

PATTERNS OF HEALTH CARE UTILIZATION
IN DENTON, TEXAS

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To the Provost of the Graduate School:

I am submitting herewith a dissertation written by Simon Onwe Ogamdi entitled "Patterns of Health Care Utilization." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Community Health Education.

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DEDICATION

To those I love

My wife, Racheal Ogamdi, and my two-year-old son. My wife's zest for serving and for caring for the entire family in a special way, has been my motivation. Much thanks also to our faithful Lord, who in His Divine dispensing, through His Spirit, strengthened me into my innerman.

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307 participants (15-83 years) from the 17 church groups in Denton, Texas volunteered for the patterns of health care utilization study conducted between June-July 1986. The five racial groups that participated in this study were represented as follows: 195 Whites, 92 Blacks, 10 Hispanics, 5 Asians, and 5 American Indians. There were 146 females and 161 males who participated in this study. Educational levels among the participants ranged from 8th grade education to postgraduate work. The patterns of health care utilization questionnaire was administered to the participants by the pastors of the various groups. Data collected from this study were statistically analyzed using frequencies, percentages, chi-square, ANOVA, and Newman-Keul's posttest analysis. There was a significant relationship between race and family income and between family income and seeking second opinion when surgery was suggested. There was a significant relationship between self rated health status and number of visits to the

doctors and clinics. A significant relationship was observed between age and the number of visits to the doctors and clinics. It was observed that the participants of this study had good immunization records.

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CHAPTER I

INTRODUCTION

From medieval days until the positive health phase (1920-1960), health was defined as freedom from disease or ailment (Basch, 1978; Bedworth, D. & Bedworth, A., 1978). In modern times health has a more inclusive definition and meaning. The World Health Organization (WHO) defined health as ". . . a state of complete physical, emotional and social well-being, and not merely the absence of disease or infirmity" (Basch, 1978, p. 204). Health also has been defined as ". . . the quality of a person's physical, psychological, and sociological functioning that enables him or her to deal adequately with self and others in a variety of situations" (Bedworth, D. & Bedworth, A., 1978, p. 5).

There are hopes and aspirations that there will be health for all in the year 2000 (Mahler, 1981; Lambo, 1980). This impressive goal is not only an aspiration of the World Health Organization, but one seemingly held by many nations, governments, societies, agencies, counties, cities, localities, communities, families, and individuals.

Contrary to this idealistic aspiration for a healthy world, there are some opposing positions. In the United

States of America between 1978 and 1982, per capita federal aid to states and localities fell by 25%. Between 1980 and 1982, federal aid to states was reduced by 20% (Altman & Morgan, 1983). The effect of these cutbacks was felt in some areas, such as maternity and child health programs and Medicaid. Medicaid, the largest public health program for children, suffered a \$5.5 billion dollar cut between 1981 and 1983 (Rosenbaum & Weitz, 1983). According to Edelman (1985), nearly 700,000 children lost Medicaid eligibility as a result of the cut. Many children now do not have access to the program due to new restrictive program criteria.

In the United States, poor mothers and children have experienced a severe lack of access to basic health care services. Approximately 1 in every 20 pregnant women and 1 in every 11 non-white pregnant women have received little or no prenatal care (National Center for Health Statistics [NCHS], 1972, 1980). According to the NCHS (1980), approximately 25% of children living in poverty had not seen a physician within the past year. A very high proportion of these children were blacks. Approximately 40% of poor children never had seen a dentist (NCHS, 1969, 1980).

Access to health care services depends largely on possessing health insurance or a sufficient amount of

disposable cash. Millions of poor people, mainly women and children, are unable to use pediatric, maternity, and other critically needed health care services. The changes in the structure of health care financing in both the public and the private sectors have reduced the availability of charity care services (Kleinman, 1981; Edelman, 1985). This crisis will only worsen with the recent trend to curtail health care spending.

During the past several years, the health risks facing poor women and children have increased. According to the Healthy People: the 1979 Surgeon General's Report on Health Promotion and Disease Prevention, mothers who do not have prenatal care are more likely to have complications during pregnancy. Babies born to mothers who have received little or no prenatal care are one and a half to three times more likely to have a low birth weight. "Low birth weight increases the risk of death twenty times" (Healthy People, 1979, p. 308).

The importance of health care utilization for all segments of the population cannot be overemphasized. Edelman (1985) found that in New York, prenatal care data, particularly from non white groups, are alarming. The percentage of mothers receiving late or no prenatal care ranged between 21.3 to 35.9% of all pregnancies.

Adolescent pregnancy is associated significantly with health risks to both the women and children. In New York, one sixth of all births to nonwhite women in 1982 were to adolescents.

Rationale for the Study

Risks to good health come from various sources. According to the 1979 Surgeon General's Report (Healthy People, 1979, p. 6), these risks may be biological, behavioral, and environmental. The biological risks are expressed through genetic inheritance. Inherited disorders can cause early death or impairment of physical or mental function that ranges from slight to serious disability. For many of these inherited diseases, preventive measures are available in the form of early detection through screening. The early diagnosis depends very much on the use of available health care services. Preventive services in areas of genetic screening and testing for carrier status, as well as other planning services, will strengthen health care utilization. Prenatal diagnosis resulting from adequate and timely use of health care services will improve the health status of members of the community.

The importance of behavioral factors in the etiology of diverse health problems is becoming recognized increasingly by health care professionals. According to

the 1979 Surgeon General's Report on Health Promotion (Healthy People), the development of strategies to change individual behavior is a problem. The complexities faced by the preventive efforts in this area cannot be overemphasized.

Poverty is related to poor health among infants, children, adolescents, and the elderly. Poverty can affect health in many ways. It influences individual behaviors and attitudes towards health care that, in turn, can affect health negatively (Healthy People, 1979).

The health of an infant during the first year of life is determined to a great extent during the nine months before birth. Reducing the incidence of low birth weight is a high priority in promoting infant health. A high quality prenatal care service has the beneficial effect of reducing low birth weight and many other complications of pregnancy. The major strategy to reduce low birth weight involves the increase in the utilization of prenatal health care services and other family planning services (Healthy People, 1979).

Many infectious diseases have been reduced, and some even have been eliminated, due to the great success of past immunization programs. However, because of the lack of a currently perceived threat to their health, many children no longer are immunized against some of these childhood

diseases. As a result, it is possible that many of these deadly diseases may make a comeback in the future. The need for adequate use of immunization programs and other prenatal health care services therefore is emphasized (Backes, 1981; Goodman, Orenstein, & Hinman, 1982; Healthy People, 1979).

The health care services for a community extend beyond the care of infants and children in the community. Improving the health status of the adolescents and adults depends heavily on reducing death and disability from motor vehicle accidents. Most of these accidents are related to alcohol overuse. Alcohol use has been cited by the Surgeon General as an important contributor to all types of injuries (Healthy People, 1979).

Cardiovascular diseases are still the leading cause of death in the United States. High blood pressure is the most important factor in strokes, and is critical in the incidence of coronary heart diseases and heart failure. The Healthy People (1979) report emphasized the need to reduce risk factors by changing some behaviors. Adequate exercise and regular medical checkups can help in early diagnosis and prevention of many chronic complications.

A wise consumer seeks to know what is available and has the potential to make choices according to need. The

recent trend toward cutting health care financing will prevent many people from using health services. There will be more restrictive measures instituted to determine the criteria for use of free health care services. These measures will reduce further the number of people who use the health care services (Lief, 1985).

The less privileged must have access and the opportunity to seek and receive needed help in the area of health care. Such access to health care services should lead to an increase in early diagnosis of acute and chronic diseases and should improve the quality of health in the community (Berki & Ashcraft, 1979).

Denton, the largest city in Denton County, is faced with new challenges as the demands for improved highways and community services increase (1980, census data). Health planning will be the primary goal of the health care providers in the city. An increase in the knowledge concerning the patterns of health care utilization in Denton will strengthen health care planning in Denton.

Purpose of the Study

The purpose of the study was to investigate the patterns of health care utilization in Denton, Texas.

Statement of the Problem

The problem of this study was to determine health care utilization patterns, factors considered in the choice of physicians, episodes with disease experiences, health insurance experiences, immunization records, and the recognition of health needs by the participants. This study was instituted also to determine sources of health information and sociodemographic characteristics such as age, sex, and levels of education of the sample in relation to the utilization patterns.

For the purpose of this study, 20 church groups in Denton were randomly selected to participate. Seventeen of these 20 church groups agreed to participate in the study, yielding 307 church members age 15 years or older. The Patterns of Health Care Utilization Questionnaires were given to the pastors for their church members to complete. The patterns of health care utilization of the participants were determined from their responses to the questionnaire.

Hypotheses of the Study

The following null hypotheses were investigated in the present study and were tested at the .01 level of significance.

1. There is no relationship between race and the frequency of use of doctors' offices or clinics.

2. There is no relationship between level of education and frequency of use of doctors' offices or clinics.

3. There is no relationship between family income and use of doctors' offices or clinics.

4. There is no relationship between race and overnight hospitalization.

5. There is no relationship between having regular physical examinations and chronic health problems.

6. Whether or not a person has insurance is not related to the use of health care services.

7. Availability of transportation is not related to use of health care services.

8. Past experiences of waiting time do not affect the use of doctors' offices or clinics.

9. There is no relationship between age and the use of doctors' offices or clinics.

10. There is no relationship between sex and use of doctors' offices or clinics.

General Design of the Study

During the months of March and April 1986, 17 Denton church groups agreed to participate in the study. The Health Care Utilization Questionnaire was given to these participants by their pastors. The completed

questionnaires were returned to the pastors within one week. From the data collected, the researcher determined the patterns of health care utilization; factors considered in the choice of physicians and other health care services; episodes with disease experiences; immunization records; and socio-demographic characteristics such as age, sex, race, and levels of education.

Limitations

The study was subjected to the following limitations:

1. The degree to which the participants were truthful in responding to the questionnaire.
2. Time pressure for the completion of the research study.
3. The cooperation of the pastors in carrying out the study.
4. The proportion of various racial groups in the church groups.
5. The degree to which the participants were representative of the population from which the sample was drawn.
6. The reliability, objectivity, and the validity of data collected through a self-report method.

Delimitations

The study was subjected to the following delimitations:

1. The population was restricted to church groups in Denton, Texas.

2. The study was restricted to those church members present in the meeting halls on the specified days.

3. The study was restricted to church members aged 15 years and older.

4. The study was restricted to volunteer participants.

Assumptions

The following assumptions were made by the researcher:

1. Participants had equal opportunity to use available health care services.

2. Participants had sufficient recall of their needs to verbalize them.

CHAPTER II

REVIEW OF RELATED LITERATURE

A comprehensive review of the available literature relating to the patterns of health care utilization disclosed that the present investigation did not duplicate any previous study. Studies reflecting the need for health care before and immediately after birth are found in the first section of this chapter, and studies dealing with minority health care use are reviewed in the second section. Studies reflecting the variety of ways to encourage health care use are reviewed in the third section.

Health Care Need Before and Immediately

After Birth

Teenage pregnancy has reached epidemic proportions in the United States. Randolph and Rivers (1985) reported that in New York State alone there were 27,611 babies born to teenage mothers in 1982. It was noted that 20-30% of these teenagers received little or no prenatal care.

Randolph and Rivers (1985) also reported that maternal morbidity and mortality have been increasing for both blacks and whites. The fetal mortality rate also has been increasing due to lack of proper prenatal care. Randolph

and Rivers went on to say that 75% of infant deaths take place during the neonatal period (birth to 28 days). To counter the increasing rate of neonatal deaths, the State of New York instituted the Prevention of Low Birth Weight Project for women of all ages. This project is aimed at promoting early and regular use of prenatal and child care services (Randolph & Rivers, 1985).

There are other supportive programs that are suffering some setbacks. The Women, Infants, and Children (WIC) Program, and other maternal and child health services are facing drastic cuts. Such cuts will impact negatively on the number of deaths and complications during pregnancy and immediately after birth (Randolph & Rivers, 1985).

Edelman (1985) stressed that, in the midst of debate over reducing health expenditures, a critical health problem involving underfunding and underutilization still remains. Edelman emphasized that in America, poor mothers and children are experiencing a severe lack of access to basic health care services.

Teenage pregnancy among adolescents is as profound a problem in New York as elsewhere. Adolescent pregnancy is associated significantly with heightened health risks to both mother and infant. In New York, one sixth of all births to nonwhites in 1982 were born to adolescent

mothers. In 1982, there were more than 300 births to nonwhites under 15 years of age in New York. In the same year, nearly 39% of nonwhite teenage mothers under 15 years, and 30% of those between 15 and 19 years, received little or no prenatal care (Edelman, 1985).

Kleinman (1981) and Wilensky and Berki (1982) noted that access to health care services largely depends on possessing health insurance or sufficient amounts of disposable cash. For this reason, millions of poor children and women have been unable to make use of needed health care services. Approximately 66% of children living in poverty nationwide either have been completely uninsured or else have been insured for only a portion of the year. Uninsured persons are 55% less likely to receive physicians' services, and 90% less likely to receive hospital care than the insured. Uninsured women routinely travel for hours to give birth because no nearby hospital will admit them (Davis & Rowland, 1983).

Even more disturbing is the indication of a substantial increase in the incidence of home births among poor women in some areas of the country because they can neither afford doctors nor hospitals. This problem has been approaching a crisis state because of the unprecedented increase in the number of poor women, and the

structural changes in both the public and private health care financing programs that have reduced the availability of charity health care services (Edelman, 1985).

Since 1979, three million children (300 a day) have fallen into poverty (Edelman, 1985). According to Randolph and Rivers (1985), "poverty is associated with less access to health care, substandard housing, poor nutrition, and lack of health information" (p. 131).

Davis and Rowland (1983), in the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, concluded that society has an ethical obligation to ensure that all its members have access to basic health services, and that the ultimate responsibility for ensuring that the societal obligation is met lies with the government. According to Edelman (1985), policymakers at all levels are requested to heed these words. In Edelman's words. "No major reshaping of the American system for distributing health services can proceed ethically unless the ultimate goal of such an undertaking is not simply saving money but ensuring a basic equity in health care for all Americans" (1985, pp. 128-130).

Becerra (1981) stated that the seriousness of the problem of health care for children is reflected in the

widely accepted estimate that one of every three in the United States receives inadequate medical care. According to Becerra, most of these children come from low-income families whose access to preventive medical care, or to early diagnosis of medical problems, is limited.

The permanent effects of inadequate early care cannot be overemphasized. If threats to a child's development are not identified and treated, a child's growth may be adversely and profoundly affected. It has been estimated that 30 to 40 million people in this country lack access to adequate care for financial reasons (Becerra, 1981).

Minority Health Care

The Reagan Administration, since 1980, has intensified the drive to reduce public health expenditure for the elderly, the disabled, and the poor. Edelman (1985) noted that, between 1978 and 1982, per capita federal aid to the states and localities fell by 25%. The effect of this and other cutbacks were felt in discretionary health programs such as the Community and Migrant Health Programs, and Title V Maternity and Child Health Program. Medicaid, the largest public health program for children, was cut by more than \$5 billion dollars between 1981 and 1983. Nearly 700,000 children lost Medicaid eligibility as a result of the cutbacks (Rosenbaum & Weitz, 1983). Many more children

could not gain eligibility because of new restrictive program criteria (Edelman, 1980; 1985).

Poverty has struck minority children most severely. Nearly 50% of black children in America are poor. Edelman felt that poverty is associated strongly with reduced health status. Poor children have 30% more days of restricted activity, and lose 40% more school days because of illness. Neonatal mortality is 150% higher, and the infant mortality rate is 200% among the poor (Budetti, 1984).

Since 1980, there has been a nationwide erosion in the number of women receiving early prenatal health care services, and an increase in the number of women receiving little or no prenatal health care. Edelman (1985) said that this trend has been particularly noticeable among nonwhites.

According to the Surgeon General's Report (Healthy People, 1979), similar erosions have occurred in the area of preschool immunization. In 1978, 51.7% of black preschool children were not fully immunized against diphtheria, pertussis, and tetanus. In 1982, this figure had climbed to 66%. In 1978, 60.7% of black preschool children were not adequately immunized against polio. By 1982 the number had risen to 65% (Edelman, 1985).

Historically, many barriers to health care have discouraged low-income families from using health care. According to Becerra (1981), some parents do not understand the benefits of early health care for their children. Becerra believed that an individual's racial, ethnic, or national background affects the use of available health care services. In addition, if parents do not speak English, language becomes a barrier to obtaining medical help for themselves and their children. Portions of the low-income population continue to suffer from the lack of medical care because of a variety of reasons.

Many of the minority families have limited finances to spend on health care because they are in low-paying jobs. Many more of these minorities are ineligible for government programs. The health care providers to many minority groups need a good knowledge of the minority culture and background in order to gain their confidence and stimulate use of health care services (Becerra, 1981).

Holmes, Teresi, and Holmes (1983) studied the differences among Black, Hispanic, and white people's knowledge about long term health care services. According to Holmes et al. (1983), patterns of health related use of services vary between white people and the minority groups. The differences include possession of a varying degree of information and different attitudes towards services.

There have been many culturally determined attitudes that have influenced the pattern of health care use (Dutton, 1985). Some of such culturally determined attitudes which were noted were family oriented care giving, and lack of physical and psychological accessibility of services (e.g., staff who share the same language, traditions, and values; and service locations in minority neighborhoods). Holmes et al. (1983) reported that the most important predictor of minority use of health care services was the proportion of minorities on the staff in the service agency. While ethnicity of staff was of considerable importance, the key issue was language. Service providers should speak the same language as their clients. The study of utilization of health care by Laredo migrant workers was conducted by Walker (1979). The researcher found that with the elimination of financial barriers, utilization by the migrant workers did not increase as expected. Walker found that the removal of financial barriers did not initiate a drastic increase in health care utilization.

The population of migrant workers which was studied used ambulatory services about one half as much as the general United States population. The assumption that Laredo migrant workers would approach national norms of ambulatory

use when economic barriers to care were reduced or removed was not realized. Walker suggested that additional study be conducted to determine why the enrolled migrants use or do not use health care facilities.

Lief (1985), in the paper entitled "The Legal and Administrative Barriers to Health Care," stressed the minority predicament in using health care services. Lief (1985) and McBride (1985) believed that health care in this country neither was designed to address nor operated to provide equal access to minorities and the poor. Intentional barriers to health care for minorities largely have disappeared; but practices remain that effectively restrict access to health care services for minorities and the poor (Lief, 1985; Weaver & Garrett, 1978).

Many admission policies of health care institutions have the intended or unintended effects of denying minorities health care services. According to Lief (1985), some hospitals refuse to treat emergency patients who lack third-party insurance, either by "dumping" them at the door of public hospitals, or simply by turning them away. Increased travelling time to health care institutions, and the cost of health care services make it likely that poor black families defer obtaining medical care until the condition is critical.

Randolph and Rivers (1985) felt that sharp disparities persist both in health status and in the use of health services according to family income, ethnic background, parental education, and geographical location. In 1984, Secretary of Health and Human Services, Margaret Heckler, stated that, "While the health of all Americans continues to improve radically, a disparity between the majority population and the minorities still plagues us. . . . Blacks still suffer excessive medical problems that are an affront to our ideals" (Randolph & Rivers, 1985, p. 131).

An examination of relevant statistics concerning health care among black children demonstrates that the health and well-being of this population is in jeopardy. According to Randolph and Rivers (1985), strategies for dealing with this problem must emphasize preventive health care and adequate use of available health care services.

Lee and Glasser (1974) observed an unfortunate trend in maternity care. In their study, 33 mothers who had experienced both a midwife home delivery and a hospital delivery were asked to compare the experiences. Three mothers found the experiences comparable, three found the hospital delivery preferable, and 27 found home delivery preferable. Many of the reasons given by the mothers who had negative feelings about the use of hospitals were

similar. Some of them felt that hospital delivery was cold and indifferent. Some did not have the same doctors they had had during prenatal care. Many of the patients did not get the kind of personal attention they got at home. According to many of the mothers, the hospital care was hurried and impersonal. Some felt that they were compelled to undertake procedures they did not like. Some complained that the hospital nurses were nasty and did not respond to their needs. Some used the home midwives because of financial reasons. According to Lee and Glasser (1974), the unmet need in the health care delivery system has been compelling expectant mothers to use unattended home deliveries.

Slesinger and Cautley (1981) studied medical utilization patterns of Hispanic migrant farm workers in Wisconsin. Their study revealed that the migrant workers received much less preventive care than other groups in the United States. Migrant workers who used federally funded health clinics had fewer barriers to health care services than those who used private health clinics.

Slesinger and Cautley (1981) and Berki and Ashcraft (1979) emphasized that the improvement of access of health care services and facilities definitely improved health care use. Clinic hours and the presence of

Spanish-speaking paraprofessionals encouraged the use of health care services by the migrant workers. Night and weekend clinic hours improved health care use by the migrant workers. The researchers felt that the migrant workers must be involved in health care planning if they are to have their needs adequately met. Slesinger and Cautley (1981) suggested that the health care facilities serving migrant workers must have more Spanish speaking staff during the planting and harvesting seasons.

Until recently, studies of health care utilization and economic status have usually indicated that quality health care went to those who could afford it (Warnecke, Graham, Mosher, Montgomery, & Schotz, 1975). The services offered by federal, state, and municipal agencies have made a complete range of preventive care available to most people. The health insurance benefits have expanded access greatly to private medical services.

Despite increased availability of public and private health care programs, large numbers of those in need do not use such health care services (Orr, Miller, & James, 1984; Warnecke et al., 1975). Social systems in the community and local beliefs and values can affect health care use. Social isolation and alienation separate the community from the public health bureaucracy and the health

providers. This may result in underutilization of needed health care services. There is a need for each community to initiate programs that will be concerned primarily with informing the members of the community of the preventive and curative services available, and will motivate them to use these services (Warneke et al., 1975). Such programs will be helpful in exposing to the city health department some of the unmet health and social needs of the community and will help to improve the communication between the community and the public health professionals. Warnecke et al. (1975) found that personal contact with the health professional was positively associated with greater use of public health services.

Factors Affecting Health Care Use

Berki and Kobashigawa (1978) studied the roles of education and income as determinants for utilization of ambulatory services in the United States. This topic was studied by the application of path analysis to a sample interviewed in the 1970 National Health Interview Survey. The method permitted the identification of both the direct and indirect effect of some variables on utilization of health care. They found that the relationships between income, education, and health care use were clearly complex. Income was a major determinant of health care use.

Bice, Eichorn, and Fox (1972), in a careful multivariate analysis, have shown that, while the presence of chronic conditions appeared to be the second best predictor of utilization for the poor, net price was the best. Based on the study of socioeconomic status and use of physician services, the investigators felt that education was a major utilization determinant for health care services. High levels of need were associated with lower education. Education was associated with a high tendency to use ambulatory services.

Luft, Hershey, and Morrell (1976) studied the factors affecting the use of physician services in Livingston, California. The 299 families studied were all from Livingston. The investigators designed a model of utilization study in which supply and demand of health care services was examined. The investigators also looked at utilization behavior in a rural county, utilization in a setting with a fixed supply of physicians, preventive behavior, and travel time. Observed utilization was a function not only of the services demanded by the consumers, but also of the services supplied by the providers. Wants were a function of perceived health status or symptoms as well as a function of knowledge of health care options, attitudes, and cultural expectations.

The researchers found that education had a highly significant effect on regular checkups (Luft, Hershey, & Morrell, 1976).

Belloc and Breslow (1972) studied the relationship between physical health status and health practices among the residents of Alameda County, California. This 1965 study was based on a probability-based sample of residents of Alameda County, California. Physical health was measured along a spectrum ranging from a low level with severe disability to a high level with absence of chronic conditions or symptoms. The relationship between common health practices, such as hours of sleep, regularity of meals, physical activities, smoking, and drinking, were studied. Belloc and Breslow showed that good practices were associated with positive health.

CHAPTER III

METHODOLOGY

The purpose of this study was to determine patterns of health care utilization, factors considered in the choice of physicians and other health care services, episodes with disease experiences, and health insurance experiences. This study also was designed to determine immunization records, recognition of health needs, sources of health information, and some demographic characteristics such as levels of education in Denton, Texas.

This research was conducted in Denton, Texas, from November 1985 to July 1986. During the period from November 1985 to January 1986, the Patterns of Health Care Utilization Questionnaire was designed by the researcher and tested for use in this study.

This chapter describes the methodology employed in the development of this study and is organized as follows:

(1) Preliminary Procedures, (2) Selection of the Instruments, (3) The Design and the Establishment of the Patterns of Health Care Utilization Questionnaire, (4) Selection of the Site, (5) Selection of the Participants, (6) Collection of Data, (7) Treatment of

Data, and (8) Procedures Followed in the Preparation of the Final Report.

Preliminary Procedures

At the beginning of this study, accessible literature pertaining to health care utilization was collected and studied. Dr. Cripe, Director of the Denton City and Denton County Health Department, was contacted about the feasibility of conducting this study, and he gave his approval and his suggestions. The need for data on patterns of health care utilization in Denton was addressed in a series of interviews with the Director of the Health Department.

Based on a comprehensive review of the literature, appropriate criteria were established for:

1. The selection of the instruments to be used in the study.
2. The selection of site.
3. The selection of the participants to be tested.
4. The administration of the instrument.

Personal interviews were conducted with some pastors of church groups in Denton to determine the feasibility of the study. The churches, because of their combined audiences, would supply an adequate number of participants at the required time for the study. There were positive

responses from most of the pastors interviewed. The pastors were assured that the information obtained would be strictly confidential, and that participants' names would not be included. An introductory letter was sent to other pastors to inform them of the study.

Selection of the Instrument

The criteria for the selection of the instrument to measure the patterns of health care utilization were as follows:

1. The instrument must be concerned primarily with patterns of health care utilization.
2. The instrument must be considered adequate by the researcher with respect to readability.
3. The instrument must be considered adequate by the researcher with respect to validity and reliability.
4. The instrument must not take participants more than thirty minutes to complete.

After a detailed review of literature, no current and accessible instrument was found that would meet the above criteria. The researcher decided to design an instrument that would be adequate for this study.

The Design and the Establishment of the Patterns of Health Care Utilization Questionnaire

Initially, a list of 150 questions designed to ascertain patterns of health care utilization was compiled.

This draft was given to thirty volunteers from Texas Woman's University, Denton, and Animed Laboratory, Dallas, who were asked to indicate their feelings about the instrument and to make suggestions in the form of comments about the clarity of the instrument. This method was used to test the readability of the instrument. The participants' educational experiences ranged from the ninth grade to postgraduate studies.

As a result of this phase of the study, 21 questions were removed from the list. Other changes were made where necessary to eliminate any ambiguities.

Content validity of the instrument was determined with the help of judges and by means of consultation with other specialists in the field. A total of ten doctoral students in the health education and health care administration programs at Texas Woman's University, Denton; North Texas State University, Denton; and The University of Oklahoma Health Science Center, Oklahoma City, helped in the determination of the validity of the instrument. The aims of the research study were outlined for these judges. The revised list of 129 questions was given to each of them. They were asked individually to select 100 from the 129 questions for the instrument.

The judges agreed on 89 questions. The first 69 of these questions selected by the judges were used by the researcher because of the time factor emphasized in the criteria. The last 20 questions removed dealt with health knowledge which was not a primary emphasis in this study. These 69 questions became the Pattern of Health Care Utilization Questionnaire (see Appendix A).

Reliability was determined by the test-retest method. Twenty participants were tested, and then were retested after one month. Individual responses to each item were compared in the two testings. The individual percentage of agreement was calculated by dividing the number of matched responses by the total number of responses in the test. The reliability percentage of agreement was calculated to be 0.91 (see Appendix B).

The Selection of Sites

The criteria established for the selection of the sites for this study were:

1. The sites must be in Denton.
2. There must be no expense to the researcher for the use of the sites.
3. The pastors must be willing to give permission for the study.
4. The sites must have at least 300 members.

5. The sites must have a collective audience.

6. The participants must be able to choose to participate in the study.

After establishing the criteria for the selection of the sites, the researcher randomly selected the church groups that participated in the study (see Appendix C). Twenty church groups were selected by the simple random sampling method. An introductory letter and a consent letter were sent to the pastor of each of the selected church groups (see Appendix D). Personal phone calls were made to the pastors to arrange interview times. Reminder letters were sent to the pastors before the scheduled times of interviews with the researcher.

During the interviews, the purpose and design of the study was explained. A copy of the Patterns of Health Care Utilization Questionnaire was given to each of the pastors in response to their request to know the contents of the questionnaire.

One week after the interviews, a consent letter was sent to the pastors requesting them to indicate whether or not their churches would participate in the study. Seventeen of the 20 pastors indicated a willingness to participate.

Selection of Participants

The criteria for the selection of participants for the study were as follows:

1. Participants must be willing to participate in the study.
2. Participants must be 15 years of age or older.
3. Participants must be willing to participate without compensation.
4. Participants must be present on the scheduled day of administration of the questionnaire.

Collection of the Data

The criteria for the collection of data for this study were as follows:

1. The pastors must administer the questionnaire on a scheduled date.
2. The participants must complete the questionnaire in the meeting hall unless some special consideration was given.
3. Participants who could not complete the questionnaire in the meeting hall because of other engagements would be allowed to take it home and return the questionnaire to the pastor within seven days.
4. The completed questionnaire must be returned to the pastor. Most of the pastors interviewed discussed the

study with the members of their church. Fifty copies of the Patterns of Health Care Utilization Questionnaire were given to each of the pastors. The instructions for each section and for specific questions were part of the actual questionnaire.

The questionnaire was administered to the participants after the church service on June 1, 1986. Most of the participants could not complete the questionnaire in the meeting hall because of other previous engagements. Those who took the questionnaire home were asked to return it to their pastors on June 8, 1986. There were several engagements in the church groups that day, so less than 10% of the participants completed the questionnaire in the meeting halls as scheduled.

The researcher met with the pastors at the end of the evening meeting on June 8, 1986 and collected the completed questionnaires. Repeat visits were made to each of the pastors after one week, to collect any questionnaires that were turned in late.

Treatment of the Data

Information from the questionnaire was analyzed, organized, and presented in appropriate tables. Percentages, frequencies, chi-squares, and ANOVAs were used for statistical analyses (see Appendix E).

Procedure Followed in Preparation
of the Final Report

A final written report of the study was submitted to members of the dissertation committee for suggestions and corrections. The report was revised in accordance with the recommendations made, and was resubmitted to the members of the dissertation committee for final approval.

CHAPTER IV

PRESENTATION OF THE FINDINGS

The purpose of this chapter is to present a narrative and tabular form of the data collected in this study. The purpose of the research study was to determine the health care utilization patterns; consideration of factors in the choice of physicians; episodes with disease experiences; immunization records; and recognition of health needs among the participants in Denton, Texas. This study also was designed to determine sources of health information and sociodemographic characteristics such as age, sex, race, and levels of education in Denton, Texas.

The research study involved 307 participants from 17 church groups in Denton, Texas. The findings of this study were based upon data collected from these participants who were members of the 17 selected church groups in Denton, Texas during June-July 1986. The Patterns of Health Care Utilization Questionnaires forms were completed by the participants from the church groups. The questionnaire provided the participants with choices concerning patterns of health care use.

The data were treated statistically by chi-squares, frequencies, percentages, and ANOVA. The .01 level of

significance was used to determine the degree of significance. The findings of the study appear under the following headings: (1) Race and Frequency of Use of Doctors' Offices or Clinics, (2) Level of Education and Frequency of Use of Doctors' Offices or Clinics, (3) Family Income and Use of Doctors' Offices or Clinics, (4) Race and Overnight Hospitalization, (5) Regular Physical Examination and Chronic Problems, (6) Health Insurance and Use of Health Care Services, (7) Transportation and Use of Health Care Services, (8) Waiting Time and Use of Health Care Services, (9) Age and Use of Health Care Services, (10) Sex and Use of Health Care Services, and (11) Other Findings.

Race and Frequency of Use of Doctors'
Offices or Clinics

Hypothesis One: There is no relationship between race and the frequency of use of doctors' offices or clinics.

Table 1 shows the summary of the statistical analysis of variance between race and number of visits. The F ratio $(4,302) = 0.31$ at .01 level of significance was not statistically significant. Therefore, the number of visits did not differ among the racial groups represented in this study. Based on this finding, the researcher accepted the first hypothesis, that there was no relationship between

race and the frequency of use of doctors' offices or clinics.

Table 1

Analysis of Variance on Race and Number of Visits among the Participants

Source	<u>df</u>	<u>ss</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	4	87.36	21.84	0.31	> .01
Within groups	302	21455.05	71.04		
Total	306	21542.41	92.88		

Note. $F(.99, 4, 302) = 3.32$.

Level of Education and Frequency of Use
of Doctors' Offices or Clinics

Hypothesis Two: There is no relationship between level of education and the frequency of use of doctors' offices or clinics.

Table 2 shows the analysis of variance between the level of education and the number of visits to the doctors' offices or clinics.. The F ratio of 1.63 at .01 level of significance was not statistically significant. The researcher accepted the second hypothesis that there was no relationship between the level of education and the frequency of use of doctors' offices or clinics.

Table 2

Summary Table of Level of Education and Number of Visits

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	454.98	4	113.75	1.63	> .01
Within groups	21087.43	302	69.83		
Total	21542.41	306	183.58		

Note. $F(.99, 4, 302) = 3.32.$

Family Income and Use of Doctors' Offices
or Clinics

Hypothesis Three: There is no relationship between family income and use of doctors' offices or clinics.

Income in form of dollars are essential in the payment of health care costs. Table 3 shows the summary of family income and number of visits to the doctors' offices or clinics.

Table 3

Summary Table on Family Income and Number of Visits

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	531.34	7	75.91	1.08	> .01
Within groups	21011.06	299	70.27		
Total	21542.40	306	146.18		

Note. $F(.99, 7, 299) = 2.64$

The F ratio of 1.08 at .01 level of significance was not statistically significant. The researcher accepted the third hypothesis that there was no relationship between family income and use of the doctors' offices or clinics.

Race and Overnight Hospitalization

Hypothesis Four: There is no relationship between race and overnight hospitalization.

One hundred and eighty-nine of the 307 participants reported no overnight hospitalization since January 1983. The number of overnight hospitalizations ranged from 0 to 31 times (see Appendix D). Table 4 shows the analysis of variance between race and overnight hospitalization.

Table 4

Analysis of Variance Between Race and Overnight Hospitalization

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	915.40	4	228.85	0.41	> .01
Within groups	169156.65	302	560.12		
Total	170072.30	306	788.97		

Note. $F(.99, 4, 302) = 3.32$.

The F ratio of 0.41 at .01 level of significance was not statistically significant. Based on the result of the

analysis of variance between race and overnight hospitalization, the fourth hypothesis was accepted that there was no significant relationship between race and overnight hospitalization among the participants in this study.

Regular Physical Examination and Chronic Health Problems

Hypothesis Five: There is no relationship between having regular physical examination and chronic health problems.

The annual physical examination was one indicator of use of doctors and clinics. A consistent annual physical examination would have a long term positive effect on the health status of the participants.

Forty-six of the 307 participants reported that they had or have had problems with high blood pressure. A majority of the participants who needed some improvement in their present health condition wished they could improve their weight and blood pressure. Table 5 shows the analysis of variance between annual physical examination and high blood pressure among the participants.

The F ratio of 4.24 at the .01 level of significance was not statistically significant. Based on this finding, the researcher accepted the fifth hypothesis that there was no relationship between having regular physical examination and chronic health problems.

Table 5

Analysis of Variance Between Annual Physical Examination
and High Blood Pressure

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	1.41	2	0.70	4.24	> .01
Within groups	50.37	304	0.17		
Total	71.80	306	0.87		

Note. $F(.99, 2, 304) = 4.64$.

Health Insurance and Use of Health Care Services

Hypothesis Six: Whether or not a person has insurance is not related to the use of health care services.

With increasing costs of medical care, the importance of medical insurance cannot be overemphasized. Table 6 shows an analysis of variance between the ways of payment of health care costs and the number of visits to the doctors' offices and clinics.

The F ratio of 0.62 at .01 level of significance was not statistically significant. The researcher accepted the sixth hypothesis that whether or not a person had insurance was not related to the use of health care services.

Table 6

Analysis of Variance on Ways of Payment and Number of Visits

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	131.56	3	43.85	0.62	> .01
Within groups	21410.84	303	70.66		
Total	21542.40	306	114.51		

Note. $F(.99, 3, 303) = 3.78$.

Transportation and Use of Health Care Services

Hypothesis Seven: Presence of available transportation is not related to the use of health care services.

The means of getting to the doctors' offices or clinics are important if health care need is to be supplied adequately. Table 7 reflects the analysis of variance between transportation as a factor and the number of visits to the doctors' offices or clinics.

The F ratio of 1.20 at .01 level of significance was not statistically significant. Based on this finding, the researcher accepted the seventh hypothesis that the presence or absence of available transportation was unrelated to the use of health care services among the participants.

Table 7

Analysis of Variance Between Transportation as a Factor and
the Number of Visits among the Participants

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	337.89	4	84.47	1.20	> .01
Within groups	21204.51	302	70.20		
Total	21542.40	306	154.67		

Note. $F(.99, 4, 302) = 3.32$.

Waiting Time and Use of Health Care Services

Hypothesis Eight: Past experiences of waiting time do not affect the use of doctors' offices or clinics.

Past experiences of waiting in the doctors' offices or clinics may be responsible for unnecessary delay in seeking health care services. Table 8 reflects the analysis of variance between waiting time and the number of visits to the doctors' offices or clinics.

The F ratio of 1.45 at .01 level of significance was not statistically significant. The researcher accepted the eighth hypothesis that past experiences of waiting time in the doctors' offices did not affect the use of health care services among the participants of this study.

Table 8

Analysis of Variance Between Waiting Time and the Number of Visits

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	404.99	4	101.25	1.45	> .01
Within groups	21137.41	302	69.99		
Total	21542.40	306	171.24		

Note. $F(.99, 4, 302) = 3.32$.

Age and Health Care Use

Hypothesis Nine. There is no relationship between age and the frequency of use of doctors' offices or clinics.

Table 9 shows the one way analysis of variance between age and number of visits to the doctors' offices or clinics among the participants. The F ratio of 3.34 at .01 level of significance was statistically significant. The researcher rejected the ninth hypothesis that there was no relationship between age and the use of doctors' offices or clinics.

Table 9

One-Way Analysis of Variance Between Age and Number of Visits

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Equality of cells means	138.37	6	224.72	3.34	< .01
Error	20194.03	300	67.31		
Total	21542.39	306	292.03		

Note. $F(.99, 6, 300) = 2.80$.

Sex and Use of Health Care Services

Hypothesis Ten: There is no relationship between sex and use of doctors' offices or clinics.

There were 146 females and 161 males who participated in this study. Table 10 shows the analysis of variance between sex and number of visits to the doctors' offices or clinics.

The F ratio of 1.53 at .01 level of significance was not statistically significant. The researcher accepted the tenth hypothesis, that there was no relationship between sex and the use of doctors' offices or clinics.

Table 10

Analysis of Variance Between Sex and Number of Visits

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	107.24	1	107.20	1.53	> .01
Within groups	21435.20	305	70.28		
Total	21542.42	306	177.48		

Note. $F(.99,1,305) = 6.63$.

Table 11 represents an outline of the age breakdown among participants of this research study. Table 11 also shows the number in each age range, and the estimated mean of the number of visits to the doctors' offices or clinics.

Table 11

Age Breakdown and Estimated Mean of Number of Visits

Age Range (Years)	Frequency Distribution and Means	
	Frequency	Mean Number of Visits
15-25	43	2.72
26-35	87	4.70
36-45	64	9.00
46-55	43	4.83
56-65	39	3.76
66-75	23	3.69
Over 75	8	4.75
Total	307	4.78

The age range for the participants was 68 (15-83) years; the mean age was 42 years; and the median age was 38 years. The lowest mean number of visits of 2.72 occurred among the 15-25 age range. The highest mean number of visits of 9.00 was recorded among the 36-45 age range.

The Newman-Keuls' posttest was used to compare the means for the confirmation of significance in the analyses of variances in this study (Pagano, 1981, pp. 383-392). Table 12 shows the Newman-Keuls' posttest on the results of the analysis of variance between age and the number of visits to the doctors' offices or clinics. The null hypothesis was rejected because $Q_{\text{obt}} 3.94 > Q_{\text{crit}} 3.64$. There was a significant difference between means 1 and 3. Table 12

Newman-Keuls' Posttest

Means Compared		Q obt	
Rank Ordered		Calculated	Q Critical
1.	2.72	3.94	3.64
6.	3.69	3.34	4.12
5.	3.76	3.30	4.40
2.	4.70	2.70	
7.	4.75	2.60	
4.	4.83	1.33	
3.	9.00		

Note. df = 300, alpha = .01, r = 7 (2,3,4,5,6).

Other Findings

Table 13 shows the racial distribution of the participants in this study. One hundred and ninety-five of the 307 participants were Whites while 92 of the 307 participants were Blacks.

Table 13

Racial Distribution of the Participants

Race	Distribution	
	Frequencies	Percentages
White	195	63.5
Black	92	30.0
Hispanic	10	3.3
Asian	5	1.6
American Indian	5	1.6
Total	307	100.0

Table 14 shows the participants' race and checkup experiences. Checkup experiences differed significantly between the racial groups that participated. Forty-three of the 92 Blacks and 131 of the 195 Whites reported regular checkup experiences.

Table 14

Participants' Race and Checkup Experiences

Checkups	Race					Total
	White	Black	Hispanic	Asian	Indian	
Yes	131 (67%)	43 (47%)	2 (20%)	2 (40%)	1 (20%)	179
No	63 (32%)	48 (52%)	7 (70%)	3 (60%)	4 (80%)	125
No Response	1 (1%)	1 (1%)	1 (10%)	0 --	0 --	3
Total	195	92	10	5	5	307

Note. $\chi^2 = 28.48$; $df = 8$; Significant--needed $\chi^2_{(.99,8)} = 20.09$.

Table 15 shows the racial satisfaction with medical doctors. The black participants were not as satisfied with their medical doctors as were the white participants. Eighty-six of the 195 Whites who participated were very satisfied while 72 of them were satisfied with their doctors. The overall satisfaction rate was very high. The four American Indian participants were not satisfied with their doctors.

Table 16 is a cross-tabulation of race and the degree of satisfaction of the participants with the clinics. Treatment given to individuals ranked very high in their consideration for health care use. Table 17 shows the frequency of participants who considered treatment very important in their choice of health care services. In this study, 255 of the 307 participants considered treatment by the doctors as a very important aspect of their health care use. Only 6 of the 307 considered treatment by the doctors as unimportant. Five of the 307 participants did not indicate whether treatment was important to their use of their doctors.

The way the doctor acts was an important part of the use of the doctors' services. According to the findings, 218 of the 307 participants considered how the doctor acts as a very important part of their use of the doctors'

Table 15

Racial Satisfaction with Medical Doctors (M.D.)

Satisfaction	Race				
	White	Black	Hispanic	Asian	Indian
Very satisfied	86 (44%)	29 (31%)	0 --	1 (20%)	0 --
Satisfied	72 (37%)	31 (34%)	4 (40%)	3 (60%)	0 --
Somewhat satisfied	24 (12%)	16 (17%)	1 (10%)	0 --	0 --
Somewhat dissatisfied	5 (3%)	0 --	0 --	0 --	0 --
Dissatisfied	3 (1%)	9 (10%)	2 (20%)	1 (20%)	1 (20%)
Very dissatisfied	5 (3%)	7 (8%)	3 (30%)	0 --	4 (80%)
Total	195	92	10	5	5

Note. $\chi^2 = 92.57$; $df = 20$; Significant--needed $\chi^2 (.99, 20) = 37.57$.

Table 16

Racial Satisfaction with Nurses

Satisfaction	Race				
	White	Black	Hispanic	Asian	Indian
Very satisfied	43 (22%)	9 (10%)	0 --	0 --	2 (40%)
Satisfied	69 (35%)	25 (27%)	0 --	2 (40%)	3 (60%)
Somewhat satisfied	29 (15%)	26 (28%)	6 (60%)	0 --	0 --
Somewhat dissatisfied	4 (2%)	1 (1%)	0 --	0 --	0 --
Dissatisfied	2 (1%)	0 --	1 (10%)	0 --	0 --
Very dissatisfied	0 --	1 (1%)	0 --	0 --	0 --
No Response*	48 (25%)	30 (33%)	3 (30%)	3 (60%)	0 --
Total	195	92	10	5	5

Note. $\chi^2 = 48.28$; $df = 24$; Significant--needed $\chi^2 (.99, 24) = 42.98$.

*This group includes those who did not indicate their degree of satisfaction and those who had not used nurses before.

Table 17

Race and Importance of Treatment by the Doctors

Importance of Treatment	Race			
	White	Black	Hispanic	Asian
Very important	160 (82%)	77 (84%)	10 (100%)	4 (80%)
Somewhat important	25 (13%)	10 (11%)	0 --	1 (20%)
Not very important	2 (1%)	3 (3%)	0 --	0 --
Unimportant	5 (3%)	1 (1%)	0 --	0 --
No Response**	3 (1%)	1 (1%)	0 --	1 (20%)
Total	195	92	10	5

Note. $\chi^2 = 16.85$; $df = 16$; Not significant--needed $\chi^2 (.99, 16) = 32.00$.

**Participants in this group did not indicate any category.

services. Sixty-two of the participants considered the doctors' actions as somewhat important while 9 considered the doctors' actions as not very important. Only 10 of the participants considered the doctors' actions as unimportant. Eight did not indicate the degree of importance they attached to the doctors' actions.

In this study, 166 of the 307 participants considered the character of the doctors as a very important aspect of their use of the doctors' services. Ninety-one of the 307 participants considered the doctors' character as somewhat important while 35 participants considered the doctors' character as not very important. Only 10 considered the doctors' character as unimportant while 5 of the participants did not indicate their choice.

The frequency of use of health care services such as the doctors' offices and clinics was ascertained with such variables as regular checkups, annual physical examinations, and the number of visits to the doctors' offices or clinics in the last two years. The number of visits to the doctors' offices or clinics in the last two years ranged from 0 to 50 times. Most of the participants visited their doctors between 0 to 5 times (see Appendix F for data).

Table 18 shows the frequencies and percentages of the participants who reported that they had family

doctors and those who reported that they did not have family doctors. Two hundred and sixty-two of the 307 participants had family doctors. Only 45 of the 307 participants did not have family doctors. Approximately 75% of the participants had doctors of medicine as their family doctors, 6% had chiropractors as their family doctors, while 5% had doctors of osteopathic medicine as their family doctors.

Table 18

Distribution of Participants Reporting Having Family Doctor and Those Reporting Having No Family Doctor

Responses	Distribution of Participants	
	Frequencies	Percentages
Yes--Doctor	262	85.3
No--Doctor	45	14.7
Total	307	100.0

Table 19 shows the frequency and the percentages of the participants and the kinds of medical personnel utilized. Most of the participants utilized a medical doctor (M.D.) as their primary health provider. About 15% either did not have doctors or utilized other medical personnel for specific reasons.

Table 19

Distribution of Participants and Kinds of Medical Personnel

Medical Personnel	Distribution	
	Frequencies	Percentages
Chiropractor	17	5.5
Osteopath	16	5.2
Doctor of Medicine	239	77.8
No Response	35	11.5
Total	307	100.0

Table 20 shows the frequency distribution of participants according to their level of education. The participants' educational experiences ranged from an 8th grade education to postgraduate work. The majority of the participants were high school graduates or more.

Table 20

Distribution of the Participants According to Their Levels of Education

Levels of Education	Distribution	
	Frequencies	Percentages
8th grade or less	28	9.1
9-11th grade	28	9.1
High school graduate	117	38.1
College graduate	81	26.4
Postgraduate	53	17.3
Total	307	100.0

Table 21 shows the cross-tabulation between level of education and checkup experiences among the participants.

There is a statistically significant relationship between level of education and checkup experiences among the participants. Seventy-seven percent of the postgraduate participants had checkup experiences.

Table 21

Level of Education and Checkup Experiences

Level of Education	Checkup Experiences		
	Yes	No	No Response
8th grade or less	9 (32%)	17 (61%)	2 (7%)
9-11th grade	15 (54%)	13 (46%)	--
High school graduate	67 (57%)	50 (43%)	--
College graduate	47 (58%)	33 (41%)	1 (1%)
Postgraduate	41 (77%)	12 (23%)	--
Total	179	125	3

Note. $\chi^2 = 26.94$; $df = 8$; Significant--needed $\chi^2_{(.99,8)} = 20.09$.

Table 22 shows the cross-tabulation between race and level of education. Based on the findings, the levels of education differed significantly among the racial groups that participated.

Table 23 shows the level of education and the type of medical personnel or family doctors the participants use. A chi-square ratio of 32.00 was needed for significance

Table 22

Race and Level of Education

Level of Education	Race				
	White	Black	Hispanic	Asian	Indian
8th grade or less	10 (5%)	14 (15%)	0 --	1 (20%)	3 (60%)
9-11 grade	18 (9%)	8 (9%)	1 (10%)	0 --	1 (20%)
High school graduate	79 (41%)	33 (36%)	5 (50%)	0 --	0 --
College graduate	46 (24%)	27 (29%)	4 (40%)	4 (80%)	0 --
Postgraduate	42 (21%)	10 (11%)	0 --	0 --	1 (20%)
Total	195	92	10	5	5

Note. $\chi^2 = 48.84$; $df = 16$; Significant--needed $\chi^2_{(.99,16)} = 31.99$.

Table 23

Education and Type of Medical Personnel or Family Doctor

Level of Education	Types of Medical Personnel				No Response*
	Chiropractor	Osteopath	Doctor of Medicine		
8th grade or less	1 (4%)	0 --	21 (75%)	6 (21%)	
9-11th grade	1 (4%)	4 (14%)	21 (75%)	2 (7%)	
High school graduate	6 (5%)	5 (4%)	89 (76%)	17 (15%)	
College graduate	5 (6%)	6 (7%)	55 (68%)	15 (18%)	
Postgraduate	4 (8%)	1 (2%)	45 (85%)	3 (5%)	
Total	17	16	231	43	

Note. $\chi^2 = 18.76$; $df = 16$; Not significant--needed $\chi^2 (.99, 16) = 32.00$.

*Some participants in this group did not indicate the types of medical personnel utilized while others did not have any doctors.

at .01 level and the result showed 18.76. There was no significant relationship between level of education and types of medical personnel used.

Table 24 shows participants' level of education and the sources of health information. From the result of the chi-square test on the data from Table 24, level of education did not significantly affect sources of health information among the participants. The participants depended mostly on the doctors and books for information concerning their health and sickness. One hundred and seventy-nine of the 307 participants sought health information from medical doctors while 75 of them used books as their major source of health information. Only 23 of the participants got their health information from radio and television. Eleven percent of the college graduates got their health information from radio and television while only 6% got their health information from newspapers. As many as 43% of the college graduates in this study got their health information from doctors while 37% of them depended on books for health information. Sixty-eight percent of the postgraduates got their health information from doctors while 19% of them got their health information from books. Only 4% of the postgraduates got their health information from radio and television.

Table 24

Participants' Education and Sources of Health Information

Level of Education	Sources of Health Information				
	Doctors	Books	Radio/TV	Newspaper	Other
8th grade or less	16 (57%)	10 (36%)	1 (4%)	1 (4%)	0 --
9-11th grade	16 (57%)	6 (21%)	1 (4%)	3 (11%)	2 (7%)
High school graduate	76 (65%)	19 (16%)	10 (8%)	7 (12%)	5 (4%)
College graduate	35 (43%)	30 (37%)	9 (11%)	2 (6%)	5 (4%)
Postgraduate	36 (68%)	10 (19%)	2 (4%)	0 --	5 (9%)
Total	179	75	23	13	17

Note. $\chi^2 = 29.36$; $df = 16$; Not significant--needed $\chi^2 (.99, 16) = 32.00$.

Table 25 shows race and family income among the participants in this study. A chi-square analysis of the data from Table 25 indicated a statistically significant relationship between race and family income among the participants of this study.

An important aspect of health care use is the ability of the health care consumer to seek and obtain second opinions whenever necessary. The participants were asked whether they seek a second opinion when surgery is advised by their doctors. Table 26 shows income in relation to whether or not a second opinion would be sought if surgery is advised by the doctor.

The result of the chi-square analysis of the data in Table 26 indicated that there was a statistically significant relationship between family income and second opinion when surgery was advised by the doctor. The chances for a participant to seek a second opinion when surgery was advised increased with increases in family income.

Table 27 provides a summary table on income and overnight hospitalization. The F ratio of 1.10 at .01 is not statistically significant. Having a large or a small annual income did not determine the number of overnight hospitalizations among the participants.

Table 25

Race and Distribution of Family Income

Family Income (\$)	Racial Distribution				
	White	Black	Hispanic	Asian	Indian
0-7499	14 (7%)	14 (15%)	1 (10%)	4 (80%)	0 --
7500-9999	6 (3%)	13 (14%)	0 --	0 --	1 (20%)
10000-14999	31 (16%)	24 (26%)	0 --	0 --	0 --
15000-24999	41 (21%)	12 (13%)	5 (50%)	0 --	0 --
25000-34999	38 (19%)	20 (22%)	3 (30%)	1 (10%)	4 (80%)
35000-49999	44 (23%)	3 (3%)	0 --	0 --	0 --
50000-74999	17 (9%)	6 (7%)	1 (10%)	0 --	0 --
75000 & over	4 (2%)	0 --	0 --	0 --	0 --
Total	195	92	10	5	5

Note. $\chi^2 = 88.27$; $df = 28$; Significant--needed $\chi^2 (.99, 28) = 48.28$.

Table 26

Income and Second Opinion if Surgery is Advised by Doctor

Participants' Option for Second Opinion			
Family Income (\$)	Yes	No	No Response*
0-7499	22 (67%)	5 (15%)	6 (18%)
7500-9999	6 (30%)	10 (50%)	4 (20%)
10000-14999	28 (51%)	16 (29%)	11 (20%)
15000-24999	42 (72%)	14 (24%)	2 (3%)
25000-34999	43 (65%)	14 (21%)	9 (14%)
35000-49999	26 (55%)	10 (21%)	11 (23%)
50000-74999	20 (83%)	2 (8%)	2 (8%)
75000 & over	4(100%)	0 --	0 --
Total	191	71	45

Note. $\chi^2 = 30.48$; $df = 14$; Significant--needed $\chi^2 (.99,14) = 29.14$.

Table 27

Summary Table on Income and Overnight Hospitalization

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	4283.81	7	611.97	1.10	> .01
Within groups	165788.23	299	554.48		
Total	170072.04	306	1166.45		

Note. $F(.99, 7, 299) = 2.64.$

Table 28 shows the frequency of the participants responding to questions concerning regular checkups. About 41% of the participants did not have regular checkup experiences. Approximately 58% of the participants reported that they had regular checkup experiences.

Table 28

Participants' Response to Questions Concerning Regular Checkups

Response to Checkups	Distribution of Participants	
	Frequency	Percentages
Yes	179	58.3
No	125	40.7
No Response	3	1.0
Total	307	100.0

Table 29 shows the distribution of participants who responded to the questions concerning annual physical examination. Approximately 44% of the participants reported having regular annual examinations.

Table 29

Participants' Response to Questions Concerning Annual Physical Examination

Annual Physical	Distribution of Participants	
	Frequency	Percentages
Yes	134	43.6
No	172	55.0
No Response	1	1.4
Total	307	100.0

The participants rated their health status under these categories: (1) Excellent, (2) Good, (3) Fair, and (4) Poor. Table 30 shows the health rating of the participants. Twenty-seven percent of the participants rated themselves to be in excellent health while about 55% rated themselves to be in good health. Only about 4% of them rated their health as poor. Poor health status can affect the number of visits to the doctors and clinics.

Table 30

Participants' Self-Rating of Their Health Status

Rating	Distribution		
	Frequency	Mean	Percentage
Excellent	83	3.3	27.0
Good	170	4.6	55.4
Fair	41	10.3	13.4
Poor	13	6.9	4.2
Total	307	5.1	100.0

Table 31 shows the analysis of variance between self-rated health status and the number of visits. The F ratio of 7.35 was statistically significant. The participants who rated themselves in excellent health had fewer visits to their doctors or clinics.

Table 31

Analysis of Variance Between Self-Rated Health Status and Number of Visits

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	1461.99	3	487.33	7.35	< .01
Within groups	2008.41	303	66.27		
Total	3470.40	306	553.60		

Note. $F(.33, 3, 303) = 3.78$.

The number of visits to the doctors' offices or clinics differed among the various self-rated categories. Participants who rated themselves in fair and poor health conditions visited their doctors' offices or clinics more frequently. Table 32 shows the Newman-Keuls' posttest analysis on the means of the self-rated health status.

Table 32

Newman-Keuls' Posttest

Means Compared			
Rank	Ordered	Q obt Calculated	Q Critical
1.	3.3	5.09	3.64
2.	4.6	4.09	4.12
4.	6.9	1.01	4.40
3.	10.3	2.63	4.60
		2.46	

Note. Q obt 5.09 > Q crit (3.64,4.12,4.40,4.60).

df = 303, alpha = .01, r = 4(2,3,4)

Table 33 shows the frequency distribution of ways of paying health care costs among the participants. Seven of the participants did not indicate in the questionnaire the ways of paying their health care expenses. Approximately 69% of the participants had personal or group insurance for their medical and health care costs. About 23% reported paying their health care costs in cash.

Table 33

Frequency Distribution of Participants' Ways of Paying
Health Care Costs

Ways of Payment	Distribution	
	Frequency	Percentages
Insurance	212	69.1
Cash	70	22.8
Medicare	18	5.9
No Response	7	2.2
Total	307	100.0

Table 34 represents a cross-tabulation of ways of paying health care costs among the racial groups. Seventy-two percent of the white participants and 67% of the Black participants paid their health care cost by insurance.

Table 34

Participants' Ways of Paying Health Care Costs by Race

Ways of Payment	Race				
	White	Black	Hispanic	Asian	Indian
Insurance	140 (72%)	62 (67%)	4 (40%)	3 (60%)	3 (60%)
Cash	41 (21%)	22 (24%)	5 (50%)	0 --	2 (40%)
Medicare	10 (5%)	6 (7%)	0 --	2 (40%)	0 --
Other	4 (2%)	2 (2%)	1 (10%)	0 --	0 --
Total	195	92	10	5	5

Note. $\chi^2 = 20.89$; $df = 12$; Not significant--needed

$\chi^2_{(.99,12)} = 26.21$.

The ways available to participants for the payment of health care costs did not differ significantly from race to race. According to the findings, 140 of the 195 Whites and 62 of the 92 Blacks paid their health care costs through their health insurance. Five of the 10 Hispanics who participated paid their health care costs by cash.

Table 35 reflects the means of transportation to the doctors' offices or clinics. Approximately 85% of the 307 participants drove themselves to the doctors' offices or clinics. Only one of the participants used the city assisted transportation program as the means of getting to the clinics and doctors' offices for appointments.

Table 35

Means of Transportation to the Doctors' Offices or Clinics

Means of Transportation	Frequency Distribution	
	Frequency	Percentages
City assisted	1	0.3
Taxi	5	1.6
Walk	13	4.2
Ride from friends	28	9.2
Drive myself	260	84.7
Total	307	100.0

Table 36 shows the distribution of the participants' response to how often transportation was a factor in their health care use. Approximately 18% of the participants indicated that transportation was a factor in their use of health care services. About 70% of the participants did not have problems with getting to their doctors' offices or clinics for the needed health care.

Table 36

Frequency of Transportation a Factor in the Participants' Use of Health Care Services

Transportation Often a Factor	Frequency Distribution	
	Frequency	Percentages
Always	38	12.4.
Most of the time	17	5.5
Occasionally	30	9.8
Seldom	42	13.7
Never	180	58.6
Total	307	100.0

Table 37 shows the degree of importance of the waiting time to the use of doctors' offices and clinics. One hundred and fifty-two of the 307 participants considered waiting time in the doctors' offices and clinics as a very important part of their health care use. Only 6 out of the 307 participants considered waiting time as unimportant. Some of the participants reported that time wasted in an

attempt to see their doctor was responsible for their decision to change to another doctor.

Table 37

Degree of Importance of "Waiting Time" to the Use of
Doctors' Offices and Clinics

Degree of Importance	Distribution	
	Frequency	Percentages
Very important	152	49.5
Somewhat important	124	40.4
Not very important	19	6.1
Unimportant	6	2.0
No response	6	2.0
Total	307	100.0

Table 38 reflects the sex distribution of the participants of the study. The participants in this study were made up of approximately 48% females and 52% males.

Table 38

Sex Distribution of the Participants

Sex	Distribution	
	Frequency	Percentage
Female	146	47.6
Male	161	52.4
Total	307	100.0

Table 39 reflects the marital characteristics of the participants. Approximately 69% of the participants were married at the time of this study. Only 4.5% of the participants were divorced.

Table 39

Marital Characteristics of the Participants

Status	Distribution	
	Frequency	Percentages
Single	61	19.9
Now married	212	69.1
Widowed	14	4.5
Separated	4	1.3
Divorced	14	4.5
Living together	2	0.7
Total	307	100.0

Table 40 shows the frequency distribution of the participants based on whether or not they had children at the time of this study. Approximately 79% of the participants had children. Only 21% did not have children at the time of this study.

Table 40

Distribution of the Participants Based on Children

Status	Distribution	
	Frequency	Percentages
Yes--children	242	78.8
No--children	65	21.2
Total	307	100.0

To determine the relationship between sex and overnight hospitalization, an analysis of variance was performed. Table 41 shows the analysis of variance between sex and overnight hospitalization.

Table 41

Analysis of Variance Between Sex and Overnight
Hospitalization

Source	<u>ss</u>	<u>df</u>	<u>ms</u>	<u>f</u>	<u>p</u>
Between groups	730.21	1	730.21	1.32	> .01
Within groups	16934.83	305	555.22		
Total	17665.04	306	1285.43		

Note. $F(.99, 1, 305) = 6.63.$

Comparing sex and overnight hospitalization, the F ratio of 1.32 at .01 level of significance was not statistically significant.

Immunizations

According to the data on immunizations, 246 out of the 307 participants were immunized against polio, 46 had no immunization against polio, and 19 of the participants did not indicate whether or not they were immunized against polio. Of the 307 participants, 187 were immunized against measles, 99 were not immunized, and 21 did not indicate whether they were immunized against measles. One hundred and twenty-five of the 307 participants were immunized against cholera. Of the 307 participants, 166 were immunized against rubella virus, 115 were not immunized, and 26 of the participants did not indicate whether or not they were immunized against the rubella virus.

Among the 307 participants, 213 were immunized against diptheria, 74 were not immunized, and 20 did not respond to this question. Of the 307 participants, 173 were immunized against pertussis, 108 were not immunized, and 26 did not respond. Two hundred and twenty-eight of the 307

participants were immunized against tetanus, 65 were not immunized, and 14 did not respond to this question.

Chronic Problems

Twelve of the 307 participants reported that they have or have had heart problems, 281 have not had any heart problems, and 14 did not indicate whether or not they have or have had any heart problems. Only two of the participants have had strokes, 291 of the participants reported no strokes, and 14 of the participants did not indicate whether or not they have had strokes.

Sixty-two of the participants reported that they have or have had problems with arthritis, 236 have had no problems with arthritis, and 9 of the participants did not indicate whether they have or have had problems with arthritis. Nineteen of the participants have had stomach ulcers, 276 have not had stomach ulcers, and 12 of the participants failed to indicate whether or not they have had stomach ulcers. Ten of the participants have had diabetes, 286 have not had diabetes, and 11 did not respond to the question concerning diabetes. Eleven of the participants have had problems with cancer, 286 have not had any problems with cancer, and 10 of the participants

did not respond to the question concerning cancer. Only 2 of the 307 participants reported having had problems with alcoholism, 292 of the participants have not had any problems with alcoholism, and 13 did not indicate whether or not they have had problems with alcoholism.

Of the 307 participants, 36 reported that they have had episodes of migraine headaches, 260 of the participants have not had migraine headaches, and 11 did not respond to this question concerning migraine headaches. Twenty-nine of the participants have had bronchitis, 266 of the participants have not had bronchitis, and 12 did not indicate whether they have had bronchitis. There were only 2 cases of tuberculosis, 7 cases of mental illness, and 3 cases of emphysema reported in the study.

Fourteen of the participants reported that they have had problems with teenage pregnancy, 259 of the participants have not had problems with teenage pregnancy, and 34 of the participants did not indicate whether they have had problems with teenage pregnancy. Six out of the 14 participants who had problems with teenage pregnancy went to the doctors' office or clinic for help, 1 of the 14 did not consult anyone, 4 of them went to the hospital for help, 1 of them consulted a friend, and the other 2 did not indicate what they did.

Employment

Of the 307 participants, 177 were employed, 109 were not employed, and 21 of the participants did not indicate whether they were employed at the time of the study. Sixty-four of the 177 participants who were employed had jobs in health related fields.

Choice of Practitioners

The majority of the participants preferred to consult with a general practitioner in time of need. Of the 307 participants, 155 preferred consulting with a general practitioner, 79 of the participants preferred consulting with specialists, 75 indicated no preference concerning whether or not to go to a general practitioner or to a specialist. Among the 307 participants, 161 reported seeing a dentist at least once a year, 137 did not see a dentist at least once a year, and 9 of the participants did not indicate whether or not they went to a dentist at least once a year.

Participants' Habits

Of the 195 Whites who participated in the study, 116 ate breakfast most of the time, 43 ate breakfast occasionally, and the remaining 36 rarely or never ate breakfast. Forty-seven Blacks ate breakfast most of the

time, 31 occasionally ate breakfast, and 14 rarely or never ate breakfast. Almost all the Hispanics, Asians, and the American Indians ate their breakfast daily.

Forty-eight of the 195 Whites ate between meals most of the time, 118 occasionally ate between meals, and 29 of the white participants rarely or never ate between meals. Thirty-five Blacks ate between meals most of the time, 42 occasionally ate between meals, while 15 rarely or never ate between meals. Of the 10 Hispanic participants, 4 ate between meals most of the time, 5 occasionally ate between meals, while one rarely or never ate between meals. Most of the Indians who participated did not eat between meals.

Fifty-nine of the 195 Whites who participated exercised most of the time, 78 exercised occasionally, and 58 of the Whites rarely or never exercised. Fifteen of the Blacks exercised most of the time, 48 occasionally exercised, and 29 of the Blacks rarely or never exercised. Among the Hispanic participants only one exercised most of the time, 7 exercised occasionally, and 2 of the Hispanic participants never exercised. Two of the Asian participants exercised occasionally, while the remaining 3 rarely or never exercised. Among the Indian participants, 3 exercised most of the time, while 3 never or rarely exercised.

Among the white participants, 23 drank five or more cups of coffee daily. Twenty-nine of the white participants occasionally drank five or more cups of coffee daily, while 143 of the white participants rarely or never drank coffee. Among the black participants, 6 drank five or more cups of coffee most of the time, while 11 occasionally drank five or more cups of coffee daily. In the Hispanic group, only one drank five or more cups of coffee most of the time, 2 occasionally drank five or more cups of coffee daily, and 7 rarely or never drank coffee. Among the Asian participants only one occasionally drank five or more cups of coffee daily. Four of the Asian participants rarely or never drank coffee. Among the American Indians who participated only one occasionally drank five or more cups of coffee daily, while 4 rarely or never drank coffee.

Among the white participants, 15 were involved in a recreational activity most of the time, 97 occasionally participated in recreational activities, and 83 of the white participants rarely or never participated in a recreational activity. Among the black participants, 3 were involved in recreational activities most of the time,

32 occasionally participated in recreational activities, and 57 rarely or never participated in any recreational activities.

Among the Hispanic participants 4 occasionally participated in recreational activities, while 6 rarely or never participated in recreational activities. All five of the Asian participants rarely or never participated in any recreational activities. Only one of the Indian participants was occasionally involved in a recreational activity, while the remaining 4 rarely or never participated.

Of the 307 white participants, 4 drank four or more drinks of alcohol most of the time, 7 occasionally drank four or more drinks, and 184 rarely or never drank alcohol. In the black group only one drank four or more drinks most of the time, 8 occasionally drank four or more drinks of alcohol, and 83 Blacks rarely or never drank four or more drinks. Among the Hispanic participants only one drank occasionally, while 9 rarely or never drank four or more drinks of alcohol daily. All the Asian participants rarely or never drank four or more drinks daily. All the Indian participants rarely or never drank four or more drinks daily.

Many of the participants wished to improve their present health condition. Of the 307 participants, 149

felt that they needed an improvement, 134 did not feel that they needed any improvement in their present health condition, and 24 did not indicate whether or not they needed any improvement.

Forty-two of the participants have been trying to improve on their present condition of health for less than six months, 19 have tried between 6-12 months, 69 have tried more than one year, and 18 have given up their trials to improve their health condition. Of the 307 participants, 159 did not indicate how long they had tried to improve or whether they even needed any improvement. Among those who wanted to improve their present condition of health, 38 felt that time was an obstacle to their improvement. Sixty-one felt that they lacked the motivation, 16 felt that improvement was very low on their priority list, and 5 felt that they needed some facilities to aid in their improvement. Thirty-eight had other undisclosed reasons, while 149 did not indicate any choice.

Among the racial groups who participated, 108 Whites indicated that they needed to improve their present health condition while 72 did not think that they had any need for improvement. Fifteen of the participants did not indicate whether or not they wanted an improvement or not. Weight

was the problem of a majority of those who wanted improvement in their health condition.

Thirty-two Blacks who participated wanted improvement in their present health condition, 53 did not need any improvement, and 7 of the Blacks did not indicate whether or not they wanted any improvement. Weight and high blood pressure were the major complaints among the black participants.

Among the Hispanic participants, 4 wanted improvement, while 6 did not need any improvement in their present health condition. Of the 5 Asian participants, 2 needed improvement, while 2 did not feel they needed any improvement in their present health condition. One of the Asian participants did not indicate whether or not improvement was needed. Three of the Indian participants needed improvement, while one did not need any improvement in the present health condition. One did not indicate whether or not improvement is needed. Of the majority of the participants who needed change, reducing weight was their pressing need. High blood pressure was mentioned in fewer cases.

Location and Use of Health Care Services

Many of the participants reported that location was a factor in their use of health care services. Forty-four of

the 307 participants reported that location was always a factor in their use of health care services, while 84 reported that most of the time location was a factor in their use of health care services. Forty-seven reported that location occasionally was a factor in their use of health care services. Fifty-three reported that location seldom was a factor in their use of health care services. Seventy-nine of the participants never considered location as a factor in their use of health care services.

Pregnancy and First Appointment with a Doctor

Thirty-six of the participants had or will have their first appointment in less than one month of pregnancy, while 90 had or will have their first appointment in 1-3 months of pregnancy. Sixteen had or will have their first appointment in 4-7 months of pregnancy, while 4 had or will have their appointment after seven months of pregnancy.

Seventy-seven of the participants used or will use private OB-GYN for their prenatal care. Ten used or will use Denton Midwifery clinics while 12 used or will use Denton Health Department Maternity clinics. Seventeen were undecided as to where their prenatal care services would be sought. The remaining 47 did not indicate any choice.

Choice of Day Care Services

A majority of the participants felt that quality of services in the day care center was the main determining factor of their use of the services of the center. Of the 307 participants, 117 felt that the quality of services in the day care center was the main determining factor in their use of the services. Fifty-seven felt that the cost of the day care centers was the main determining factor. Only 6 of the participants felt that location was the main determining factor in their use of the day care. Three felt that accessibility was the main determining factor in the use of their services. Twenty-two felt that the availability of services was the main determining factor of their use of day care centers. The remaining 102 did not indicate any choice.

Among the 307 participants, 125 preferred to have their children stay home with their relatives, while 46 preferred to have their children stay with baby sitters. Only 24 preferred to have their children stay in the day care centers, while 17 had no preferences. Ninety-five of the participants did not indicate any choice.

Use of Denton Health Department Clinics

The Women, Infants, and Children (W.I.C.) program is a nutritional program for women, infants, and children in

need. Thirty-four of the 307 participants in this study have used the W.I.C. programs in Denton, 219 have not used the W.I.C. programs, and 54 did not indicate whether or not they have used the W.I.C. programs. Only 54 of the 307 participants have used the maternity clinics of the Denton Health Department, 235 participants have not used the maternity clinics, and 51 did not indicate whether or not they have used the maternity clinics.

Twenty-six of the participants have used the Infectious Disease Clinic of the Denton Health Department. Of the 307 participants, 249 have not used the Infectious Disease Clinic, while 32 did not indicate whether or not they have or have not used the Infectious Disease Clinic. Only 44 of the participants admitted having been referred to the clinics of the Denton Health Department while 235 of the participants have not. Twenty-eight of the participants did not indicate whether or not they have been referred to the clinics of the Denton Health Department.

CHAPTER V
SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS
FOR FUTURE STUDIES

The general purpose of the study was to determine the health care utilization patterns, factors considered in the choice of physicians, episodes with disease experiences, health insurance experiences, immunization records, and recognition of health needs by the participants. The study also determined the sources of health information and sociodemographic characteristics such as age, sex, race, and levels of education. Another purpose was to gather baseline data on patterns of health care use in the community which would be of value for health planning in Denton, Texas.

The participants were 307 members from seventeen church groups in Denton, Texas. The church groups and participants were randomly selected for the study. The Patterns of Health Care Utilization Questionnaire was administered to the participants to obtain the data needed for the study. The pastors of the various church groups worked in their capacities as facilitators for the study.

Tests of Hypotheses

The summary of the findings was based on the hypotheses of the study. The null hypotheses of the study that follow were subjected to statistical analysis at the .01 level of significance.

Hypothesis One: There is no relationship between race and the frequency of use of doctors' offices or clinics (ACCEPTED).

Hypothesis Two: There is no relationship between level of education and frequency of use of doctors' offices or clinics (ACCEPTED).

Hypothesis Three: There is no relationship between family income and use of doctors' offices or clinics (ACCEPTED).

Hypothesis Four: There is no relationship between race and overnight hospitalization (ACCEPTED).

Hypothesis Five: There is no relationship between having regular physical examinations and chronic health problems (ACCEPTED).

Hypothesis Six: Whether or not a person has insurance is not related to the use of health care services (ACCEPTED).

Hypothesis Seven: Availability of transportation is not related to the use of health care services (ACCEPTED).

Hypothesis Eight: Past experiences of waiting time do not affect the use of doctors' offices or clinics. (ACCEPTED).

Hypothesis Nine: There is no relationship between age and the use of doctors' offices or clinics. REJECTED).

Hypothesis Ten: There is no relationship between sex and the use of doctors' offices or clinics. (ACCEPTED).

The first hypothesis was accepted on the basis of the statistical analysis of variance between race and the number of visits. A nonsignificant relationship existed between race and the number of visits at the .01 level of significance.

The second hypothesis was accepted on the basis of the statistical analysis of variance between the level of education and number of visits. A statistically nonsignificant relationship existed between the level of education and number of visits at the .01 level of significance.

The third hypothesis was accepted on the basis of the statistical analysis of variance between family income and number of visits. The analysis of variance between family income and the number of visits to the doctors' offices or

clincis was not statistically significant at the .01 level of significance. The fourth hypothesis was accepted since the analysis of variance between race and overnight hospitalization was not statistically significant at the .01 level of significance.

The fifth hypothesis was accepted because of the nonsignificant relationship that existed in the analysis of variance between annual physical examination and a chronic health problem such as high blood pressure. This statistical analysis of variance between annual physical examination and high blood pressure was not significant at the .01 level of significance. It should be noted that the statistical analysis of variance between self rated health status and the number of visits was significant at the .01 level of significance. Those who rated their health status as fair and poor made more visits to the doctors' offices or clinics.

The sixth hypothesis was accepted because the statistical analysis of variance between ways of payment of health care costs and the number of visits was not significant at the .01 level of significance. The seventh hypothesis was also accepted because the statistical analysis of variance between transportation and number of visits was not significant.

The eighth hypothesis was accepted because the statistical analysis of variance between waiting time and the number of visits was not significant at the .01 level of significance. The ninth hypothesis was rejected because the statistical analysis of variance between age and number of visits was significant at the .01 level of significance. The number of visits to the doctors and the clinics differed significantly between the age groups. A drastic increase in the mean number of visits was observed among the 36-45 age groups. The tenth hypothesis was accepted because the statistical analysis of variance between sex and number of visits was not significant at the .01 level of significance.

Discussion

The statistical treatment of data from the Patterns of Health Care Utilization Questionnaire provided information concerning the patterns of health care use among the participants in Denton, Texas. The percentage of the participants represented in the study were: 64% White, 30% Black, 3% Hispanic, 1.6% Asian, and 1.6% American Indian.

Comparing percentages between the racial groups may be misleading due to the smallness of some of the racial groups. The percentages of participants who had regular checkup experiences were not encouraging. Among the

white participants 67% had regular checkup experiences. Among the black participants 47% had regular checkup experiences. This particular study was not designed to find out the reason the white participants had higher checkup experiences. There may be a need to carry out such studies in the future.

Regular checkup experiences among the participants increased with the levels of education. The college graduates among the participants had a 58% checkup rate while the postgraduates had a 77% checkup rate. Those participants who had 8th grade education or less had a 32% checkup rate.

The means of transportation was not a major deterrent in visiting the doctors' offices or clinics. Approximately 90% of the white participants drove their own cars to the doctors' offices or clinics for appointments. The American Indian participants were not satisfied with the services of their physicians. More than 80% of the American Indians who participated were very dissatisfied with their physicians.

A very high percentage of the participants from all the races considered treatment by the doctors or clinics as a very important part of the choice for their health care services. Treatment given to these participants

during their first visit determines whether they will go back to that doctor's office or clinic again for help. This fact may be responsible for some of the low checkup rates observed in all the racial groups. There was no significant relationship between race and number of visits to the doctors' offices or clinics. There were many variables that could affect the number of visits to the doctors' offices or clinics. These variables were not restricted to any particular race.

More than 38% of all participants were high school graduates. Approximately 26% of all the participants were college graduates and 17% were post graduates. Only about 18% of the participants did not graduate from high school.

Family income was not a major factor in health care use. A statistical analysis of variance between income and number of visits was not significant. More than 69% of the participants pay their health care costs through their health insurance coverage.

A regular physical examination seemed to be extremely important to the future health status of the participants. Those who rated their health status as excellent had fewer number of visits to their doctors' offices or clinics, while those who rated their health status as fair and poor made more visits to their doctors' offices or clinics.

One hundred and eighty of the 307 participants reported that transportation was never a factor in their use of health care services. Lack of availability of transportation was not a factor in the use of health care services among the participants of this study. Only 38 of the 307 participants reported that transportation was always a factor in their use of health care services.

More than 80% of the participants felt that waiting time was an important consideration when making a choice of health care services. The waiting time in the clinics may be overridden by the individualized or personalized treatment given to participants on their visits. More than 90% of the participants felt that treatment given to them during their visits to the doctor was an important consideration in the use of their services.

Age definitely affected the use of health care services. Participants between the ages of 36-45 years had the highest mean number of visits to the doctor and the clinics. The age range 46-55 years had the second highest mean number of visits to the doctors' offices or clinics. There was some degree of stabilization in the number of visits to the doctors' offices or clinics between the ages of 65 and 75 years. The mean number of visits to the doctors' offices or clinics was the highest at age range 35-45 years.

There were approximately 48% females and 52% males among the participants in this research study. However, the result of a statistical analysis of variance between sex and the number of visits was not significant, and the result of a statistical analysis between sex and overnight hospitalization was not significant.

As reported in Chapter IV, 125 of the 307 participants were immunized against cholera. This unexpected high rate of cholera immunization may be due to either a misunderstanding of this item of the questionnaire, or the inclusion of a large number of foreign participants in the sample population.

Conclusions

Based on the results of this study, the following conclusions were drawn:

1. Race itself was not responsible for an increased frequency of use of health care services.
2. Level of education did affect the checkup experiences of the participants.
3. Family income did not affect the frequency of health care utilization.
4. There was no relationship between race and overnight hospitalization.
5. Regular checkup experiences did affect the number of visits to the doctors' offices or clinics.
6. Whether or not a person had insurance was not related to the use of health care services.

7. Presence or absence of available transportation was unrelated to the use of health care services among the participants.

8. Past experiences of waiting did not affect the use of health care services.

9. Belonging to a particular sex did not increase health care use.

10. Age did have a definite effect on the number of visits to the doctors' offices or clinics by the participants of this study.

11. The minority participants such as the Hispanics and the American Indians were not satisfied with the medical doctors.

12. The more educated participants indicated that the medical doctors were a source of health and health care information.

13. Family income differed significantly among the racial groups that participated in this study.

14. Family income affected the rate at which the participants sought second opinions when surgery was advised by the doctors.

Recommendations

As a result of this study, the researcher recommends further studies in the following areas:

1. Minority satisfaction with the health care system in Denton, Texas.
2. Health values of the minorities in Denton, Texas.
3. The services of the health care clinics in Denton, Texas.
4. Minority staff representation in health care service clinics.
5. A continuation of the study of this nature using more participants from each minority group.
6. The rate of childhood immunizations in Denton, Texas.
7. The rate of the minorities who carry health insurance in Denton, Texas.
8. Indigent health care in Denton, Texas.

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APPENDIX A
THE PATTERNS OF HEALTH CARE UTILIZATION
QUESTIONNAIRE

PATTERNS OF HEALTH CARE UTILIZATION QUESTIONNAIRE.

THIS QUESTIONNAIRE IS A PART OF A RESEARCH STUDY BEING
CONDUCTED AT TEXAS WOMAN'S UNIVERSITY.

PLEASE COMPLETE THIS QUESTIONNAIRE. ANSWER THE QUESTIONS
TRUTHFULLY AND AS ACCURATELY AS POSSIBLE. PLEASE DO NOT
WRITE YOUR NAME ON YOUR QUESTIONNAIRE. READ THE INSTRUCTIONS
FOR EACH SECTION.

DIRECTIONS:

FILL IN THE BLANKS WITH THE CORRECT INFORMATION.

1. What is your birth date? ---/---/---
2. Do you have any children?---If Yes,Number of children---
3. Do you have a family Doctor?---If Yes,what kind of Doctor?

a.--Chiropractor c.--Doctor of Medicine

b.--Osteopath d.--Other (specify)-----

When was your last visit?-----

Reason for visit?-----

Number of visits since January 1984?-----

When was your last hospitalization?-----

Number of overnight hospitalizations since January 1983?-----

4. What is your current weight?---lbs Height?---ft---ins.

5. Here is a list of health problems that some people experience.

In COLUMN 1, Place an "X" in the YES column for each disease that you presently HAVE or HAVE HAD in the last four years or an "X" in the NO column for each disease you currently DO NOT HAVE, OR HAVE NOT HAD in the past four years.

In COLUMN 2, indicate the MAJOR ACTION taken to deal with each Disease. Choose from the four choices below.

Place the letter on the correct blank in 2.

a.--Went to Doctor c.--Went to hospital or clinic
b.--Treated myself d.--Went to friend/relative

In COLUMN 3,indicate the approximate distance to the person or facility you identified above,from your home.

Choose from the five choices below. Place the letter of your choice on the correct blank in 3.

a.--0-2 miles d.--9-11 miles
b.--3-5 miles e.--12 miles and over
c.--6-8 miles

EXAMPLE: If I had a heart attack 3 years ago, went to a clinic,that was 4 miles from home, my answers would be:
a.-Heart attack, an "X" on Yes in column 1,C in column 2 and a B in column 3.

	COLUMN			COLUMN		
	1	2	3	1	2	3
a. Heart disease	Yes	NO	Action Miles	Yes	NO	Action Miles
b. High blood pressure	---	---	---	---	---	---
c. Stroke	---	---	---	---	---	---
d. Arthritis	---	---	---	---	---	---
e. Stomach ulcer	---	---	---	---	---	---
f. Diabetes	---	---	---	---	---	---
g. Cancer (of any kind)	---	---	---	---	---	---
h. Glaucoma	---	---	---	---	---	---
i. Asthma	---	---	---	---	---	---
j. Alcoholism	---	---	---	---	---	---
k. Bronchitis	---	---	---	---	---	---
l. Mental illness	---	---	---	---	---	---
m. Tuberculosis	---	---	---	---	---	---
n. Migraine headache	---	---	---	---	---	---
o. Emphysema	---	---	---	---	---	---
p. Accident	---	---	---	---	---	---
q. Multiple Sclerosis	---	---	---	---	---	---
r. Childhood communicable diseases egi Measles	---	---	---	---	---	---
s. Teenage pregnancy	---	---	---	---	---	---

DIRECTIONS:

When you consider going to a medical doctor for help, how important would you personally rate each of the following items? For questions 6-21 write the letter which best represents your feelings for each of the items in the space to the right of the number. Choose from the following four.

- a. Very important
- b. Somewhat important.
- c. Not very important
- d. Unimportant.

6. ---The medical school graduated from.
7. ---That the doctor is a female.
8. ---That the doctor is a male.
9. ---How the doctor acts or behaves.
10. ---Appearance of the doctor's office.
11. ---That the doctor is advanced in age.
12. ---The doctor's willingness to make house calls.
13. ---Whether the doctor practices alone or with others.
14. ---The distance from the doctor's office to my home.
15. ---How the doctor treats me.
16. ---The length of time you must wait to see the doctor.
17. ---What hospital the doctor practices.
18. ---How the doctor respects my time.
19. ---What the doctor charges.
20. ---That you will see the same doctor every time.
21. ---That the doctor accepts medicare patients.

22. Have you ever been immunized against the following diseases? Please mark "x" in the column of your choice and CIRCLE the letter to the left of the disease if your immunization was in the last four years.

	Yes	No
a. Polio	----	----
b. Measles	----	----
c. Cholera	----	----
d. Rubella (German Measles)---	----	----
e. Diphtheria	----	----
f. Pertussis	----	----
g. Tetanus	----	----
h. Mumps	----	----

DIRECTIONS:

Circle the letter of the correct answer.

23. What was the highest grade you completed in school?
 a.--8 grades or less d.--College graduate
 b.--9-11 years e.--Post graduate
 c.--High school graduate
24. Are you employed now? a.--Yes b.--No If yes, is your kind of work related to Health/Health Care?
 a.--Yes b.--No
25. To what racial group do you belong?
 a.--White b.--Black c.--Hispanic d.--Asian e.--Indian
26. The total family income last year.
 a.--\$0- \$7,499 per year e.--\$25,000-\$34,999
 b.-- \$ 7,500-\$9,999 f.--\$35,000-\$49,999
 c.--\$10,000-\$14,999 g.--\$50,000-\$74,999
 d.--\$15,000-\$24,999 h.--\$75,000 and over

- 27 How do you get to the doctor or clinic if you have an appointment?
- a. --City/County assisted transportation such as Span
b. --Taxi.
c. --Walk
d. --Ride from friends or neighbor
e. --Drive myself.

28. How often is transportation a factor in your getting an appointment with your doctor or clinic?
- a. --Always d. --Seldom
b. --Most of the time e. --Never
c. --Occasionally

DIRECTIONS:

In questions 29-35, identify your degree of satisfaction with the medical care, treatments and or services by writing the letter indicating your choice in the space provided next to each item. Please consider the total experience if you visited more than one person in each specialty. Select from the seven choices that follow. Write your answer in the space to the right of each number.

- a. --Very satisfied e. --Dissatisfied
b. --Satisfied f. --Very dissatisfied
c. --Somewhat satisfied g. --Have not used (N/A)
d. --Somewhat dissatisfied
29. ---- Doctor of Medicine (M.D)
30. ---- Osteopath (D.O)
31. ---- Chiropractors
32. ---- Hospitals or clinics
33. ---- Midwives
34. ---- The Denton Health Department
35. ---- Nurses

DIRECTIONS:

CIRCLE THE LETTER OF THE CORRECT ANSWER.

36. When you get sick, do you prefer to see a general practitioner or a specialist?
- a. --General practitioner b. --Specialist c. --Doesn't matter
- 37 Do you see a dentist at least once a year?
- a. --Yes b. --No
38. Have you ever gone to a doctor or a medical clinic for a "check-up" or examination even though you did not think that anything was wrong at the time? a. --Yes b. --No
39. Do you get a physical check-up every year? a. --Yes b. --No
40. Have you ever had any bad experiences with any medical doctor which made you lose confidence. a. --Yes b. --No
- If you answered Yes, briefly describe your reason.-----

41. Have you changed doctors in the last 5 years?
- a. --Yes b. --No
- If you answered Yes, briefly explain WHY you changed? ---

42. Where do you get most of your own information about health and sickness?
- a. --Doctors d. --Newspapers
b. --Books e. --Other (specify)-----
c. --Radio and Television
43. What is the main way that you pay for your Medical and hospital expenses?
- a. --Personal, group or family insurance
b. --Cash
c. --Medicare and medicaid funds
d. --Other (specify)-----

44. Are you now:

- a.--Single
- b.--Now married (Living with spouse)
- c.--Widowed
- d.--Separated
- e.--Divorced
- f.--Living together

45 Please rate your health at this time?

- a.--Excellent b. --Good c.--Fair d.--Poor

46. How often is location a factor in your use of a

Doctor or a clinic?

- a.--Always d.--Seldom
- b.--Most of the time e.--Never
- c.--Occasionally

47. Please indicate your sex? a.---Male b.---Female

DIRECTIONS:

CIRCLE THE LETTER OF THE CORRECT RESPONSE.

Do not respond to questions 48 and 49 if you are a male.

If you are a female, answer questions number 48 and 49.

48. If you have been pregnant before or are pregnant now, when did or when are you going to make your first appointment with a Doctor.

- a.--Less than 1 month d.--More than 7 months
- b.--1-3 months e.--Didn't until delivery
- c.--4-7 months

49. If you are pregnant now or intend to be pregnant, where are you or where will you be going for your prenatal?

- a.--A private OB-GYN
- b.-- Denton Midwifery clinics
- c.--Denton Health and maternity clinics
- d.--Don't know

DIRECTIONS:

CIRCLE THE LETTER OF THE CORRECT RESPONSE.

CONTINUE WITH QUESTIONS 50-53 WHEN APPLICABLE.

50. The main determining factor for my use of a day care center or a baby sitter is the:

- a.--Cost of care
- b.--Quality of services
- c.--Location
- d.--Accessibility

e.--Availability of services (time and day)

51. Where or with whom will you feel comfortable leaving your child or children?

- a.--Home with relatives
- b.--Baby sitter
- c.--Day care center
- d.--No preference

52. Have you ever used the Denton County nutritional program for Women, Infant and Children (WIC)?

- a.--Yes b.--No

53. Have you ever used the Denton County Maternity clinics?

- a.---Yes b.---No

54. Have you ever used the infectious disease clinic of the Denton Health Department?

- a.--Yes b.--No

55. Have you ever been referred to any of the clinics of the Denton Health department? a.--Yes b.--No

56. Have you ever referred any person to the clinics of Denton Health Department? a.---Yes b.---No

57. If you have used any of the clinics of the Denton health department, where did you first find out about it?
- a.---Doctors
 - b.---Friends
 - c.---Radio & television
 - d.---Newspapers
 - e.---Relative
 - f.--- Clinics or hospital
 - g.---Druggist
 - h.--- Other (specify)-----
58. Is there anything related to your health that you desire to improve or change? a.---Yes b.---No
If you answered Yes, name the most important one.-----

59. How long have you tried to make this change?
- a.---Less than 6 months
 - b.---6-12 months
 - c.---More than 1 year
 - d. I have given up
60. What do you think are the obstacles to making this desirable change
- a.---Time
 - b.---Motivation
 - c.---Low priority
 - d.---Facilities
 - e.---Other (specify)
61. When do you work? Select the time frame closest to your work schedule.
- a.---3am-11am b.---11pm-7am c.---7am-3pm d.---8 am--5pm
62. How often do you check with your physician when you have no health related need?
- a.-----At least once every 3 months
 - b.-----At least once every 4-8 months
 - c.-----At least once every 9-12 months
 - d.-----At least once in 1-2 years
 - e.-----More than 2 years
63. Do you seek a second opinion when surgery is advised?
- a.---Yes b.---No
- DIRECTIONS:**
In questions 64-69 choose the letter from the list below which best describes your present lifestyle pattern.
Place your answer in the space at the right of each number.
- a.---Most of the time
 - b.---Occasionally
 - c.---Rarely or Never
- 64. -----Eating breakfast
 - 65. -----Eating between meals
 - 66. -----Doing some physical exercise
 - 67. -----Drinking 3 or more cups of coffee daily
 - 68. -----Recreational activity such as playing cards
 - 69. -----Consuming 4 or more drinks of alcohol daily

APPENDIX B

THE RELIABILITY PERCENTAGE OF AGREEMENT

RELIABILITY PERCENTAGE OF AGREEMENT

Twenty participants were tested and retested after one month. Individual responses by items were compared in the two testings. The individual percentage of agreement was calculated by dividing the number of matched responses by the total number of responses in the test. Individual percentage of agreement for the twenty participants are shown below.

1.	98
2.	97
3.	94
4.	91
5.	95
6.	86
7.	91
8.	79
9.	85
10.	88
11.	91
12.	91
13.	98
14.	96
15.	80
16.	89
17.	99
18.	94
19.	88
20.	93
TOTAL	1823
AVERAGE	91.15
DIVIDE BY 100 =	.91

The Reliability percentage of agreement was 0.91.

APPENDIX C
LIST OF THE CHURCH GROUPS THAT PARTICIPATED
IN THE STUDY

CHURCH GROUPS THAT PARTICIPATED

The following church groups participated in the study.

Our thanks to them.

1. Calvary Baptist Church, 1601 N. Elm, Denton
2. Central Baptist Church, 2221 N. Carroll, Denton
3. First Assembly of God Church, 2227 N. Carroll, Denton
4. St. James Episcopal AME Church, 1107 E. Oak, Denton
5. Denton Christian Church, 3130 N. Elm, Denton
6. St. Andrews Presbyterian Church, 300 W. Oak, Denton
7. Asbury Methodist Church, 1919 N. Elm, Denton
8. Trinity Tabernacle Church, 2417 Bernard, Denton
9. The Saints in Church in Denton, Hall #1, 2301 Hinkle Dr., Denton
10. Denton Baptist Temple, I Hwy 35 E., Denton
11. St. Andrews Church of God in Christ, 608 Lakey, Denton
12. Mt. Calvary Baptist Church, 728 E. Prairie, Denton
13. Church of Christ, 411 Simmons, Denton
14. St. Emmanuel Missionary Baptist Church, Denton
15. Morse Street Baptist Church, 921 Morse St., Denton
16. St. Barnabas Episcopal Church, 122 N. Elm, Denton
17. First United Methodist Church, 201 S. Locust, Denton

Our thanks again to all the members and all the pastors who cooperated with the researcher to make this study a successful one.

Sincerely yours,

Simon Ogamdi

APPENDIX D

LETTERS

Department of Health Education
Texas Woman's University
Denton, Texas 76204
February 20, 1986

Dear Reverend _____

I am Simon O. Ogamdi, a doctoral student at the Texas Woman's University, Denton. I am pursuing a Doctor of Philosophy (Ph.D.) degree in Community Health Education. I am now preparing my doctoral dissertation, which deals with "The Patterns of Health Care Utilization," in Denton, Texas.

I am using the "Churches" in Denton as my site for sampling and data collection. You and your congregation have been selected to participate in this research study. Adult members and teenagers 15 years and over will participate in this study.

A short questionnaire will be administered to the participants between the last week of February 1986 and the second week of March 1986. Information gathered in this study will be CONFIDENTIAL. The results of the research study will be made available to you for your church library.

I will appreciate you and your congregation participating in this study. I will contact you within a week by telephone, followed by an appointment for a visit. During my visit, I will provide you with a copy or copies of the questionnaire.

I look forward to hearing from you.

Sincerely yours,

Simon O. Ogamdi, B.S., M.S.
(214) 594-1497

Date

Dear Simon,

My congregation WILL/WILL NOT participate in your
research study.

Pastor

Church

Department of Health Education
Texas Woman's University
Denton, Texas 76204
July 1, 1986

Dear Pastor,

The period of data collection for the Patterns of Health Care Utilization study is now over. Any participant returning the questionnaire now, is acceptable, but the information will not be included in the data analyses.

Thank you very much for your participation. Our thanks to all the members who gave their time to complete the Patterns of Health Care Utilization Questionnaire.

Our thanks again to all the members and all the pastors who cooperated with the researcher to make this study a successful one.

Sincerely yours,

Simon Ogamdi

PATTERNS OF HEALTH CARE UTILIZATION
QUESTIONNAIRE

Dear Pastor,

These are the questionnaires for that study. The requirements for the study are:

1. If possible, complete the questionnaire immediately and hand the completed copy to the pastor.
2. Those unable to complete their copy can take the questionnaire home, complete it and return the completed questionnaire to the pastor within seven days.
3. Members 15 years and older can take part in the study.
4. All the uncompleted questionnaires will be returned to pastor within seven days.

Thanks for your cooperation.

Simon O. Ogamdi

APPENDIX E
STATISTICAL ANALYSES

OUTLINE OF THE STATISTICAL ANALYSES

The variables that are considered in this section were representative of the variables that were studied.

Variables such as marital characteristics in item 44, number of children in item 2, location in item 46, degree of satisfaction in items 29-35, degree of importance in items 6-21, immunization in item 22, habits in items 64-69, use of Denton county clinics in items 52-56, input on health care decision making in item 63 and choice of prenatal care in item 49 were subjected to appropriate statistical analyses. Some of the variables in the questionnaire that were not mentioned in the hypotheses are necessary for a detailed description of the population.

<u>Hypotheses/Variables</u>	<u>Item #s</u>	<u>Statistical Analysis</u>
Race and frequency of use of doctors and offices and clinics	25,3,62,5	Tables, percentages, frequencies, and chi-square
Level of Education and use of doctors and clinics	2,3,5,63,42	Tables, percentages, chi-square, and frequencies
Family income and use of doctors' offices and clinics	26,3,5,42,38,39,63	Tables, frequencies, and percentages
Race and overnight hospitalization	25,3	Tables, percentages, and frequencies
Regular physical and chronic health problems	5,39,45,58	Tables, percentages, and frequencies

<u>Hypotheses/Variables</u>	<u>Item #s</u>	<u>Statistical Analysis</u>
Insurance and the use of doctors' offices or clinics	43,3,5,52,53,54,55	Tables, percentages, and frequencies
Transportation and use of doctors' offices or clinics	28,3,5,27	Tables, percentages, and frequencies
Waiting time and use of services	16,3,5	Tables, percentages, and frequencies
Age and the use of clinics and doctors	1,3,5,62	Range, tables, percentages, frequencies, mean, and ANOVA
Sex and chronic health problems	47,3,5,58	Tables, percentages, frequencies, and chi-square

APPENDIX F

PART A. RAW DATA ON OVERNIGHT HOSPITALIZATION

PART B. RAW DATA ON NUMBER OF VISITS

RAW DATA

Overnight Hospitalization			Number of Visits	
<u>Visits</u>	<u>Frequency</u>	<u>Percentage</u>	<u>Frequency</u>	<u>Percentage</u>
0	189	61.6	54	17.6
1	45	14.7	35	11.4
2	19	6.2	49	16.0
3	21	6.8	39	12.7
4	4	1.3	29	9.4
5	4	1.3	16	5.2
6	3	1.0	16	5.2
7	1	0.3	4	1.3
8			10	2.6
9			4	1.3
10	9	2.9	8	2.6
11	1	0.3	9	2.9
12	3	1.0	13	4.2
13			3	1.0
14	1	0.3		
15	1	0.3	5	1.6
16			1	0.3
18	1	0.3		
20	1	0.3	3	1.0
21			1	0.3
24			1	0.3
25			1	0.3
28	1	0.3		
30			1	0.3
31	3	0.9		
40			3	1.0
50			2	0.3
Total	307	100.0	307	100.0