicated delivery, newborn protection, and newborn survival.

Childbirth is considered to be a normal, natural part of life. Problems with pregnancy are not anticipated and are not necessarily interpreted as symptoms. Going to a clinic or hospital for prenatal care is foreign to the Navajo view of life. It is considered natural to endure the hardships and discomforts of pregnancy. For example, Navajo women would go to the doctor for bleeding, but not for swelling or excessive weight gain.

Promotion of harmony in pregnancy focuses particularly on safety of the mother and safety of the developing infant. Cultural rules which pertain particularly to pregnancy include a number of taboos. Pregnant women can not attend certain sings, for example, the yei-be-chai, which is a curing ceremony for the sick. She should avoid sick people. Yei-be-chais also wear masks and pregnant women are not supposed to see them. She should also avoid contact with dead persons or animals, even looking at the dead as in attending a funeral is prohibited. Avoidance of contact with the dead is one of the strongest taboos. Fear of ghosts is common and people are afraid that ghosts or spirits may continue to inhabit graveyards, hospitals and other places where people have died. For Navajos to have pregnant women deliver their babies in a place where people are sick and sometimes die, runs contrary to traditional practices for staying well and insuring safety.

Certain foods are prohibited, especially if the pregnant woman has experienced any illness in the past in which the medicine man

has told her not to eat certain foods. Commonly prohibited foods include fish, chicken, eggs, and wild game (venison).

Since pregnancy is a natural condition, women are to continue to be active and avoid lying down. The rationale for not lying down is that inactivity makes the baby big and delivery more difficult. Pre-eclampsia care, on the contrary, requires rest for the pregnant woman and may require complete bedrest.

Another taboo is tying knots. Both the mother and father are to avoid tying knots. Otherwise problems with the infant might occur, particularly a difficult labor caused by the tightening effect of the tied knots. Tying knots in weaving and use of knots in care of livestock are prohibited, i.e., no weaving for the female, no rodeos for the male. Avoidance of preparation for the unborn infant is a way of preventing close attachment in case the infant should die. Infants are not named until birth, nor are clothing, cradle board, and other supplies obtained until several days postpartum. This taboo is probably related to the higher incidence of infant mortality experienced in the past. Families were interested in having as many children as possible to ensure that some would survive.

Disharmony results from broken rules or taboos. Illness or having pains are indicators of disharmony, as are bad dreams and nightmares. Being sick, uncomfortable or having symptoms of illness are evidence of contact with negative forces. Witchcraft is suspect whenever disharmony occurs. When a pregnant woman is out of harmony her symptoms may be bad dreams, or just being troubled. She first recognizes any taboo she may have broken and sets out to restore harmony, for example, if she felt pressured by family members to attend a funeral. Even if she did not view the body, attendance at the funeral would be a violation of the taboo. She may seek any number of traditional remedies, depending on the disharmony, such as various curing ceremonies, herbal treatments, or purification rites. Neonatal complications or illness can also be problematic. This type of complication or illness requires that the infant be blackened with ashes and that a cleansing ceremony, the Enemy Way, be held to restore harmony. One possible cause of infant problems is birth in the hospital which is regarded as a haunted house. Another possible cause is that the mother broke a taboo.

Cultural rules for pregnancy behavior such as those described became the basis of the culturally relevant nursing care plans that were developed and implemented later in this study. To accomplish this, a tool to measure current cultural practices and dimensions of traditionality was needed. The development of such a tool was the next step in the study.

DEVELOPMENT AND IMPLEMENTATION OF TRADITIONALITY FIELD STUDY

Early in the study (1976) the investigators identified the need to develop an interview instrument appropriate for assessing a, then still unclear, concept called traditionality. The development of a traditionality instrument ultimately required several years work (and was supported by WICHE Nursing Research Development Grant). Conceptual categories of traditionalism from which specific questions for the traditionality instrument evolved, were obtained from personal nursing experiences among the Navajo by the members of the investigative group (three of whom are Navajo), extensive input by other Navajos, especially pregnant women, and a review of the literature (Bailey, 1948, 1950; Evans & Fike, 1975; Gilpin, 1968; Kluckhohn, 1944; Kluckhohn & Leighton, 1962; Ladd, 1957; Leighton & Leighton, 1944; Leighton & Kluckhohn, 1947; Loughlin, 1965; Porvaznik, 1967; Sevcovic, 1975; Wyman, 1950; and others).

The final traditionality instrument was the product of three pretests in which a total of 117 pregnant Navajo women from various areas of the reservation participated. The pretests were designed to analyze clarity, brevity, and ease of translation from English to Navajo; document problems encountered in obtaining information; confirm item variability for comparative measurement; confirm item discrimination to adequately separate moderns from traditionalists; confirm inter-item correlation to relate items under specified categories to each other, indicating the ability to measure general constructs; identify needed additions or deletions; and to verify tool validity.

Based on input from the three pretests, the final form of the traditionality questionnaire evolved into a group of demographic and socioeconomic questions, a group of questions on general traditional cultural information, and another group of questions on specific cultural beliefs and values relating to pregnancy, plus an open ended question on suggestions for how nurses could help during pregnancy.

Analysis of the pretests also identified the need to have all questionnaires administered as interviews by bilingual Navajo as a means of improving the reliability of the questionnaire through better interpretation and greater number of completed items.

The concept of traditionalism suggests how well an individual follows either long established cultural practices or a newer, more modern way of life, and was seen as being composed of at least three categories: (1) traditional individuals who are trying to maintain beliefs, values and customs which have persisted for several generations,

(2) modern individuals who are following beliefs, values and customs different from traditional concepts, and (3) transitional individuals who subscribe to some traditional cultural concepts while also accommodating to modern cultural concepts. Identification as to which category of traditionalism the individual belonged was done on the basis of subjective appraisal by the interviewer, who gave rationale for the decision.

Research Design. Based on the described preliminary work, a grant proposal to conduct research on the identification of traditionality dimensions among pregnant Navajo women was submitted to, and approval with funding granted from, DHHS, Division of Nursing. The research questions to be addressed included:

1. Is traditionality a continuous scale ranging from traditional to modern with transitional being a point on the scale, or do the labels of "traditional", "transitional", or "modern" refer to particular combinations of values and beliefs?
2. Are there multiple traditionality types?
3. What are the key items and/or subscales of items that discriminate traditionality types?
4. What, if any, are the typical profiles of traditionality types?

The study population was defined as pregnant Navajo women of at least one-fourth Indian blood who live on or near the Navajo Reservation. A proportionate sample of pregnant women from each of the eight NAIHS service units was drawn. This target quota was equal to 10% of the expected annual births for each service unit in the study for a total projected sample size of 470. Study participants were solicited by announcements in Navajo on local radio stations, in newspaper articles, and by announcements posted in Chapter Houses (tribal buildings in geographically strategic areas where various kinds of meetings and gatherings can be held).

Data collectors were four bilingual, Navajo nursing students who had completed a maternity clinical practicum. They were trained in administration of the traditionality instrument and other relevant aspects of data collection. Inter-rater reliability was established to ensure accurate recording of data. Expectant Navajo women served as subjects during the training exercises which were provided by two of the Navajo investigators.

During the three summer months of 1980 study data were collected in each of the eight service units. The various advertisements used to recruit participants identified the nature of the study, the need for pregnant Navajo women, and the date and time for each community and Chapter House when the interview team would be present. Two

teams, each with two interviewers, went to the Chapter Houses in the different communities and remained until the quota of interviews for that particular geographical area was obtained. Prior to the administration of the questionnaire a signed, informed consent statement was obtained from each participant. A major consideration involved using the patient's primary language to explain the study, describe its intent and purpose, as well as to obtain the consent and administer the tool.

Data were analyzed using several procedures including Contingency coefficients and Pearson correlations, where appropriate, to compute the relationship between the interviewer's assessment of traditionalism and individual items on the instrument. Variable cluster analysis identified the dimensions of traditionality as a means of establishing conceptual categories of values and beliefs as well as providing the basis for creating subscales of the instrument. Object cluster analysis identified subsets of individuals based on similar profiles across identified dimensions (as measured by subscales of selected items), for the purpose of examining conceptual meaning. Discriminant analysis identified combinations of items that best distinguished persons judged to be in different categories of traditionality, and was used on subscale scores developed from the variable cluster analysis.

Traditionality Field Study Data. A total of 479 expectant Navajo women responded to the traditionality questionnaire. Ages ranged from 14 to 51 years of age with a mean of 24.8 years. A high 80% of the respondents were under 30 years of age. Almost half of the respondents (N = 221) had completed 12 or more years of formal education with a range from 0 to 15 years and a mean of 10.4 years. Slightly more than half (N = 287) had family incomes of less than \$8,900, whereas 12% (N = 58) had family incomes of more than \$18,000. Number of living children ranged from 0–12 with 72% of respondents having 0 to 2 living children, producing a mean of 1.9. Telephones were in 22% of the homes, running water was piped into 55% of the homes, and 53% had indoor toilet facilities. Whereas, private vehicles were owned by 57%, relatives or friends were relied upon to take the other 43% to prenatal clinics, 25% of whom paid an average of ten dollars for the ride. While most respondents spoke both Navajo (92%) and English (95%), 31% spoke primarily Navajo in the home and 7% spoke primarily English in the home. With regard to religious affiliation, most respondents followed the Navajo Way (75%), but there were high percentages of affiliation with Christian Denominations (59%), Native American Church (49%), and Church of Jesus Christ of Latter Day Saints (24%), indicating a prevailing pattern of identification with two or more religions.

TABLE 1

SELECT CULTURAL PRACTICES OF EXPECTANT NAVAJO WOMEN (N = 479)

CULTURAL PRACTICE	YES		NO		TOTAL	
	F	%	F	%	F	%
If had bad dream, hire a healer?	332	(69.3)	147	(30.7)	479	(100.0)
Have hired traditional healer for self?	317	(66.2)	161	(33.6)	478	(99.8)
Do you use corn pollen?	379	(79.1)	100	(20.9)	479	(100.0)
Do not eat certain foods after a sing?	128	(26.7)	323	(67.4)	451	(84.1)
Have had puberty rite? (Kinaalda)	255	(53.2)	224	(46.8)	479	(100.0)

TABLE 2

SELECT CULTURAL PRACTICES RELATING TO PREGNANCY OF EXPECTANT NAVAJO WOMEN (N = 479)

PREGNANCY PRACTICES	YES		NO		TOTAL	
	F	%	F	%	F	%
Go to ceremonies while pregnant?	43	(9.0)	434	(90.6)	477	(99.6)
OK to see dead person while pregnant?	52	(10.9)	427	(89.1)	479	(100.6)
OK to see dead animal while pregnant?	98	(20.5)	381	(79.5)	479	(100.0)
Feel tying knots is wrong when pregnant?	217	(45.3)	262	(54.7)	479	(100.0)
Do not eat certain foods while pregnant?	89	(18.6)	390	(81.4)	479	(100.0)
Plan on having Blessingway Ceremony?	279	(58.2)	172	(35.9)	451	(94.1)
OK to rest during day	396	(82.7)	83	(17.3)	479	(100.0)

TABLE 3

SELECT CULTURAL PRACTICES RELATING TO CHILDBIRTH OF EXPECTANT NAVAJO WOMEN (N = 479)

CHILDBIRTH PRACTICE	YES		NO		TOTAL	
	F	%	F	%	F	%
Like healer present at birth?	289	(60.3)	188	(39.2)	478	(99.5)
Like baby's father present at birth?	387	(80.8)	90	(18.8)	477	(99.6)
Hang onto sash belt during labor?	226	(47.2)	219	(45.7)	445	(92.9)
Drink herbs after birth?	413	(86.2)	66	(13.8)	479	(100.0)
Prefer position during birth? Squatting?	92	(19.2)	387	(80.8)	479	(100.0)
Do you want to save placenta?	208	(43.5)	271	(56.5)	479	(100.0)
Do you want the baby's first stool or urine.	227	(47.4)	251	(52.4)	478	(99.8)

TABLE 4

SELECT CULTURAL PRACTICES RELATING TO THE INFANT OF EXPECTANT NAVAJO WOMEN (N = 479)

INFANT PRACTICE	YES		NO		TOTAL %	
	F	%	F	%	F	%
Massage baby after birth?	424	(88.5)	55	(11.5)	479	(100.0)
Plan to use cradle board?	394	(82.3)	85	(17.7)	479	(100.0)
Plan to breast-feed baby?	317	(66.2)	161	(33.6)	478	(99.8)
Plan to use umbilical cord stump?	448	(93.5)	30	(6.3)	478	(99.8)
Plan on giving baby Navajo name?	215	(44.9)	264	(55.1)	479	(100.0)
Believe in getting things ready for infant?	227	(47.4)	252	(52.6)	479	(100.0)

Responses to questionnaire items concerned with traditional cultural beliefs and practices of a general nature and those specifically associated with the pregnant state indicated their continued relevance. Table 1 suggests that traditional cultural beliefs and practices are still supported by the predominantly young expectant Navajo women. Adherence to food taboos was the only practice not supported by the majority, while almost 80% used corn pollen, a sacred substance employed in many contexts to promote, maintain, or regain health.

Traditional cultural practices during pregnancy to ensure the well-being of the mother and unborn child had a very high degree of adherence as seen in Table 2. The traditional proscription to avoid extra rest during pregnancy (a sign of laziness) represented the largest shift away from traditional pregnancy practices.

The greatest decline in adherence to traditional cultural practices occurred with the intrapartum stage of childbirth (Table 3). This may well be due to restrictions within the hospital setting which prevents the following of certain traditions. The traditional practice of drinking herbs after the baby's birth was desired by 81% of the women. Conversely, 81% would like to have the baby's father present at birth, a non-traditional preference.

Four of six select traditional cultural practices relating to the infant were supported by more than 66% of the respondents (Table 4). The other two traditional infant practices were supported by a fairly high 45–47% of the study group.

With regard to witchcraft, 75% of the respondents believed in its existence and 59% would have a ceremony for their infant to rid it of harmful influences to which it may have been exposed while hospitalized. Conversely, perceptions of the hospital as a "house of death" is declining as is the belief that urine and blood specimens might be used in witchcraft practices (at least within the hospital).

In summary, respondents in this study were young Navajo speaking women, just beginning their families, with some high school education, moderate to low income, a few amenities such as running water and indoor toilet facilities, and affiliation with both traditional and Christian religions. General cultural beliefs and practices, and those related specifically to the pregnancy state are still important to these young, expectant women.

Instrument Dimensionalities. All questionnaire items were subject to Contingency Coefficient and Pearson correlations, where appropriate, to identify significant relationships which were then used as the basis for retaining items for variable cluster analysis. With variable cluster analysis the five dimensions of domestic environment, traditional

beliefs, family, superstition, and education were identified. Internal consistency reliabilities ranged from .75 to .88.

High scores on the domestic environment cluster ($rel = .749$) indicated no piped water or indoor toilet facility, a greater likelihood of speaking Navajo in the home and in general, and the use of food stamps or USDA commodities.

High scores on the traditional beliefs cluster ($rel = .878$) indicated less possibility of doing the following: hiring healer for bad dream, using corn pollen, practicing the Navajo Way, having hired a traditional healer, frequently hiring traditional healer, drinking herbs, blackening baby with ashes, adhering to the Native American Church, believing in witchcraft, having a Blessingway Ceremony, preferring a traditional healer during birth, and saving baby's first stool.

High scores on the family cluster ($rel = .786$) indicated a higher number of living children, a higher number of wanted children, higher mother's age, and higher likelihood of wearing traditional dress.

High scores on the superstition cluster ($rel = .778$) indicated support for the belief that it is not alright to look at dead persons or at dead animals.

High scores on the education cluster ($rel = .797$) indicated lower educational attainment and no English spoken.

Following the above variable cluster analysis, object cluster analysis was done to identify groups (0-Types) according to each person's composite profile across several measures. In this study the relevant measures correspond to scores on each of the five identified variable clusters. A total of eight object clusters (0-Types) were identified based on profile combination of the above dimensions.

A description of the profiles which form the basis of the eight 0-Types is reported in FIGURE 1. Five variable subscales are listed across the top of the figure, while the eight object (person) grouping labels are reported down the right side. An upward swing in a profile line indicates a high average subscale for a particular 0-Type, and vice-versa. (See FIGURE 1)

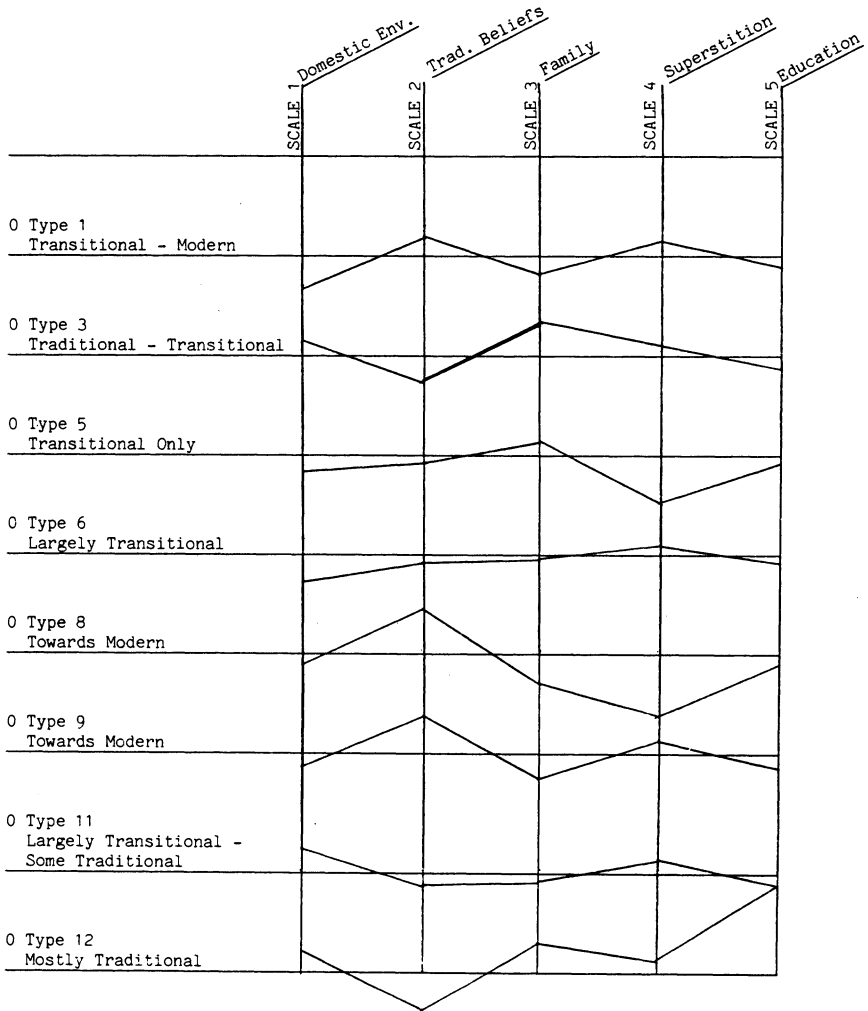
An additional description of each of the eight 0-Types is given on the following page.

OBJECT CLUSTER DESCRIPTIONS

1. 0-Type 1 - Slightly low on scale 1 (higher chance of having water). Close to average on other scales. Composed of transitional to modern.
2. 0-Types 3 - Slightly high on scale 3 (number of children). Average on other scales. High percentage of traditional.

Figure 1

PROFILES OF O TYPES



3. 0-Type 5 - Average on all scales except scale 4. Low on scale 4, indicating low superstition. Contains only transitional (but a small number).
4. 0-Type 6 - Average on all scales, largely transitional.
5. 0-Type 8 - Defined by high scores on beliefs (low belief) and low scores on superstition. Mostly moderns in group.
6. 0-Type 9 - High scores on belief (low belief level)—average on others—similar to type 8 except for average on superstition. Mostly modern.
7. 0-Type 11 - Slightly high on domestic environment (no water). Large percentage of traditional and transitional.
8. 0-Type 12 - Slightly high on domestic, high on scale 3 (children) and very high on scale 5 (indicating low level of education). Mostly traditional.

Relationship Between Traditionality and 0-Type Membership. Membership in each 0-Type was broken down by the three traditionality ratings as reported by the interviewer post-evaluation. The relation of traditionality type to membership in 0-Types was strong. For instance, 0-Types characterized by rejection of traditional beliefs usually were made up of modern individuals. Traditional persons were most likely to be in 0-Types characterized by primitive domestic environment and low educational levels.

A description of 0-Type groupings by traditionality categories is reported below in Table 5. Headings across the top of the table indicate the three traditionality categories while the eight 0-Types are listed on the following page.

We see that the 0-Types can be found according to their chance of containing traditional persons. The groups containing the highest proportion of traditional subjects were 0-Type 12, defined by low education, 0-Type 03, defined by a high number of children, and 0-Type 11, defined by a low probability of having running water in the home.

Transitional persons are more likely to fall into 0-Type 06, characterized by average scores across all subscales, 0-Type 05, characterized by low superstition scores, and characterized by a low domestic score indicating a higher chance of having water, and 0-Type 11.

Finally, those persons classified as modern are most likely to fall into 0-Type 08, characterized by lower levels of traditional belief and superstition, and 0-Type 09, also indicating a low level of traditional beliefs.

Summarizing the distribution of persons into 0-Types, it appears that traditional persons are likely to have less education and live in a less developed environment. Transitional persons are higher on

TABLE 5
FREQUENCY OF EACH TRADITIONAILITY GROUP CONTAINED IN 0-TYPES

0-Type	TRADITIONAILITY CATEGORY						
0-Type	Traditional F %		Transitional F %		Modern F %		Total in 0 Type
0-1	0	0	34	9.5	7	11.8	41
0-3	9	23.0	31	8.7	0	0.0	40
0-5	0	0.1	16	4.5	0	0.0	16
0-6	4	10.2	118	33.1	2	3.3	124
0-8	0	0.0	9	2.5	20	33.8	29
0-9	0	0.0	18	5.0	30	50.8	48
0-11	13	33.3	129	36.2	0	0.0	142
0-12	13	33.3	2	.5	0	0.0	15
TOTALS:	39		357		59		455

Percents are column percent which equal percent of each traditionaility group distributed within a particular 0-Type.

education and live in a somewhat more modern environment, although their belief system is similar to the traditional person. The modern person by comparison, is likely to have a similar educational background and living environment as the transitional while differing in their rejection of the established belief system.

In discriminant analysis, the single items which in combination best discriminated traditional from transitional persons were education, age, not speaking English, birth control method, and tying knots during pregnancy. For the most part, one could say that traditional persons were likely to have less education, be older, and be less likely to speak English than their transitional counterparts.

A different set of discriminators was found to separate modern from transitional person. The single items which in combination best accomplished this discrimination were use of corn pollen, hire healer for bad dreams, use of herbs, saving of umbilical cord, language spoken in the home, belief in witchcraft, education, and birth control method.

In summary, items reflecting adherence to traditional cultural values, beliefs, and superstitions were the most probable discriminators between transitional and modern persons. The modern person was significantly less likely to believe in the established Navajo values.

When subscale scores were used as discriminators, similar results were found. The most important discriminators between traditional

and transitional persons were the subscales measuring education and family. Transitional persons were best discriminated from modern individuals by the belief and superstition subscales.

Interpretation. The results of cluster analysis and two approaches to discriminant analysis seemed to support similar outcomes in this study. The major finding was that the key indicators which separate the transitional from the traditional Navajo are not the same as those indicators separating the transitional from the modern person.

From a measurement point of view, traditionality (as defined within this study) cannot be appropriately considered or measured as a continuum. Rather the psychometric distances on the traditionality scale must be seen as discrete steps, first from traditional to transitional, and then from transitional to modern.

Conceptually, this empirical finding contains major implications regarding the acculturation process that occurs as an individual moves from the traditional toward the modern role. The findings of this study would suggest that individuals begin to move away from a traditional identification by changing their environment and increasing their educational level. Essentially, the individual becomes outwardly more integrated into the surrounding modern Anglo culture. While this change process is taking place, the individual has managed to hold on to most of the traditional beliefs and values. For many, the beliefs and values will eventually become modified as assimilation into the modern way of life increases.

Perhaps one of the greatest implications of this finding is concern for the direction of the described change process. Psychological theory would suggest a person undergoing behavior changes would first change attitudes and ideas about the behavior. A change in attitude increases the acceptance of and propensity for a change in behavior. Essentially, the individual is prepared for change. The findings of this study suggest a possible reversal of this process. The individual is seen as moving out of a traditional Navajo environment into the modern world. At the same time, that person seems to have held on to the traditional ideas, values, and beliefs of the Navajo culture. The person's behavior becomes dictated by the modern world while the person's belief system has not been restructured to prepare for the change. A major difference exists in one's perception of reality and the realism within which the person has to operate. The potential for problems of role conflict and stress are increased in the transitional person. Within the context of this study, the health care implications of this conflict situation are significant.

(Part 2 of this article will appear in the next issue)