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"Self-Care Among Hispanics, Blacks and Whites in the U.S.:
Analysis of U.S. Data"

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SELF-CARE BEHAVIOR AMONG HISPANICS, BLACKS AND WHITES
IN THE UNITED STATES: ANALYSIS OF NATIONAL DATA

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ABSTRACT

Self-care refers to health-motivated behavior taken by the lay person (the consumer) on his or her own behalf or on behalf of family, friends, or community to promote health or to treat illness. It is perceived as a middle-class movement. The self-care literature does not account for self-care behavior among Hispanics, blacks, and other disadvantaged groups in our society. This study documents what these groups are doing themselves for health maintenance and the treatment of illness without necessarily seeking professional medical care.

Multiple classification analyses are then used in the secondary analyses of two data sets: (a) a 1976 nationwide study on access to medical care and (b) a 1981-82 survey of municipal health services conducted in five U.S. central city areas. Both surveys were conducted by the Center for Health Administration Studies (CHAS) at the University of Chicago.

Two types of self-care activities are analyzed: self-care behavior in the absence of illness and self-care activities as a response to an episode of illness. The self-care activities in the absence of illness include the prevalence of certain types of lifestyles or personal health practices such as getting enough exercise, eating nutritious meals, keeping at the appropriate weight, dental care, smoking habit, and past participation in health education programs. The self-care activities in the presence of an illness include the use of different types of home (nonprescribed) treatments and seeking lay consultation.

Findings of self-care practices among the different racial and ethnic groups are presented, reasons for observed differences are discussed, and recommendations for policy formulation and future research are provided.

I. INTRODUCTION

Self-care is a discretionary, health motivated behavior that a lay person takes on his or her own behalf, or on behalf of the family, friends or community for health maintenance and promotion and for the treatment of illness (Andersen et al., 1981a; Levin & Lewis, 1976). It is considered a health resource which can either supplement, substitute for, or provide an alternative to the formal medical care system (Fleming, Giachello & Andersen, 1984). Self-care behavior may include a series of activities. Some of these activities may be aimed at improving personal health habits and lifestyle (such as consuming healthy food and vitamins, engaging in regular exercise and/or attending wellness programs). It may also involve self-diagnosis activities using tools such as blood pressure cuffs, home pregnancy test kits, and even equipment for self-gynecological exams. Other self-care activities involve the use of home remedies and nonprescribed drugs for the treatment of common illnesses and for the management of chronic conditions such as diabetes (Verbrugge & Ascione, 1987; Wilkinson, Darby & Mant, 1987).

Empirical studies of self-care are limited. Few focus on the characteristics of different subgroups in the U.S. population. Most of the research available suggests that self-care behavior occurs among middle-class suburban whites (Danchik & Schoenborn, 1979; Fleming & Andersen, 1976). Few efforts have been made to study self-care activities among racial or ethnic groups or among economically disadvantaged groups in our society.

Two papers have been written in an attempt to document self-care behavior during an illness among racial and ethnic groups in the U.S. The first (Giachello & Andersen, 1981) is an exploratory effort examining the extent of Hispanic involvement in self-care activities relative to whites. Findings of this study showed that Hispanics and whites were equally likely to use nonprescribed home

treatment (NPHT), but the type of home treatment varied slightly. Whites used more over-the-counter (OTC) medication while Hispanics showed some tendency to use homemade treatment. Furthermore, some correlates of ethnicity, such as large family size and presence of a relative in the home, as well as socioeconomic factors such as high education and income, were positively associated with the practice of self-care activities for these groups.

The second paper (Giachello, Fleming & Andersen, 1982) further expanded the above analyses by including blacks as well as Hispanics and whites. Through multivariate analysis new hypotheses were tested. Findings indicated that different factors such as health beliefs, family type, family income, inconvenience in seeking formal medical care as well as the illness experience itself (e.g., number of symptoms, severity of illness, etc.) were related to different types of self-care activities for whites, Hispanics and blacks in the U.S. In addition, determinants of self-care activities varied by ethnic group. For example, personal and family characteristics, socioeconomic factors, and socio-medical variables, such as lack of health insurance and other barriers in using the formal medical care system, appeared to be more important predictors of self-care activities for ethnic minorities than for whites.

This research project builds upon these findings in self-care behavior among ethnic groups. It (a) continues to document the extent of practice in self-care activities by minority ethnic groups during the presence of an illness; (b) begins the documentation of self-care practices for health maintenance and health promotion; (c) tests new hypotheses based primarily on a typology of health care developed for this study; and (d) explores the relationship between minority use of self-care activities relative to the use of the formal medical care system.

Secondary data analyses were performed on two data sets: (1) a 1976 nationwide study of access to medical care and (2) a 1981-1982 community health survey known as the Municipal Health Services Program (MHSP) Wave II. Both surveys were conducted by the Center for Health Administration Studies (CHAS) at the University of Chicago. Two types of self-care activities were studied. (a) Self-care practices in the absence of illness, including exercise, nutrition, weight control, dental care, and smoking, and the propensity to change or improve these practices by exploring respondent's past participation in health education on these and other health topics. (b) Self-care activities in the presence of an episode of illness such as the use of nonprescribed home treatment (NPHT) and seeking lay health advice. The MHSP study contains data on self-care practices in the absence of illness, while the 1976 data allows the study of self-care activities in the presence of an episode of illness.

General Characteristics of the Ethnic Groups Under Study

Before assessing the comparative studies of Hispanics, blacks, and whites in the area of prevention patterns and self-treatment activities, it is valuable to examine the socioeconomic and demographic aspects of these groups and to call attention to the great diversity of the Hispanic population.

Hispanics and blacks are the largest ethnic minorities in the United States. According to population projections for 1986 there were over 17 million Hispanics and over 29 million blacks in the U.S. representing 7 and 12 percent, respectively, of the total U.S. population of over 240 million (U.S. Census, CPR, 1984; 1986). According to the Census Bureau Hispanics are defined as persons who self-identified as Mexican, Mexican-American, Puerto Rican, Cuban; or those who came from Central or South America or Spain; or descendants of any of these groups.

Mexican-Americans comprise 63 percent of the Hispanic group, most of them residing in the Southwestern United States (U.S. Census, CPR, 1987). The term "Hispanic" includes people from some 19 countries. It is important, then, to keep in mind that Hispanics are a heterogeneous group despite the fact that they share a common language and selected aspects of the Spanish culture. For example, some Hispanics are U.S. citizens, others are not; some are newly arrived, while others have been in this country for many years or generations. Many speak only Spanish, some are bilingual in English and Spanish, and others are monolingual in English. This diversity Among Hispanics is also reflected in their health attitudes and knowledge, health status and patterns of health services utilization.

The Hispanic population is growing faster than any other ethnic group in the U.S. due to a high birth rate and immigration. For example, in 1984 the birth rate for the Hispanic population was 22.7 live births per 1,000 population. This rate is approximately 50 percent higher than the birth rate for the non-Hispanic population (NCHS, 1987). Since 1930, the largest number of legal immigrants entering the U.S., according to the U.S. Immigration and Naturalization Services, have been Hispanics. The number of legal immigrants excludes undocumented workers as well as Puerto Ricans who are U.S. citizens by birth.

Hispanics and blacks are also one of the youngest groups in the United States. In 1986, the median age for Hispanics was 25.3, compared to 25.5 for blacks and 32.6 for whites (U.S. Census, 1984).

Hispanics and blacks suffer from a series of socioeconomic disadvantages such as low education and income levels, high unemployment, large family size, crowded homes, social discrimination and, in the case of Hispanics, cultural and language barriers.

Hispanics and blacks were chosen for analysis as they represent the largest racial and ethnic groups in the U.S. with distinguishing physical characteristics, distinctive lifestyles, and limited economic and political power. Their socioeconomic, demographic, and cultural characteristics have served as barriers to access and utilization of the medical care system. As a result, existing health studies of Hispanics and blacks have focused on these factors in an attempt to explain the health behavior of these groups and their differential utilization of health services. An assumption which underlies these studies is that if these groups do not obtain the care they need through formal health care avenues, they are not receiving any care at all. Illness does not always lead to the utilization of the formal medical care system (Knapp & Knapp, 1972), especially when the cost of medical care is high and a host of discouraging inconveniences are encountered. This research project studies the prevalence of self-care activities as one of the health resources options available to minorities, rather than focusing only on the use of formal medical care institutions as previous health researchers have done.

STATEMENT OF THE PROBLEM

Health maintenance and self-treatment of illness were practically the only health resources available to individuals and their families before the development and expansion of medical institutions. The care of sick family members has been one of the primary functions of the family. Home remedies for injuries or illnesses were once both essential and common in medical treatment. The family passed on its health knowledge and self-care skills from one generation to the next as part of the socialization process. Due to limited medical personnel and geographic barriers, pharmacists and lay people played a crucial role in providing medical advice and treatment for injuries and illness. When medical services were provided

either by a lay person (e.g., a midwife) or a medical professional (when necessary), it usually took place in the home of the patient for a modest fee.

Since the beginning of this century new medical discoveries and technologies combined with environmental and sanitary measures to improve the health status of the population, lead to an increase in the aged population. Medical services for the treatment of chronic conditions were in increased demand. This resulted in changes in the organization and delivery of medical services. For example, the medical profession responded by moving medical practice out of the home of the patient. Specialized medical institutions emerged, hospital facilities which traditionally were for the terminally ill expanded, and a multitude of types of health insurance became available (Pratt, 1974; Twaddle, 1982). As a result, the health care functions of individuals and families decreased so much that many feel they have lost their sense of responsibility for taking care of themselves and have developed too much dependency on medical professionals (Light & Keller, 1979).

Giachello and associates (1981, 1982) argued that it was middle and upper-class families who initially began to depart from the longstanding tradition of self-care. With the economic resources to obtain outside medical care they became increasingly dependent on trained professionals and lost the self-confidence and skills necessary to care for themselves and others.

In recent years, studies indicate that self-care has again become more prevalent among the middle class (Danchik & Schoenborn, 1979; Fleming & Andersen, 1976). This group now appears eager to increase health knowledge, change personal health habits, and develop self-care skills. This participation has been described as a social movement (Fleming, Giachello, & Andersen, 1984; Levin & Lewis, 1976) in which the middle class is reacting to the: (a) increasing bureaucratization and professionalization of health care; (b) health providers'

dependency on medical technology; (c) politicization of medical institutions; (d) low level of quality of care; (e) inability of the medical care system to meet the demands and needs of certain segments of the population (e.g., inner city poor, rural residents, the chronically ill) (Aday, Andersen & Fleming, 1980); (f) feelings of helplessness and alienation; and (g) increasing cost of medical care. A number of common sense popular approaches to illness that worked in the past are now known to be consistent with good medical practice (Vickery & Fries, 1976). Furthermore, we now live in a "self-oriented" era in which individuals want to have more control over their lives, including their own health (Fleming & Andersen, 1976; Levin & Lewis, 1976). Recent empirical studies indicate that our most disabling and fatal illnesses are related to lifestyle and bad personal health habits (U.S. DHEW, 1979). There is also the belief that people are better off if they stay away from technology and health professionals (Fleming & Andersen, 1976).

Self-care practices were never initially deemphasized to the same extent among Hispanics and blacks (or any other disadvantaged group in our society) as these groups have been traditionally left out of the mainstream of American society because of their race, poverty status, and/or ethnic background. Part of the problem may be that Hispanics and blacks have been held in lower esteem, often physically segregated from the rest of society (e.g., living in ghetto areas), and tend to suffer from a disproportionate share of social and economic insecurity. Even though acculturation in the form of adopting the predominant behavioral patterns and language (in the case of Hispanics) does take place, structural assimilation (gaining access to American institutions, including the medical care system and health professional schools) continues to be difficult.

These groups have continued their long-standing traditions of taking care of their own health because medical services were never accessible, available, or

culturally relevant. While a series of social programs implemented in the 1960's and 1970's (e.g. Medicare and Medicaid, Migrant Health Centers, Rural Health Initiatives) did increase the availability of health services to the poor as well as to minority groups (Ahearn, 1979), empirical studies indicate that differences still exist in the source and patterns of health care received by these groups compared to middle-class whites (Aday, Andersen, & Fleming, 1980).

Moreover, Hispanics and blacks are more likely to engage in popular approaches to health care of curative measures. These health practices center around the family and traditional social values. They include the use of herbs, teas, and other home remedies and over-the-counter medications to treat childhood diseases, discomforts of pregnancy, stomach upsets, common colds, etc. A traditional support system built around relatives, friends, and neighbors has reinforced these practices through the provision of lay health advice, the availability of root doctors among blacks, and curanderos (faith healers) and comadres (godmothers) among Hispanics.

These two groups have been eager, rather than embarrassed, to share home remedies with one another for the treatment of illness. The use of nonprescribed home treatments is reinforced by the perception that such treatments produce better results than those prescribed by medical professionals. In the case of Hispanics, continued immigration and communication with relatives and friends from their native homelands maintains these practices. For Hispanics and blacks to trade their traditional health treatments for formal medical services, the latter must first be proven to be more useful (Giachello & Andersen, 1981; Giachello, Fleming & Andersen, 1982; Giachello, 1985).

In sum, it can be argued that the lack of resources with which to obtain formal medical care among Hispanics and blacks and their interest in maintaining traditional ethnic health practices are the two major factors inhibiting these groups from using and/or developing dependency on the formal medical care system. As a result, much of their health care can be described as falling within the domain of self-care.

II. THEORETICAL FRAMEWORK

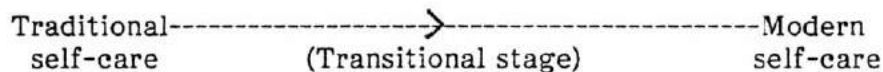
Our research project was guided by two theoretical frameworks: (a) the distinction between traditional and modern self-care activities; and (b) a typology of health care developed for this study.

Traditional Versus Modern Self-Care Practices

Traditional self-care activities refer to long-standing approaches to health care that consist primarily of curative measures oriented to somatic disorders and infectious disease and employ the use of herbs and other home remedies reflecting the health knowledge and beliefs of the American folk medical care system. This category also includes the use of over-the-counter medications which have become commonplace in our society. These practices reflect the traditional culture which has been passed on from one generation to another as part of the socialization process. They reflect attitudes and beliefs about health which are slow to change despite new scientific medical knowledge and technology. Some forces operating to preserve these activities include geographic barriers, lack of economic resources, a group's vested interest in its own traditions, and perceived efficacy of use.

Modern self-care activities refer to a series of new health practices geared primarily toward health maintenance and promotion. Many are geared to different sets of problems, namely chronic diseases. They include such activities as engaging in regular exercise (e.g., jogging), low fat diets, and the use of modern health appliances (e.g., blood pressure cuff). Modern self-care activities are the results of: (a) new medical knowledge linking lifestyle practices to health status; (b) new technology, making it possible for consumers to conduct home tests, such as pregnancy and diabetes tests; (c) new public expectations of longer and healthier life; and (d) changes in social ideologies wherein individuals want more control over their lives, including their health (Fleming and Andersen, 1976). In sum, modern self-care activities reflect current sociocultural changes based on new medical information and technology, life philosophy, and new health problems related to aging and chronic conditions.

It is important to keep in mind that traditional versus modern self-care activities represent "ideal types" of activities. They can be conceptualized as a simple linear continuum between traditional and modern poles:



As the individual adopts some of the behavior and values of modern types of self-care, he or she loses or rejects the behavior and values of the traditional type. During this process a large percentage of the populations in the "transitional stage" engaging in both types of self-care. There is some indication in the literature that ethnicity is associated with traditional self-care activities (Giachello and Andersen, 1981; Giachello, Fleming, and Andersen, 1982). Minorities are expected

to be more likely to engage in these types of practices, with the caveat that traditional versus modern self-care activities vary depending on levels of acculturation and assimilation into the mainstream of society.

However, the above linear model may be too simple for describing these phenomena because many individuals may participate in and value both traditional and modern self-care activities at the same time; or many self-care activities may have elements of both tradition and modernity.

Typology of Health Care

A typology of health care in Table I describes the health care strategies used by individuals and families to deal with their diverse health needs. It examines the total scope of individual patterns of health care and provides a framework for the study of different health resources available to an individual to deal with health and illness. It assumes a holistic view of health involving psychological, interpersonal, social, and spiritual aspects.

The health care behavior of individuals is cross classified in two dimensions. One dimension takes into consideration the health care behavior of individuals according to their health status (similar to Fleming, Sellers, and Andersen's Self-Care Behavioral Typology, 1980): a) no illness present or b) presence of an illness (classified as a benign or serious condition). For this study it was felt necessary to delineate the severity of illness condition since use of health resources may vary depending on the actual or perceived severity of the health condition. The typology then classifies health care activities by health resources available. For this study these health resources have been classified as: (a) primary helpers and (b) organizational helpers (see table 1).

The primary helpers are health resources available to individuals through their families, neighbors, workmates, schoolmates, and peers, or through the individual himself (assuming that the individual is his or her own "primary helper"). The services offered by primary helpers range from health and mental health advice, to the actual "care" of the ill one. The "healing power" (or health expertise) of the primary helpers is based on their self-care skills or health knowledge (knowledge of traditional, as well as non-traditional, non-Western alternative healing and preventive practices), on the one hand, or on their strong social bond and intimacy with the individual in need of this resource, on the other hand.

Organizational helpers are of two types: lay organizations and professional organizations. Lay organizations are natural lay groups or network systems of care services transcending kinship ties. Lay resources include the "institution" of folk healers; religious groups; a wide range of largely self-organized, self-directed educational, healing and social support groups (e.g., self-help and mutual aid groups); and other health-related community resources which directly or indirectly impact on the individual's health and mental health status. Providers of lay organizations can be considered "professionals" or "experts" with their source of expertise based on their life experience, non-medical training (e.g., ministry), or a different set of beliefs (e.g., folk or religious beliefs). Lay organizations are alternative service systems competing with and complementing the institutionalized professional helping systems.

Professional organizations are the second type of organizational helpers, and the third health resource available to the population. This resource is perhaps the most acceptable resource because it is society's most commonly recommended means of dealing with health and illness. Professional organizations primarily

function within the formal medical care system and providers of these services are trained personnel in their field. Their expertise is based on formal training and experience in the practice of medical care. Professional organizations follow the medical model of service delivery. They are more complex and bureaucratic than lay organizations and governance is in the hands of professionals rather than beneficiaries (clients). The governance of lay organizations resides with its members or clients (e.g., Alcoholics Anonymous) and the relationship with providers is open and informal. In other words, lay organizations differ from professional organizations in their organizational structure (informal and less complex than a bureaucratic system of services delivery); the nature of the relationship with provider (e.g., personal versus impersonal); and in the training and background of providers.

It is important to mention that, at times, a clear distinction between lay and professional organizations is not always possible because there are organizations which have elements of both types.

For the purpose of self-care analysis, primary helpers and organizational lay helpers are both self-care resources available to individuals and families. They can also both be instrumental in furthering self-care. In both of these resources it is possible for the individual or family to assume roles of giver (provider) or recipient of services, under different circumstances.

Types of health helpers can also move from one cell of the health care typology to another. For example, members of lay organizations can develop strong bonds of intimacy and friendship, and at times be more helpful than members of the ill person's family, thereby playing other roles that place them into the "primary helpers" category.

It is important to keep in mind that this typology is only an attempt to describe the different health resources available to individuals to take care of their diverse health needs. It is expected that the majority of the population will use both resources in a patterned manner over time for different types of health related conditions, while only a small segment of the population will only use self-care resources or only the formal medical care system.

Hypotheses

The purpose of this research project is the documentation of self-care practices among ethnic minorities relative to majority whites. The general theme which emerges from the literature review and as well as preliminary analyses (Giachello and Anderson, 1981; Giachello, Fleming, and Anderson, 1982) is that situational or opportunity factors (e.g., social economic status, family influence, barriers to care) appear to be associated with self-care activities. based on the review of the literature and on the theoretical framework described above, a list of the hypotheses to be tested evolved:

1. Groups which are not well integrated into the mainstream of society due to their race, poverty or cultural differences, such as Hispanics and blacks, are more likely than majority whites to engage in self-care activities in the presence of illness. For the same reason, Hispanics and blacks are least likely to engage in self-care activities for health maintenance and health promotion.

The literature on race relations documents that Hispanics and blacks have a minority membership status in our society because they have distinct physical and/or cultural characteristics held in low esteem by the majority white group. Consequently, they experience a series of social, economic and political

disadvantages. They have been kept out of the mainstream health care resources (e.g., formal medical care system), and have continued their long-standing traditions of engaging in self-care activities. For example, Andersen et al. in 1981b found that Hispanics in the Southwestern states were more likely than the total U.S. population to report the use of herbs and other home remedies to treat episodes of illness (21 percent compared to 12 percent). Studies on blacks have also documented widespread use of home remedies and over-the-counter medication (Murphee and Barrow, 1970; Polgar and Cowles, 1963). On the other hand, self-care activities for health maintenance and promotion such as jogging and weight control have been associated with middle-class behavior requiring a higher level of formal education and health awareness (U.S. DHEW, 1979).

2. The incidence of traditional self-care among Hispanics in the presence of illness varies according to sociocultural factors. The major effect is that of ethnicity, which may manifest itself by language use, health beliefs (locus of control), length of time in the community or family composition. For blacks, the incidence of traditional self-care in the presence of illness can partly be explained by social economic factors such as income and education, health insurance and general inconvenience in obtaining medical care.

Some preliminary studies among Hispanics in the area of self-care seem to indicate that sociocultural factors are associated with the use of home remedies and other activities labeled in this study as traditional self-care (Giachello and Andersen, 1981; Giachello, Fleming and Andersen, 1982; Stern and Giachello, 1977). The prevalence of these practices is due to such factors as the continued influx of Hispanics into this country and/or frequent travel by Hispanics to Latin-American countries, cultural pride and faith in traditional practices; health belief system; and the influence of family and social networks.

For blacks there appears to be evidence in the literature that economic factors and system characteristics (e.g., inconveniences in obtaining health care) seem to be associated with traditional self-care activities (Giachello et al., 1982b; Snow, 1974; Andersen, Giachello and Aday, 1986). Expected differences between Hispanics and blacks may be due to levels of acculturation (Hispanics are overall less acculturated into this country) and socioeconomic factors (e.g., blacks have a lower family income level than Hispanics).

3. The incidence of traditional self-care activities among ethnic groups varies by type (acute or chronic) and by severity of health condition or illness (benign or serious). Hispanics and blacks are more likely to engage in self-care activities to treat more severe health conditions than whites.

Due to problems of access to the formal medical care system it is expected that Hispanics and blacks will engage in self-care for the treatment of a variety of health conditions, particularly illnesses of a more serious nature for which formal medical care may not be accessible.

4. Within each ethnic group self-care for health maintenance and health promotion will occur more often among groups with higher levels of income and education.

Due to the diversity among and within all the ethnic groups, it is predicted that regardless of ethnicity, those groups with higher levels of education and income will be more likely to engage in health maintenance and promotion. It is assumed that people with higher socio economic status (SES) levels will participate more in the mainstream of society and have more exposure to the sociocultural changes in the last decade which have focused on lifestyle practices as a means to enhance one's health.

5. The use of the different types of health resources (self-care and formal medical care) varies across ethnic groups. Whites are more likely than minorities to engage in self-care as a supplement to the formal medical care system in both the presence and absence of illness. Hispanics and blacks are more likely than whites to use self-care in the presence and absence of illness as a substitute for the formal medical care system.

Following the line of thought developed by Fleming, Giachello and Andersen, 1984, it is argued that volume of medical services utilization and self-care is unrelated for whites who are most likely to use self-care resources as a means to enhance the efforts of professional helpers. The assumption is that self-care activities are perceived as optional by majority whites, and for that reason not necessarily a first choice.

On the other hand, due to problems of access to the formal medical care systems for blacks and Hispanics (e.g., low insurance coverage, geographic barriers), and a vested interest in perserving cultural practices, these groups will engage more in self-care activities as the only choice available, or the one they prefer most to take care of their health needs.

III METHODOLOGY

Secondary data analysis was conducted on two data sets: a) the 1976 national study on Access to Medical Care; and b) the 1981-82 Municipal Health Services Program (MHSP). These data sets were available through the Center for Health Administration Studies (CHAS), University of Chicago, and contain items which are relevant to the study of self-care. The MHSP is an evaluation research project of five municipal health facilities in five inner cities: Baltimore, Cincinnati,

Milwaukee, St. Louis, and San Jose. Originally, the Robert Wood Johnson Foundation and the Health Care Finance Administration provided grants to these health facilities to reorganize their services to better serve the medically disadvantaged and reduce "unnecessary" use of outpatient departments and emergency rooms of local municipal hospitals. These funding sources then gave CHAS a grant to evaluate the accomplishments of these municipal health facilities.

Data for this study was obtained through telephone interviews, screening for the adult (usually a female) who knew most about the health care of the family. Information was obtained on up to five members in the family. The final sample consisted of 1200 families representing both "users" and "nonusers" of the MHSP facilities. "Users" of a MHSP facility were those where at least one member of the family reported using the MHSP facility in the previous year. The "non-users" sample includes households in which no use of the MHSP clinics or hospitals was reported. (For a detailed description of the sampling procedure, see Andersen et al., 1981a.)

For purposes of this study, secondary data analyses were conducted only on three cities: Cincinnati, San Jose and Milwaukee, each with relatively high concentrations of minorities. Cincinnati has a high proportion of blacks (28 percent) compared to the national average (14 percent), but no Hispanics; Milwaukee and San Jose have relatively high concentrations of Hispanics. There were few blacks in the Milwaukee area surveyed and none appeared in our sample. San Jose showed the most ethnic diversity in addition to Hispanics, with blacks, American Indians, and Asians also represented. However, because of small numbers the latter were excluded from our analyses.

The sample sites do not represent entire cities or metropolitan areas rather, they were the central portions of Cincinnati and Milwaukee and the southeastern

portion of San Jose. According to population figures the largest area under study was San Jose with a total population of 92,000 followed by Milwaukee with 50,000, and Cincinnati with 36,000.

With regard to socioeconomic and demographic differences, Cincinnati has a high concentration of people of 65 years and older while San Jose has the highest concentration of young people; all of these sites are relatively low income. However, the Cincinnati area includes some pockets of somewhat affluent households, so overall average income is close to the national average.

The second data set analyzed was the 1976 National Survey on Access to Medical Care. This study was designed by the Center for Health Administration Studies (CHAS). The field work was conducted by the National Opinion Research Center (NORC), University of Chicago, during 1975-76 (Aday, Andersen and Fleming, 1980). Health data were collected on a probability sample of 7,787 persons representing the noninstitutionalized population in the U.S. The sample design included oversampling of three groups: people who experienced an episode of illness, rural southern blacks, and Hispanics (primarily Mexican-Americans) living in the Southwest. One adult and one child under 17 years of age living at home were randomly selected from 5,432 households in approximately 140 areas of the United States. A selected adult or adult proxy (usually the mother) was interviewed for the child. Health data were collected on access measures; health status, including information on an illness experience; health services utilization; and other related topics. For this study the main self-care measures analyzed with this data set were the use of nonprescribed home treatment and seeking lay consultation for health advice.

Most of the analysis in this 1976 study is limited to those who reported a relatively severe episode of illness that began during the year prior to the date of

the interview. As a means of identifying an episode of illness, respondents were asked the following questions:

During the past 12 months, did any illness or injury (except for pregnancy or pregnancy-related complications) cause you to stay in bed or cut down on your usual activities for 3 days or more in a row including times you may have been hospitalized?

Since (date 1 year ago) have you had any health problem or injury that has caused you a lot of pain or worry?

Respondents who answered yes to both the above questions were asked to provide specific information about those health conditions. If more than one condition was listed, the one that caused respondent the most worry (or the family, in the case of a child's illness) was chosen by the interviewer. According to this definition, 31 percent of the U.S. population experienced a relatively severe episode of illness (Fleming, Giachello & Andersen, 1984). The total number of respondents in the sample with such an episode of illness was 2,713.

Self-Care Measures

Using the MHSP data, self-care was defined as a series of personal health practices undertaken by respondents in the sample not necessarily in the presence of illness. The specific health practices include: eating nutritious meals, maintaining appropriate weight, taking care of teeth or dentures, getting sufficient exercise, and not smoking. Respondents in the MHSP sample were asked to judge if they were doing "very well," "fairly well" or "not well" in taking care of themselves with regard to these lifestyle practices. For the purpose of this study, self-care users are defined as those people who responded "very well" or "fairly well" to these practices.

One additional measure indicative of propensity to change or improve lifestyle practices was respondent's past participation in health education programs. Respondents in the sample were specifically asked if they had attended any classes, lectures or films or had talked with a physician about any of the following topics:

1. How to make meals more nutritious
2. How to keep at the appropriate weight
3. How to take care of teeth and dentures
4. Exercising
5. How to care for the health of a child
6. Methods of birth control and family planning (for females between the ages of 14 and 45 years old)
7. Specific illnesses such as cancer, heart disease, high blood pressure, diabetes

Self-care users were defined as those who responded positively.

Another self-care measure using the MHSP data is seeking preventive physical examination. Respondents were asked if they visited a doctor within the year for a physical examination or check-up.

For purposes of this investigation, all of the MHSP self-care measures are defined as "modern" self-care activities because these practices reflect sociocultural changes in our society emphasizing health maintenance and promotion.

Self-care behavior has been defined for the 1976 national survey on Access to Medical Care as the practice of any of the following activities around an episode of illness during the year in which the study took place: (1) use of over-the-counter medication (OTC), (e.g.aspirin, cold medicine, etc.) (respondents who reported

expenditures for obtaining nonprescribed medication but who failed to provide a positive response to the use of OTC on a series of "home remedies" questions in the survey are included in this group); (2) the use of homemade medicines (tea, herbs, baths, herbs for rubbing in the skin, bandages); (3) total "nonprescribed home treatment (NPHT)". An index was developed based on the summation of categories 1 and 2; and (4) seeking lay health advice about an illness or condition. Respondents who reported an episode of illness were asked if they sought lay advice within the household (i.e., spouse, children, relatives), or outside the household (i.e., friend, relatives, druggist). Seeking lay health advice about illness or condition is considered a self-care measure because the decision to either engage in self-care activities or to seek professional help is usually made through informed contacts with lay persons.

Self-care measures used with the 1976 data set were considered "traditional" self-care activities in the presence of illness, as they have been common health care approaches undertaken by individuals and family members to treat symptoms of illness and health conditions for many generations.

Other Dependent Variables: 1976 and MHSP Data

Other dependent variables analyzed with the 1976 and MHSP data sets measure utilization of the formal medical care system. Utilization variables include: (1) whether or not respondents saw a physician within a year, (2) the mean number of ambulatory M.D. visits for those respondents with medical visits, (3) whether or not the respondent was hospitalized during the year, (4) the mean number of hospital days for respondents who reported a hospitalization, and (5) seeking preventive physical examination. For the 1976 access study, seeking preventive, dental and optometric examinations were additional dependent

variables analyzed. Based on the typology of health care developed for this project, these variables were analyzed to explore the relationship between minority use of primary helpers during an episode of illness relative to use of the formal medical care system.

For the MHSP data, these variables were analyzed as a means of exploring the relationship between minority use of self-care for health promotion and maintenance relative to use of the formal medical care system.

For this study the main independent variable was ethnicity. For the 1976 study respondents were classified into the following categories: 1) whites, 2) urban blacks, 3) rural blacks, and 4) southwest Hispanics (from California, Texas, Arizona, New Mexico and Colorado). Using the 1980 U.S. Census definition, Hispanics are "those who defined themselves as being Puerto Rican, Cuban, Mexican, Mexican-American, Chicano, or being from Central or South America origin." Of 354 persons of Hispanic origin with an episode of illness, 86 percent were Mexican-American (primarily because sampling was done in the Southwest, the area with the highest U.S. concentration of Mexicans and Mexican-Americans), 14 percent cited Hispanic origin other than Puerto Rican or Cuban. The questionnaire was translated into Spanish, and Hispanic respondents were given the choice of being interviewed in Spanish or English. Whites, urban and rural blacks with an episode of illness numbered 1,965, 208 and 153, respectively.

The rationale for distinguishing between urban and rural blacks was based on the fact that studies have identified great barriers to access and utilization of health services in rural areas. Some of the most frequently mentioned include shortage of health professionals and limited availability of other medical resources (Aday, Andersen & Fleming, 1980). In addition, rural black residents have been described as being more traditional and skeptical about use of the formal medical

care system (Fleming & Andersen, 1976; Andersen, Kraultz & Anderson, 1975; Snow, 1974) and more receptive to using a lay person such as midwife for health care. Therefore, whether blacks living in rural areas were more likely to engage in traditional self-care activities than urban blacks was examined.

For some specific analyses using the 1976 data, blacks and Hispanics were merged into a new category labeled "ethnic minorities," particularly when the cells to be analyzed were small.

For the MHSP data, the ethnic group classifications were: whites, blacks and Hispanics. Again, Hispanic identification was based on the 1980 U.S. Census definition. As with the 1976 access study, the majority of Hispanics in the MHSP study were Mexican-American. In Milwaukee there were 92 Hispanics, of which 73 percent were Mexican-American, 22 percent Puerto Rican and 5 percent of other Hispanic groups. In San Jose there were 410 Hispanics of which 86 percent were Mexican-Americans, 3 percent Puerto Ricans and 11 percent of other Hispanic groups. The ethnic distribution in the different MHSP sample sites is as follows:

	White	Blacks	Hispanics
Cincinnati	524	414	--
Milwaukee	894	--	92
San Jose	515	--	410

Study Design and Analytic Tools

Multiple Classification Analysis (MCA) was the primary analytical procedure used for testing the hypotheses of this study using the 1976 study and the MHSP data sets. MCA is similar to dummy variable regression except that deviations are

expressed for each category of the predictor (independent) variables as deviation from the grand mean of the dependent variable. MCA permits the net effect of each predictor variable to be estimated through controls for differences in other correlated variables in the model. MCA was used to control for need and other (e.g, socioeconomic) factors that might account for differentials in self-care use for the ethnic groups. When each of the adjustment variables was entered separately the adjusted scores for the dependent variables are reported, as were their effects when combined with other factors, so that their respective contributions to explaining variations in the dependent variable (self-care measures) could be evaluated. The adjusted scores essentially suggest the level of self-care used by the ethnic population if everyone had the same characteristics. The SPSS ANOVA-MCA option was the statistical procedure used.

To correct for sample design all data sets analyzed in this report were weighted. For the 1976 data all statistics used were adjusted to correct for an estimated design effect of 1.83 which resulted from the deviation in sample design from a simple random sample. The design effect for ethnic minority was further adjusted by an additional 1.5 for blacks (urban and rural) and 2.7 for Hispanics to correct for oversampling of these groups (see Aday, Andersen & Fleming, 1980, appendix A & B). The adjustment of data was necessary so that results could represent the entire noninstitutionalized population.

Adjusted standard error of percentages obtained by the SPSS/ANOVA MCA procedure using as an example the 1976 data set was as follows:

$$\sqrt{\frac{P}{\text{weighted } n} \cdot Q \cdot 1.83 \text{ (Design Effect)} \cdot \begin{matrix} 1.5 \text{ (blks) or } 2.7 \text{ (Hisp)} \\ \text{or } 2.1 \text{ (ethnic minority)} \end{matrix}}$$

P = percentage Q = P-100

The adjusted standard error for the mean is:

$$\sqrt{\frac{\text{Total Mean}}{\text{unweighted N}} * 1.83 \text{ (Design Effect)} * 1.5 \text{ (blks) or } 2.7 \text{ (Hisp)} \\ \text{or } 2.1 \text{ (ethnic minority)}}$$

In our analyses differences in percentages which were greater than twice the adjusted standard error is significant at $p \leq .05$, or differences which were three time the adjusted standard error or significant at $p \leq .01$ are highlighted in the chapters on findings.

To test hypothesis 2, a series of regressions were conducted in order to examine the main effects of one or more independent variables (e.g., cultural, social class) on self-care measures. Regression analysis was used because the MCA procedure handles a limited number of variables.

For this analysis the SPSS Multiple Regression was employed, a statistical procedure which allows the examination of the effect on the dependent variables on each set of independent or predictor variables with others in the set controlled. Multiple regression requires either continuous or ordinal variables; however, nominal variables were included by classifying them as dummy variables.

The value of t obtained from the SPSS Multiple Regression was adjusted to correct for an estimated design effect (any procedure used that may have deviated from a random sample). The adjusted SPSS t was computed as follows:

$$\text{Adj. t} = t \text{ SPSS} \sqrt{\frac{1}{\text{design effect}}}$$

The design effect varied by ethnic group. Findings at $P \leq .05$ or $P \leq .01$ levels of significance were reported in the hypotheses testing as well as any consistent pattern of relationships between independent variables and self-care measures.

MHSP data were weighted to adjust for the differential sampling of user and non-user families so that the results of analyses could be generalized to the catchment area, the central city areas with populations varying from approximately 20,000 to 80,000 people with telephones. The design effect (called here design factor) varied by survey site. The design effect for Cincinnati whites was 1.25 and 1.45 for blacks. The design effect for Milwaukee whites was 1.2 and 1.3 for Hispanics, and the design effect for whites and Hispanics in San Jose was 1.3.

Finally, adjustments of standard error (S.E.) of percentages obtained by either the MCA procedure or by cross-tabulation were as follows:

$$\text{Adj. S.E. of Percentage} = \sqrt{\frac{P Q}{\text{Unweighted number of cases}}} * \text{Design Effect}$$

Standard error of differences in percentages or mean for each category were computed by applying the following formula:

$$\sqrt{(S.E.)^2_a + (S.E.)^2_b}$$

See Aday et al. (1980: Appendix B) for a more detailed explanation of this formula.

In sum, this section has provided a general description of this study's data sets, self-care measures, and analytical procedures. The subsequent section reports selected findings.

IV SUMMARY OF FINDINGS

Traditional self-care

The ethnic minority population in our 1976 sample is compared with the white majority in terms of demographic, illness and socioeconomic characteristics in Table 4. This table reveals that the Hispanic population is the youngest group with

a median age of 25. Hispanics and rural blacks reported the lowest level of education. Urban blacks and southwest Hispanics were least likely to be linked to a regular source of medical care. All of the ethnic groups are comparable in terms of health concern.

Table 5 shows the percent use of traditional self-care activities measured by the use of over-the-counter medication (OTC), homemade treatment (HT), nonprescribed home treatment (NPHT), and the seeking of lay consultation (LC). Of all people with a relatively severe illness, 24 percent reported the use of at least one kind of NPHT. The percentage reporting use of specific kind of NPHT such as OTC medication was 19 percent and 7 percent for HT. The vast majority of those with an illness reported consulting with someone regarding their condition (70 percent).

No significant differences emerged among our ethnic population on the reporting of these activities. This resulted in the rejection of hypothesis 1 (see table 19).

Due to this finding, the impact of sociocultural factors (e.g., health beliefs, family size, language, family composition), socioeconomic factors (e.g., education and family income) and system characteristics (e.g., inconveniences in obtaining medical care, health insurance, and regular source of health) were examined in a multivariate analyses (see Table 6). The results indicate that traditional health beliefs (locus of control) were significantly related to use of NPHT among whites and southwest Hispanics. Nuclear family composition was related to seeking lay consultation for Hispanics and whites, while extended family system was significantly related to the use of any NPHT, specifically HT for Hispanics. Length of time living in the community was also positively associated with the use of homemade treatment for whites and lay consultation for urban blacks.

Findings on the impact of socioeconomic characteristics revealed that lack of a regular source of medical care was significantly associated with the use of NPHT and HT for rural blacks, while barriers causing one to delay in seeking a M.D. or not to see one at all, as well as low family income, were associated with the use of OTC, HT and lay consultation for urban blacks. These findings on the impact of sociocultural, socioeconomic and system characteristics supported hypothesis # 2. For blacks, the incidence of traditional self-care in the percent of illness can be partly explained by socioeconomic factors and/or system characteristics.

In examining the impact of medical needs on the use of traditional self-care activities (See Table 7 through 10) it was found that regardless of ethnicity, people engaged in self-care to treat acute rather than chronic conditions. The acute illnesses were in most cases of benign nature as opposed to serious. This finding was also supported by the analysis of a second indicator of medical need, a severity of illness index developed by a panel of medical experts. People in our study, regardless of ethnicity engaged in self-care activities for less health problems. These health problems were of a preventive nature not requiring medical consultation, or they were health problems for which a physician was consulted for symptom relief. There was an indication in the data, that this pattern was not necessarily true for rural blacks who increasingly used NPHT for severe health conditions and to treat illnesses for which a physician must be seen.

With regards to seeking lay consultation, this discretionary behavior appears more often regarding chronic conditions as opposed to acute ones. This pattern was not as clear when the severity of illness measure was analyzed.

The findings on medical needs as they relate to traditional self-care led to the rejection of the hypothesis # 3. According to this hypothesis blacks & Hispanics were expected to self-care inappropriately by treating more severe

health conditions than whites. Although there were indications that this may be true for rural blacks, findings were not statistically significant.

The relationship between utilization of health services and traditional self-care activities was also examined in Tables 11 through 18 for different utilization variables. Findings indicate that regardless of ethnicity, self-care users use formal medical care less, indicating that self-care serves as a substitute. This provided partial support to hypothesis # 5. This pattern however, was not true for ethnic minorities who sought preventive physical, dental and eye examination.

Self-care Activities for Health Maintenance and Health Promotion

Table 20 provides some basic descriptive information about the ethnic population in the MHSP study. This table reveals that the subsample populations overall are relatively older with higher median age than the median age of these populations nationwide, although Hispanic samples are slightly younger, with larger family size than whites in the same areas. Hispanics and blacks both have lower levels of education and are less likely to have health insurance coverage than whites in the same community. In addition, whites from Cincinnati and Hispanics from Milwaukee were least likely to have a regular source of medical care. The data in Table 20 clearly indicate that we are dealing with an economically disadvantaged population, as over 40 percent of the sample were poor at the time of the study. The incidence of low family income seems to be most pronounced among blacks in Cincinnati. A higher percentage of ethnic minorities than whites reported having poor or fair health. No differences were reported in concern about health among our ethnic groups.

Findings in Table 21 indicate that over 40 percent of the sample populations reported doing "very well" in taking care of themselves for most of the lifestyle

practices under study. Over 50 percent reported doing "very well" in taking care of teeth or dentures, while between 20 to 30 percent reported dissatisfaction with their current weight and the amount of exercise they regularly engage in. The white ethnic majority was as likely as minority groups to do well in most lifestyle practices, with the exception of Hispanics, who, according to the data, reported smoking less than majority whites.

Findings on health education in Table 22 indicate that respondents have not been exposed as often as some experts in the field find desirable. The reported percentage was as low as 13 percent for classes on nutrition and child care for whites in Cincinnati to as high as 29 percent for blacks who took classes on exercising. Findings across ethnic groups demonstrated that blacks participated more than any other group, while no differences emerged between Hispanics and whites, except for classes on specific illnesses for which whites reported more participation.

Findings on seeking of preventive examinations (see Tables 23 and 24) show that Hispanics and rural blacks were less likely than whites to engage in this behavior. But findings were only significant for rural southern blacks with regard to preventive dental examination, the only support evident for hypothesis # 1 (see table 45).

The relationship between modern self-care activities and socioeconomic factors, measured by levels of education, income, and the poverty level index (see tables 25 through 36) indicate that people of higher education and income were found most likely to engage in self-care. This relationship was particularly clear for measures of health education and seeking of preventive examination. This finding supported hypothesis 4 (see table 45) which predicted that self-care for health maintenance and health promotion will occur more often among groups with higher levels of education and income.

Finally, the relationship between self-care measures and use of formal medical care was explored on tables 37 through 44. Findings indicate that those who participated in health education activities or who sought preventive examinations used health services more. This indicates that these types of activities tend to encourage the use of the formal medical care system.

DISCUSSION

Traditional Self-Care Activities

One consistent finding that emerged from this study is that determinants of self-care in the presence of illness are quite different for the three ethnic groups. For the ethnic minorities, in particular, enabling and predisposing variables appeared to be more important predictors of self-care activities than for whites. Whites use self-care mostly as a response to level of need, whereas for ethnic minorities self-care behavior is more apt to be influenced by personal and family characteristics and economic issues such as barriers to using the formal medical-care system. However, caution is needed in the interpretation of these findings due to small cell sizes and large standard errors.

One particular concern is the lack of significant differences in prevalence of self-care practices among ethnic groups. Several explanations can be provided. First, the ethnic minorities in this sample may have been acculturated to the point of losing many of their traditional health practices. The influence of the mass media, for example, may have had a dramatic impact. Or perhaps minority membership status is of less impact on the practice of self-care.

Second, neither Hispanics nor blacks are a homogeneous group as often perceived. The majority of Hispanics studied in this sample were Mexican-Americans. Perhaps the self-care behavior of this group is different from Cubans and Puerto Ricans, or among sub-groups of Mexican Americans, as has been the

case with reference to health status and health services utilization (Trevino & Moss, 1984; Giachello & Andersen 1986).

A third explanation for the lack of differences in self-care practices among the ethnic groups may be related to the nature of the data set. For example, the 1976 study was originally designed to measure access to formal medical services rather than traditional self-care behavior. Therefore, key self-care indicators were limited.

A final explanation is that perhaps some Hispanics and blacks did not engage in traditional self-care activity as a result of discouragement by medical practitioners. Some activities may be strongly invalidated by medical knowledge and are thought of as being based on superstition by health professionals, showing disregard and lack of respect for traditional practices proven to be effective in treating certain health problems among these groups.

Another concern is the few differences found in the study between urban and southern blacks. A distinction between urban and southern blacks was considered necessary because previous studies have identified great barriers to access and utilization of health services in rural areas. Particularly important are shortage of health professionals and limited availability of health facilities (Aday et. al., 1980). In addition, rural black residents have been described as being more traditional and skeptical about use of the formal medical-care system (Fleming et al., 1976; Kravitz, 1975; Snow, 1974). However, our findings do not reveal clear differences between urban and rural blacks in reference to self-care in the presence of illness. There was some indication in the data, however, that rural southern blacks use nonprescribed home treatment to treat more serious kinds of health conditions, and to treat health problems for which seeing a physician is highly recommended or

mandatory. The findings also point to the fact that rural southern blacks are least likely to seek preventive physical and dental examinations, which may be explained by the access problem.

Finally, our findings show that self-care in the presence of illness serves as a substitute for medical care. This is particularly true for ethnic minorities. This is a very important finding as self-care is viewed with new hope by government, consumers, and researchers because of its potential impact on improving the health status of the population while reducing utilization of health services, and medical expenditures. For blacks, both urban and rural, the study shows that self-care in illness is used because of access problems in obtaining care through the formal medical-care system. The fact that southern blacks use nonprescribed home treatment for serious health conditions raises ethical and medical issues about the patient's ability to self-diagnose, monitor and self-treat conditions which require medical attention, and about self-care in illness as the only alternative available to a particular group.

Modern Self-Care Activities

The results of this study pertaining to health promotion activities provide some interesting findings. It was quite surprising that blacks and Hispanics were as likely as majority whites to report doing well in the different lifestyle practices considered. Middle-class whites were predicted to do considerably better than ethnic minorities. There are a series of explanations for these findings. First, since the information analyzed in this study is based on self-reporting data, there was no way to validate the information given by the respondents. Therefore, there may be a margin of error, as people may want to believe they are doing well taking care of themselves and are engaging in the "right" health habits.

Second, the fact that in some cases ethnic minorities with low socioeconomic status were engaging in lifestyle practices such as weight control and exercise, may be related to cultural factors. Traditionally, exercise and weight control have often been given a class connotation. For example, exercise has been perceived as a "lower class" behavior and associated with low status occupations which required physical labor. Workers may perceive these types of jobs as ones providing sufficient exercise. In addition, weight-lifting, basketball, and even boxing, are sports that ethnic minorities, particularly blacks, have been actively involved in and may be culturally determined, as they may be perceived as related to "machismo."

Being overweight has traditionally been associated with abundance and with the image of beauty among Hispanics and blacks. This leads to increased acceptance of obesity by these groups. The perception of maintaining proper weight may be based on a minority group's standards of proper behavior which differ from the majority's. The findings that better educated blacks and Hispanics are "doing well" in health practices may be indicative of desires to "fit in," to be part of the mainstream of things characteristic of the middle-class way of life.

Third, the possible role of the media in their increased efforts to expose the public to health concerns should be acknowledged. The role of the media may very well explain the relative high percentage of respondents who reported doing well in lifestyle practices. Perhaps with the epidemic of Acquired Immune Deficiency Syndrome (AIDS), the public is now demanding more health information from the media. New medical knowledge of issues such as smoking, cholesterol, and other high-risk factors have led to a more responsive media.

It was a surprise to find that relatively few people reported participating in health education activities. Efforts by health providers and community-based

health and human services organizations are apparently not as effective as expected in reaching out and educating the public, partly because sufficient funding has not been allocated for this purpose. With the AIDS epidemic and need for proper community awareness and education, for the first time, the state and city health departments are reaching out to the poor and ethnic minorities and allocating resources for effective intervention. There are also new initiatives such as the Office of Minority Health based on the Secretary of Health Task Force Report on Black and Minority Health (U.S. DHHS, 1985). Monies are becoming available for programs on obesity, lack of exercise, and salt intake related to cardiovascular conditions, diabetes, and high blood pressure, which affect ethnic minorities in a disproportionate way.

In the current era where lifestyle is considered the main barrier to preventing illness, the poor and ethnic minorities are at an economic disadvantage deprived of the education, health services, and other preventive measures necessary for health promotion. Information and services which improve the public's health, such as health clubs, screening programs, magazines and books, and classes for exercise and relaxation, must be purchased. The Hispanic and other minority communities have limited hope of achieving the health benefits currently envisioned for the American people. Not only do the recent governmental cutbacks create education/employment barriers to better health, but they also reduce the provision of basic health programs.

The aim of self-care is to engage the individual in a socialization process by which the person can develop greater responsibility for his or her own health, and competent participation in self-care alongside professional care. However, it can be argued that the promotion by the government of health as "everybody's business" represents an ideology with political and financial motives. The poor and the ethnic

minorities need to be educated. Modern self-care is, therefore, less likely to be valued or adopted by people with limited financial or educational resources.

The examination of personal health practices as they relate to health outcomes should be conducted with caution. For the poor and ethnic minorities there are often structural conditions beyond the control of the individual. Poverty, environmental, and occupational risks are the primary causes of most illnesses for these groups. There is a danger in touting personal health practice as the main mode of prevention to solve the health needs of most Hispanics and blacks.

V RECOMMENDATIONS

The data on ethnic differences in this analysis is far from ideal, but it provides useful information on how ethnic groups compare to whites in the different self-care activities in the presence or absence of illness. More studies are needed in this area to explore minority group status and social economic factors. There is a need to conduct surveys where both types of self-care activities (traditional and modern) can be examined more closely, and in the same data set, the prevalence of these behaviors, the motives and belief systems, as well as their relationship with the use of the formal medical-care system can also be studied.

Because of the limitation of the data sets used, it was difficult to test all the cells that the theoretical framework developed for this study calls for.

Studies focusing on Hispanics must include samples of ethnic subgroups (e.g., Cubans, Puerto Ricans, etc.) because of the diversity of these groups and their differential health status and health services utilization.

The issue of self-care as it relates to health services utilization and medical expenditure must be examined both in the presence and absence of illness because of policy implications.

There is also a need to examine self-care as it relates to the issue of access to health care, particularly today, with changes in Medicaid and Medicare, the closing of small hospitals due to financial difficulties, and the increase in medical indigency. Access to health care is a critical issue more than ever, and this may have a great impact on self-care.

Finally, educational research is necessary. With increased emphasis on health education, there is a need to study the effectiveness of different health education strategies for the poor and ethnic minorities within an approach that is sensitive to cultural and social-economic differences.

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TABLE 1
 TYPOLOGY OF HEALTH CARE

Health Status	Health Resources		
	Primary Helpers	Organizational Helpers	
		Lay Organizations	Formal Organizations
NO ILLNESS	<p>EXAMPLES:</p> <p><u>Providers:</u> -self -spouse -friend -neighbor -relatives -workmates</p> <p>health-related community resources</p> <p><u>Services:</u> -daily care -health information -advice about good care, etc.</p>	<p><u>Providers:</u> -religious groups -folk healers -self-help & mutual aid groups -druggist -midwife -grass-roots</p> <p><u>Services:</u> -advocacy -social support -lay consultation -health services (prev.) -psychological testing</p>	<p><u>Providers:</u> -M.D. -nurses -other personnel of the medical care system -Professional Human Services organization staff</p> <p><u>Services:</u> -preventive exams -health information and education -psychiatric evaluation</p>
ILLNESS a) benign b) serious	<p><u>Providers:</u> (Same as above)</p> <p><u>Services:</u> -first aid -health and mental health advice -suggestion for/or preparation of home remedies -emotional support -actual "care" of the ill one -referral information</p>	<p><u>Providers:</u> (Same as above)</p> <p><u>Services:</u> -lay consultation -health information -social support -health services -social services -first aid</p>	<p><u>Providers:</u> (Same as above)</p> <p><u>Services:</u> -treatment of illness -health education about illness -referral -social services</p>

TABLE 2

TYPOLOGY OF HEALTH CARE: CELLS TO BE TESTED IN THE STUDY¹

Health Status	Health Resources		
	Primary Helpers	Organizational Helpers	
		Lay Organizations	Formal Organizations
NO ILLNESS	<u>MHSP DATA</u> -personal health practices: -eating nutritious food -weight control -smoking habit -frequent exercise -caring for teeth or dentures -past participation in health education		<u>1976 DATA</u> -preventive physical exams -preventive dental exam -preventive optometry exam <u>MHSP DATA</u> -preventive physical exams -past participation in health education
ILLNESS a) benign b) serious	<u>1976 DATA</u> -use of homemade treatment -OTC medication -lay consultation	<u>1976 DATA</u> -lay consultation	<u>1976 & MHSP DATA</u> -MD contact -mean number of visits to MD -Hospitalization within a year -mean number of hospital days

¹See Methodology Chapter for description of cells.

TABLE 3

HYPOTHESES TESTING

List of Hypotheses	1976	MHSP	Dependent Variables	Independent Variables
1. Hispanics and blacks are more likely than whites to engage in S/C in the presence of illness. They are less likely to engage in health maintenance and health promotion.	X	X	NPHT, OTC, HT, LC ¹ -Lifestyle practices	
2. For Hispanics, self-care activities in the presence of illness are most likely to be explained by sociocultural factors while for blacks social class is relatively more significant.	X		NPHT, OTC, HT, LC	-Language, health beliefs family composition, length of time in community; Income, education
3. S/C varies by type (acute/chronic) and severity of illness. Hispanics and blacks engage more in S/C to treat severe health conditions than whites.	X		NPHT, OTC, HT, LC	-kind of health condition -severity of illness
4. Within each ethnic group S/C for health maintenance will occur most often among groups with higher levels of income and education.	X		Lifestyles, Health education	-education -income
5. Whites are most likely to use self-care in the presence and absence of illness as a supplement to the formal medical care system; Hispanics and blacks are most likely to use S/C as a substitute to formal care in the presence or absence of illness.	X	X	MD Contact Mean # of MD visits Inpatient care Mean # of hospital days	NPHT, OTC, HT, LC Lifestyle practices

¹NPHT = prescribed home treatment; OTC = over-the-counter medication; HT = homemade treatment; LC = lay consultation. Lifestyle or personal health practices refer to: eating nutritious meals, weight control, exercising, dental care and smoking habits. See methodology chapter for descriptions.

TABLE 4
 SELECTED CHARACTERISTICS OF THE ETHNIC GROUPS UNDER STUDY,
 1976

Characteristics	Whites	Urban Blacks	Rural Blacks	Southwestern Hispanics	Total U.S. Population
Mean Age	34	30	33	25	32
Mean Number of Years in Community	12	10	17	10	11
% Family Head With At Least a High School Education	32	32	18	20	29
Percent Without Health Insurance	12	17	24	30	16
Percent Without a Regular Source of Health Care	12	16	11	14	12
Percentage With an Episode of Ill- ness	33	31	20	25	31
Percentage Report- ing At Least Some Worry About Health	25	25	27	22	25
N Sample With An Episode of Illness	1965	208	153	354	2713
N Entire Sample	5241	592	630	1219	7787

TABLE 5

PERCENT USE OF TRADITIONAL SELF-CARE ACTIVITIES DURING THE PRESENCE OF AN ILLNESS
 AMONG U.S. WHITES, URBAN BLACKS, RURAL BLACKS, AND HISPANICS
 FROM THE SOUTHWEST, 1976

Ethnic Group	Traditional Self-Care											
	Use of Any Nonprescribed Home Treatment (NPHT)		Specific Kind of Nonprescribed Home Treatment									
	Unadjusted	Adjusted ¹	Over-the-Counter (OTC)			Homemade Treatment (HT)			Lay Consultation (LC)			
Whites	24 (1.3)	24 (1.3) ²	19 (1.2)	19 (1.2)	6 (0.7)	6 (0.7)	71 (1.4)	71 (1.4)	71 (1.4)	71 (1.4)	71 (1.4)	71 (1.4)
Urban Blacks	26 (5.1)	25 (5.0)	20 (4.6)	19 (4.5)	9 (3.3)	9 (3.3)	60 (5.6)	60 (5.6)	60 (5.6)	60 (5.6)	60 (5.6)	60 (5.6)
Rural Blacks	22 (5.6)	22 (5.6)	15 (4.8)	15 (4.8)	10 (4.0)	10 (4.0)	62 (6.5)	62 (6.5)	62 (6.5)	62 (6.5)	62 (6.5)	62 (6.5)
Southwestern Hispanics	21 (4.9)	22 (5.0)	15 (4.3)	15 (4.3)	10 (3.6)	11 (3.7)	71 (5.4)	71 (5.4)	71 (5.4)	71 (5.4)	71 (5.4)	71 (5.4)
Total	24 (1.1)		19 (1.0)	19 (1.0)	7 (0.7)	7 (0.7)	70 (1.2)	70 (1.2)	70 (1.2)	70 (1.2)	70 (1.2)	70 (1.2)

¹All tests are standardized for age, sex, and severity of illness condition.

²Standard errors include design effect of 1.83. Standard errors for Blacks were multiplied by an additional 1.5. Standard errors for Southwestern Hispanics were multiplied by an additional 2.7. Standard errors of percentages were calculated by applying the following formula:

$$\frac{PQ}{\text{Unweighted \# of Cases}} \quad * \text{Design Factor } 1.83 \quad \text{P=percentage} \quad \text{Q=100-P}$$

TABLE 6
 STANDARDIZED REGRESSION COEFFICIENTS FOR PREDISPOSING AND ENABLING FACTORS
 REGRESSED ON THE SELF-CARE MEASURES DURING AN EPISODE OF ILLNESS
 AMONG THE DIFFERENT ETHNIC GROUPS, 1976

Variables	Whites				Urban Blacks				Rural Blacks				S. W. Hispanics			
	NPHT	OTC	HT	LC	NPHT	OTC	HT	LC	NPHT	OTC	HT	LC	NPHT	OTC	HT	LC
Predisposing Factors																
Sex1	-.03	-.04*	-.00	-.04*	-.11	-.10	-.07	.04	-.05	-.18	-.09	-.01	.09	.08	.13	-.07
Age2	-.02	-.01	-.05*	-.02	-.01	.01	.01	-.21**	-.17	-.20	-.02	-.15	.02	.03	.08	-.03
Residence3	.02	.01	.04*	-.03	NA	NA	NA	NA	NA	NA	NA	NA	.05	.05	-.02	-.12
Family Composition4																
Alone	.02	.01	.04	-.10**	.06	.08	-.07	-.07	.00	.07	-.18	-.14	.01	.00	.00	-.02
Couple	-.01	-.02	.01	.00	.04	.06	.01	-.02	.09	.09	.00	.07	-.05	.03	-.12	-.18*
Extended	-.02	-.02	.00	-.04*	-.03	.07	.11	.03	.27	-.22	-.17	-.12	-.16*	.04	.31**	-.07
Single parents	-.01	-.02	.03	-.05**	-.05	.02	-.17*	-.12	-.08	-.05	-.14	-.17	.00	-.01	.03	-.24**
Nuclear (the base)																
Health knowledge5	-.02	-.03	.02	.00	-.02	.05	-.05	-.05	.14	.23	-.08	.09	-.17*	-.09	-.15*	-.05
Health beliefs6	.05**	.03	.06**	-.01	-.04	-.06	-.01	.07	.13	.00	.19	.09	-.18*	.11	.13	.00
Family size7	.01	.02	-.02	-.01	.03	.03	-.02	-.01	.03	-.03	-.06	-.15	-.03	.08	-.13	-.23**
Length of time in Community8	-.02	.01	.05**	-.01	-.04	-.03	-.01	-.20**	.11	.01	.13	-.13	-.05	-.01	-.10	.04
Language Use9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.01	.02	-.05	-.01
Enabling factors																
Family income10	-.03	.02	.03	-.02	.06	.14	-.21**	.01	-.03	.01	.02	-.06	-.03	.03	-.02	.00
Education11	-.03	.02	.05	.01	.09	.11	.07	-.12	-.09	-.03	-.16	-.07	-.03	-.04	-.04	-.20*
Regular source of care12	-.05*	-.03	-.03	-.03	.00	-.06	.01	.05	-.17	-.01	-.30*	-.09	.05	.02	.01	.14
Barriers in delaying or not seeing him13																
Health insurance14	-.02	-.03	.01	.07*	.05	.12*	.12*	.04*	-.14	-.10	-.09	-.02	.01	-.02	.06	.02
Intercept (constant)	-.01	-.02	-.01	.04*	-.17**	-.08	-.20**	-.06	.03	.05	-.04	.10	-.09	-.12	.06	.05
	.22	.19	.02	.79	.29	.04	.40	.86	.63	.27	.66	1.3	.15	.11	.18	1.2
R2	.01	.01	.02	.02	.06	.08	.09	.12	.17	.21	.29	.14	.12	.05	.18	.13

*Regression coefficient is significant at $p < .05$. The significant test was adjusted for the design effect according to the following formula:

$$t_{\text{adjusted}} = t_{\text{SPSS}} \sqrt{\frac{1}{\text{design effect}}}$$

**Regression coefficient is significant at $p < .01$

1 Sex was a binary variable coded as 1 for males and 0 for females.

2 Age is a continuous variable.

3 Residence variable was coded as 1 for urban areas and 0 for rural areas.

4 Family composition is a categorical variable with "nuclear family" category used as the comparison group.

5 "Health knowledge" was coded as 1 for low levels of health knowledge and 0 for high levels. See definition of health knowledge in the methodology section.

6 Health beliefs was coded as 1 for high levels of control (or traditional health beliefs) and 0 for low levels of health control (or non-traditional health beliefs).

7 Family size was treated as an ordinal variable, values ranged from 3 or less, 4-6, or 7 or more members.

8 This is a continuous variable.

9 Language was a binary variable coded as 1 for English and 0 for mainly Spanish or both.

10 Family income was treated as an ordinal variable ranking from low to high levels of income.

11 Education was treated as an ordinal variable ranking from low to high levels of education.

12 Regular Source of Medical Care is a binary variable coded as 1 for yes and 0 for no.

13 Barriers in delaying or not seeing an M.D. for the episode of illness was a nominal variable coded 1 for barriers and 0 for other reasons for delaying or not seeing M.D. during illness. See methodology section for definition of this variable.

14 Health insurance coverage is a binary variable coded 1 for yes and 0 for none.

15 Non applicable because respondents were not asked the questions related to language usage.

TABLE 7

PERCENT USE OF ANY NONPRESCRIBED HOME TREATMENT (NPHT)
BY KIND AND SEVERITY OF HEALTH CONDITION, 1976

Characteristics ¹	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Kind of health condition ²					
acute	26 (1.1)*	29 (6.0)	21 (6.7)	23 (5.6)	26 (1.1)
benign	35 (2.4)*	42 (8.7)*	19 (8.4)	34 (9.6)	35 (2.0)
serious	19 (2.0)	14 (7.1)	24 (11.0)	15 (7.1)	18 (1.7)
chronic	19 (1.9)	14 (8.5)	22 (10.1)	18 (9.4)	19 (1.3)
Severity of condition ³					
Preventive care or M.D. care makes no difference	42 (4.7)**	52 (18.1) ^a	23 (16.4) ^a	50 (20.0)	43 (5.4)
Symptom relief from MD	30 (2.5)	36 (9.2)*	15 (8.7)	26 (20.0)	30 (2.8)
Should see MD	21 (2.3)	12 (6.9)	13 (8.6)	18 (8.9)	20 (2.6)
Must see MD	13 (2.0)	17 (8.9)	34 (11.6)	10 (6.6)	13 (2.3)
TOTAL	24 (1.3)	25 (5.0)	22 (5.5)	22 (4.9)	24 (1.1)

¹All tests are adjusted for age, sex, and severity of illness. For the severity of illness indicator, the controlled variables in the analyses are only age and sex.

²Acute health condition was classified as benign or serious. Benign acute conditions are those short-term illnesses in which medical care would not have been necessary or could only assist in symptom relief. Serious conditions are then short-term illnesses in which medical care is necessary. See Methodology Chapter for additional details.

³Severity of illness is an index developed by a panel of medical experts in which illness were classified as: a) those for which medical care will make no difference or where MD can only provide preventive care; b) conditions for which an MD can only provide relief; conditions in which the panel of experts feel that an MD should be consulted; and illnesses in which MD must be seen.

^aNumber of unweighted observations were less than 25.

*Significant at $p \leq .05$ when "acute" condition is compared to "chronic," or "benign" acute condition is compared to "serious," acute conditions; or when "symptom relief" category was compared to the "should see M.D." category.

**Significant at $p \leq .01$ compared to those conditions for which a M.D. should be seen or consulted.

TABLE 8

PERCENT USE OF OVER-THE-COUNTER MEDICATION (OTC) BY KIND
AND SEVERITY OF HEALTH CONDITION, 1976

Characteristics ¹	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Kind of health condition					
Acute	21 (1.4)**	21 (5.4)*	15 (5.9)	14 (4.8)	21 (1.0)
Benign	29 (2.3)**	33 (8.3)	15 (7.6)	21 (8.2)	29 (1.9)
Serious	13 (1.7)	6 (4.8)	16 (9.5)	10 (5.9)	12 (1.4)
Chronic	17 (2.4)	12 (7.9)	11 (7.6)	18 (9.4)	17 (1.7)
Severity of condition					
Preventive care or M.D. care makes no difference	39 (4.6)**	24 (15.4) ^a	19 (15.3) ^a	43 (20.0)	39 (5.3)
Symptom relief from MD	24 (2.3)	35 (9.1)*	11 (7.6)	15 (7.4)	25 (2.7)
Should see MD	15 (2.0)	9 (6.1)	10 (7.7)	11 (7.1)	14 (2.2)
Must see MD	9 (1.7)	6 (5.6)	20 (9.8)	9 (6.2)	9 (2.0)
TOTAL	19 (1.2)	19 (4.5)	15 (4.8)	15 (4.2)	19 (1.0)

¹For explanation of variables, see Footnote, Table 7.

^aNumber of unweighted observations were less than 25.

*Significant for urban blacks at $p \leq .05$ when "acute" conditions were compared to the "chronic" category, or when "symptom relief" category was compared to "should see MD" or "must see MD" categories.

**Significant at $p \leq .01$ for whites when "acute" conditions were compared to the "chronic" category, or when benign acute conditions were compared to serious acute conditions, or when "preventive care category was compared to either "should see" or "must see MD" categories.

TABLE 9
 PERCENT USE OF HOMEMADE TREATMENT (HT) BY KIND
 AND SEVERITY OF HEALTH CONDITION, 1976

Characteristics ¹	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Kind of health condition					
Acute	7 (0.9)	12 (4.3)	10 (4.9)	12 (4.5)	7 (0.7)
Benign	9 (1.4)	15 (6.3)	9 (6.1)	20 (8.1)	10 (1.3)
Serious	6 (1.2)	7 (5.2)	10 (7.8)	7 (5.0)	6 (1.1)
Chronic	3 (1.1)	2 (3.4)	10 (7.3)	2 (3.4)	3 (0.8)
Severity of condition					
Preventive care or M.D. care makes no difference	7 (2.4)	29 (16.4) ^a	7 (10.0) ^a	23 (16.8)	9 (3.1)
Symptom relief from MD	9 (1.5)	11 (6.0)	9 (7.0)	15 (7.4)	9 (1.8)
Should see MD	7 (1.4)	2 (3.0)	3 (4.4)	9 (6.5)	6 (1.5)
Must see MD	5 (1.3)	11 (7.4)	17 (9.2)	2 (3.0)	5 (1.5)
TOTAL	7 (0.8)	9 (3.3)	10 (4.0)	11 (3.7)	7 (0.7)

¹For explanations of variables see Table 7.

^aNumber of unweighted observations were less than 25.

TABLE 10

PERCENT WITH A LAY CONSULTATION BY KIND
AND SEVERITY OF HEALTH CONDITION, 1976

Characteristics ¹	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Kind of health condition					
Acute	69 (2.4)	59 (6.6)	61 (8.0)	70 (6.5)	68 (1.9)
Benign	71 (2.3)	64 (8.5)	58 (10.5)	74 (8.9)	70 (1.4)
Serious	69 (2.4)	56 (10.1)	68 (12.1)	66 (9.4)	68 (2.1)
Chronic	77 (2.7)	67 (11.5)	68 (11.4)	75 (10.7)	76 (3.1)
Severity of ³ condition					
Preventive care or M.D. care makes no difference	67 (4.5)*	34 (17.1) ^a	59 (19.2) ^a	81 (15.7)	65 (3.9)
Symptom relief from MD	73 (2.4)	70 (8.8)	57 (12.1)	72 (9.4)	67 (2.1)
Should see MD	74 (2.4)	63 (10.2)	69 (11.8)	70 (10.6)	67 (2.2)
Must see MD	65 (2.9)	54 (5.7)	63 (11.8)	71 (10.0)	65 (2.4)
TOTAL	71 (1.4)	61 (5.7)	62 (6.5)	71 (5.4)	70 (1.2)

¹For explanation of variables see Table 7.

^aNumber of unweighted observations were less than 25.

*Significant at $p \leq .05$ when compared to the "symptom relief from MD" and "should see MD" categories.

TABLE 11

PERCENT OF THE ETHNIC POPULATION WHO CONTACTED A PHYSICIAN
WITHIN A YEAR¹ BY THE USE OF NONPRESCRIBED HOME
TREATMENT AND LAY CONSULTATION DURING AN
EPISODE OF ILLNESS, 1976

Adjusted self-care Measures ²	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Any NPHT used					
Yes	90 (1.9)*	91 (6.5)	91 (8.8)	91 (7.0)	90 (1.5)**
No	95 (0.8)	98 (1.9)	96 (2.6)	94 (3.2)	95 (0.7)
Over-the-counter Medication Used					
Yes	89 (2.2)*	90 (7.9)	88 (11.0) ^a	88 (9.5)	89 (1.9)**
No	95 (0.7)	98 (1.6)	96 (2.6)	94 (6.9)	95 (0.7)
Homemade Treatment Used					
Yes	89 (3.7)	97 (6.2) ^a	85 (18.7) ^a	100 (3.6)	91 (2.7)
No	94 (0.7)	96 (2.4)	96 (2.7)	92 (3.4)	94 (0.5)
Lay Consultation					
One or more	94 (0.9)	96 (2.9)	94 (4.1)	93 (3.6)	94 (0.7)
No consultation	94 (1.3)	97 (3.1)	97 (3.6)	96 (4.4)	94 (1.0)
TOTAL	94 (0.7)	96 (2.3)	95 (2.9)	93 (3.0)	94 (0.6)

¹Information obtained from the question, "Did you see or talk to a doctor about your health anytime this year?"

²Tests are standardized for age, sex and severity of illness.

^aBased on fewer than 25 unweighted observations.

*Significant at $p \leq .05$

**Significant at $p \leq .01$

TABLE 12

MEAN NUMBER OF M.D. VISITS¹ FOR THOSE WHO REPORTED A CONTACT WITH A PHYSICIAN WITHIN A YEAR BY THE USE OF NONPRESCRIBED HOME TREATMENT AND LAY CONSULTATION DURING AN EPISODE OF ILLNESS, 1976

Adjusted self-care Measures ²	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Any NPHT Used					
Yes	6.58(0.7) ³	9.34(3.9)	6.51(2.9)	6.05(2.3)	6.77(0.6)
No	7.27(0.4)	8.96(2.2)	7.01(1.3)	8.00(1.2)	7.39(0.3)
Over-the Counter Medication Used					
Yes	6.71(0.8)	10.08(4.6)	6.31(3.3) ^a	6.26(2.8)	7.04(0.9)
No	7.20(0.4)	8.82(2.1)	6.81(1.3)	7.82(1.2)	7.27(0.3)
Homemade Treatment Used					
Yes	5.56(1.3)	10.00(5.3) ^a	6.28(5.3) ^a	5.24(3.3)	6.17(1.0)
No	7.21(0.2)	8.95(2.0)	6.84(1.2)	7.89(1.1)	7.40(0.3)
Lay Consultation					
One or more	6.91(0.4)	8.88(2.5)	5.95(1.5)	7.46(1.3)	7.02(0.3)
No Consultation	7.60(0.6)	9.36(3.0)	8.43(1.9)	7.91(2.1)	7.74(0.5)
TOTAL	7.11(0.3)	9.05(1.9)	6.90(1.2)	7.61(1.1)	7.23(0.3)

¹Mean number of MD visits were obtained in response to the question, "How many of each of the following kinds of visits were there with a doctor during the past 12 months? Telephone calls? House calls? Visits to a doctor's office or other medical facility other than when respondent was a patient overnight?"

²See Footnote 2 on Table 11.

³Standard errors of the means were calculated by applying the following formula:

$$\sqrt{\frac{\text{Total Mean}^2}{\text{Unweighted N}} * 1.83 \text{ (design effect)} * 1.5 \text{ (Blks) or } 2.7 \text{ (Hisp)}}$$

^aBased on fewer than 25 unweighted observations.

TABLE 13

PERCENT OF THE ETHNIC POPULATION WHO WAS HOSPITALIZED WITHIN
A YEAR¹ BY THE USE OF NONPRESCRIBED HOME TREATMENT
AND LAY CONSULTATION DURING AN EPISODE OF ILLNESS,
1976

Adjusted self-care Measures ²	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Any NPHT Used					
Yes	18(2.4)*	28(10.2)	29(14.0)	24(10.4)	14(1.7)**
No	26(1.5)	32 (6.3)	37 (7.3)	28 (6.1)	27(1.2)
Over-the-Counter Medication Used					
Yes	18(2.7)*	31(12.3)	28(15.2)	19(11.4)	11(2.0)
No	25(1.5)	31 (6.0)	36 (7.1)	28 (5.9)	26(1.2)
Homemade Treatment Used					
Yes	16(4.4)	15(12.9) ^a	21(21.3) ^a	32(17.0)	18(3.7)
No	25(1.4)	33 (5.7)	36 (6.7)	26 (5.5)	26(1.2)
Lay Consultation					
One or more	24(1.6)	27 (6.7)	31 (8.0)	27 (6.3)	25(1.4)
No consultations	23(2.4)	36 (8.7)	41(10.6)	30(10.4)	25(2.1)
Total	24(1.3)	31 (5.4)	35 (6.4)	27 (5.3)	25(1.1)

¹Information based on response to the question, "Were you a patient overnight in the hospital during the past 12 months?"

²See Footnote 2 on Table 11.

^aPercentage based on fewer than 25 unweighted observations.

*Significant at $p \leq .05$.

**Significant at $p \leq .01$.

TABLE 14

UTILIZATION OF HEALTH SERVICES WITHIN A YEAR BY THE USE OF NONPRESCRIBED HOME TREATMENT AND LAY CONSULTATION DURING AN EPISODE OF ILLNESS, 1976

Adjusted Self-Care ¹	Whites					Ethnic Minorities				
	% MD Contact ²	Mean # MD Visits ³	% Inpt. Care ⁴	Mean # Hosp. Days ⁵	% MD Contact	Mean # MD Visits	% Inpt. Care	Mean # Hosp. Days		
Any NPHT used?										
Yes	90(1.9)	6.58(0.7)	18(2.4)	12.57(3.0)	91(4.1)	7.94(2.6)	27(9.4)	9.93(11.2)		
No	95(0.9)	7.27(0.4)	26(1.5)	12.12(1.2)	96(3.3)	8.38(1.4)	31(5.4)	11.06(4.6)		
Over-the-Counter Medication Used?										
Yes	89(2.2)	6.71(0.8)	18(2.7)	11.87(3.3)	89(7.7)	8.54(3.1)	27(11.0)	10.97(7.2) ^a		
No	95(0.7)	7.20(0.4)	25(1.5)	12.14(1.2)	96(2.2)	8.23(1.3)	31(5.2)	10.83(4.5)		
Homemade Treatment Used?										
Yes	89(3.7)	5.56(1.3)	16(4.4)	12.57(6.5) ^a	97(5.6)	7.84(4.0)	24(14.1)	7.50(11.9) ^a		
No	94(0.7)	7.21(0.2)	25(1.4)	12.22(1.1)	95(2.3)	8.33(1.3)	31(5.0)	11.08(4.3)		
Lay Consultation										
One or more	94(0.9)	6.91(0.4)	24(1.6)	10.44(1.3)	94(3.0)	7.97(1.5)	27(5.7)	11.73(5.4)		
None	94(1.3)	7.60(0.6)	23(2.4)	16.41(1.9)	97(3.0)	8.84(2.1)	35(4.7)	9.21(6.9)		
Total	94(0.7)	7.11(0.3)	24(1.3)	12.18(1.1)	95(2.2)	8.28(1.1)	30(4.7)	10.85(3.7)		

¹See footnote 2 in Table 11.

²See footnote 1 in Table 11.

³See footnote 1 in Table 12.

⁴See footnote 1 in Table 13.

⁵Refer to the number of nights altogether that respondents stayed in a hospital during the past 12 months.

*Significant at $p \leq .05$.

^aFewer than 25 unweighted observations.

TABLE 15

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A
PREVENTIVE PHYSICAL EXAMINATION,¹
USE OF NONPRESCRIBED HOME TREATMENT DURING
AN EPISODE OF ILLNESS, 1976

Adjusted self-care Variables ¹	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Any NPHT²					
Yes	25 (2.7)	34 (10.9)	29 (14.2)	10 (7.4)	25 (2.3)
No	27 (1.6)	24 (5.8)	33 (7.1)	19 (5.4)	26 (1.3)
Over-the-counter Medication Used					
Yes	25 (3.0)	30 (12.3)	35 (16.5) ^a	13 (10.0)	24 (2.6)
No	28 (1.5)	26 (5.7)	31 (6.9)	18 (5.1)	26 (1.3)
Homemade Treat- ment Used					
Yes	29 (5.4)	29 (16.4) ^a	10 (15.7) ^a	7 (9.4)	26 (4.2)
No	26 (1.4)	26 (5.4)	34 (6.7)	18 (4.9)	26 (1.2)
Lay Consultation					
One or more	28 (1.7)	28 (6.8)	28 (7.8)	20 (5.7)	27 (1.4)
No consultation	24 (2.4)	23 (7.6)	39 (10.7)	9 (6.6)	23 (2.0)
TOTAL	26 (0.8)	28 (4.1)	32 (6.2)	17 (4.4)	26 (1.1)

¹ Respondents who reported a preventive physical exam because "it was time to have one" were compared to those who reported not having one, having their last exam more than a year from the time of the study, having a physical exam in the presence of symptoms of illness, or having an exam because the respondent's job, insurance, school or camp required one.

² All tests standardized for age, sex, and self-perceived health.

^a Based on fewer than 25 unweighted observations.

TABLE 16

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A PREVENTIVE
DENTAL EXAMINATION, BY THE USE OF
NONPRESCRIBED HOME TREATMENT DURING AN
EPISODE OF ILLNESS, 1976

Adjusted self-care Variables ¹	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Any NPHT Used					
Yes	9 (1.8)	9 (6.6)	0 (-)	5 (5.4)	10 (1.6)
No	9 (1.0)	2 (1.9)	1 (1.5)	9 (3.9)	9 (0.9)
Over-the Counter Medication Used					
Yes	9 (2.0)	6 (6.4)	0 (-) ^a	8 (8.0)	10 (1.8)
No	9 (1.0)	4 (2.5)	1 (1.5)	8 (3.6)	9 (0.8)
Homemade Treat- ment Used					
Yes	12 (3.9)	12 (11.7) ^a	0 (-) ^a	2 (5.3)	11 (3.0)
No	8 (0.9)	3 (2.1)	1 (1.4)	9 (3.6)	9 (0.8)
Lay Consultation					
One or more	8 (1.0)	5 (3.3)	2 (4.7)	10 (4.3)	9 (0.9)
No Consultation	10 (1.7)	2 (2.5)	0 (-)	2 (3.2)	9 (1.3)
TOTAL	11 (0.6)	8 (2.6)	1 (1.3)	8 (3.2)	9 (0.7)

¹Respondents who reported at least one visit to the dentist within a year for teeth cleaned or examined or for a dental x-ray only were compared to those who reported not visiting a dentist at all or who visited a dentist for dental treatment such as teeth filled or inlays.

²See footnote 2 on Table 15.

^aBased on fewer than 25 unweighted observations.

TABLE 17

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A PREVENTIVE OPTOMETRIC EXAMINATION¹ BY THE USE OF THE NONPRESCRIBED HOME TREATMENT DURING AN EPISODE OF ILLNESS, 1976

Adjusted ² self-care Variables	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Any NPHT Used					
Yes	8 (1.7)	22 (9.5)	16 (11.5)	12 (8.1)	9 (1.5)
No	11 (1.1)	10 (4.1)	5 (3.3)	12 (4.5)	10 (0.9)
Over-the-Counter Medication Used					
Yes	7 (1.8)	20 (10.8)	9 (9.9) ^a	14 (10.3)	8 (1.6)
No	11 (1.1)	11 (4.1)	7 (3.8)	12 (4.3)	10 (0.9)
Homemade Treatment Used					
Yes	15 (4.3)	41 (17.8) ^a	21 (21.3) ^a	21 (15.1)	19 (3.8)
No	10 (3.6)	10 (3.7)	5 (3.1)	11 (4.0)	9 (0.8)
Lay Consultation					
One or more	10 (1.1)	14 (5.3)	20 (5.7)	10 (4.3)	10 (0.9)
No consultations	10 (1.7)	11 (5.7)	9 (6.6)	18 (8.8)	10 (1.4)
TOTAL	11 (0.6)	12 (2.6)	7 (3.4)	12 (3.8)	10 (0.8)

¹Preventive optometric exams excluded visits for which the primary reason was to get eyeglasses, contact lenses or any other eye treatment.

²See Footnote 2 on Table 15.

^aBased on fewer than 25 unweighted observations.

TABLE 18

PERCENT OF THE ETHNIC POPULATION WHO HAVE OBTAINED PREVENTIVE EXAMINATIONS BY USE
OF NONPRESCRIBED HOME TREATMENT DURING AN EPISODE OF ILLNESS

	Whites				Minorities		
	Percent Preventive Physical ²	Percent Preventive Dental ³	Percent Preventive Optometric ⁴	Percent Preventive Physical	Percent Preventive Dental	Percent Preventive Optometric	
Any NPHT Used							
Yes	25 (2.7)	9 (1.8)	8 (1.7)	25 (13.1)	7 (7.7)	18 (11.7)	
No	27 (1.6)	9 (1.0)	11 (1.1)	22 (6.9)	4 (3.3)	10 (5.0)	
Over-the Counter Medication Used							
Yes	25 (3.0)	9 (2.0)	7 (1.8)	25 (15.3)	6 (8.4)	17 (13.3)	
No	28 (1.5)	9 (1.0)	11 (1.1)	23 (6.8)	5 (3.5)	11 (5.0)	
Homemade Treatment Used							
Yes	29 (5.4)	12 (3.9)	15 (4.3)	18 (8.0)	7 (12.0)	31 (21.7)	
No	26 (1.4)	8 (0.9)	10 (3.6)	23 (6.5)	5 (3.4)	10 (4.6)	
Lay Consultation							
One or more	28 (1.7)	8 (1.0)	10 (1.1)	24 (7.8)	7 (4.6)	11 (5.7)	
No consultation	24 (2.4)	10 (1.7)	10 (1.7)	21 (10.2)	2 (3.5)	13 (8.4)	
TOTAL	26 (0.8)	11 (0.6)	11 (0.6)	23 (6.2)	5 (3.2)	12 (4.8)	

¹See Footnote 2 in Table 15.

²See Footnote 1 in Table 15.

³See Footnote in Table 16.

⁴See Footnote 1 in Table 17.

TABLE 19

RESULTS OF HYPOTHESES TESTING -- 1976 DATA

List of Hypotheses	1976	Results
1. Hispanics and blacks are more likely than whites to engage in S/C in the presence of illness. They are least likely to engage in health maintenance and health promotion.	X	Rejected
2. For Hispanics, self-care activities in the presence of illness are most likely to be explained by sociocultural factors while for blacks socioeconomic factors are relatively more significant.	X	Confirmed
3. S/C varies by type (acute/chronic) and severity of illness. Hispanics and blacks engage more in S/C to treat severe health conditions than whites.	X	Rejected
4. Within each ethnic group S/C for health maintenance will occur most often among groups with higher levels of income and education.	X	Not applicable
5. Whites are most likely to use self-care in the presence and absence of illness as a supplement to formal medical care; Hispanics and blacks are most likely to use S/C as a substitute to formal care in presence or absence of illness.	X	Partially supported for Hispanics and Blacks

TABLE 20

SELECTED CHARACTERISTICS OF THE ETHNIC GROUPS UNDER STUDY, 1981-82

Characteristic	Cincinnati			Milwaukee		San Jose	
	White	Blacks	White	Hispanic	White	Hispanic	
Mean Age	44	44	44	40	44	36	
Mean Family Size	2.5	3.3	2.6	3.7	2.2	3.9	
% Main Wage Earner with 13+ years of education	41	25	23	21	53	20	
% Without Health Insurance	10	14	8	12	8	17	
% Without a Regular Source of Health Care	15	10	17	24	17	17	
% With Low Family Income	45	59	49	51	42	45	
% Who Perceive Their Health Fair or Poor	19	32	18	25	17	35	
% With At Least Some Worry About Health	28	29	28	27	25	23	
N Sample	524	415	894	92	515	414	

TABLE 21

PERCENT OF THE ETHNIC POPULATION 17 YEARS OF AGE OR OVER BY HOW WELL THEY ARE DOING IN PERSONAL HEALTH PRACTICES FOR CINCINNATI, MILWAUKEE AND SAN JOSE, 1981-82

Types of Personal ¹ Health Practices	Cincinnati			Milwaukee			San Jose		
	White	Blacks	Hispanics	White	Hispanics	Whites	Hispanics	Whites	Hispanics
Eating nutritious meals									
Very Well	44 (3.7) ²	48 (4.3)	46 (9.1)	43 (2.8)	46 (9.1)	42 (3.6)	40 (4.3) ³	42 (3.6)	40 (4.3) ³
Fairly Well	44 (3.7)	42 (4.5)	43 (9.3)	48 (2.7)	43 (9.3)	48 (3.8)	39 (4.3) ⁺	48 (3.8)	39 (4.3) ⁺
Not Well	12 (4.3)	10 (5.4)	11 (8.9) ^a	9 (3.4)	11 (8.9) ^a	10 (4.6)	22 (5.3) ⁺	10 (4.6)	22 (5.3) ⁺
Maintaining proper weight									
Very well	41 (3.9)	36 (4.8)	44 (9.2)	42 (2.8)	44 (9.2)	40 (4.0)	35 (4.4)	40 (4.0)	35 (4.4)
Fairly Well	40 (3.8)	37 (5.0)	38 (9.5)	38 (2.8)	38 (9.5)	35 (3.9)	35 (4.6)	35 (3.9)	35 (4.6)
Not Well	20 (4.1)	25 (4.6)	17 (9.6) ^a	20 (3.2)	17 (9.6) ^a	25 (4.4)	30 (4.8)	25 (4.4)	30 (4.8)
Sufficient exercising									
Very Well	39 (3.7)	43 (4.6)	43 (9.4)	46 (2.7)	43 (9.4)	35 (3.8)	34 (4.5)	35 (3.8)	34 (4.5)
Fairly Well	39 (3.8)	34 (5.0)	31 (10.3)	38 (2.9)	31 (10.3)	44 (4.0)	35 (4.6) ⁺	44 (4.0)	35 (4.6) ⁺
Not Well	23 (4.5)	22 (4.6)	25 (9.0)	16 (3.2)	25 (9.0)	21 (4.4)	31 (4.6) ⁺	21 (4.4)	31 (4.6) ⁺
Dental care									
Very Well	64 (2.9)	52 (4.0) ⁺	52 (7.8)	60 (2.3)	52 (7.8)	61 (3.1)	55 (3.8)	61 (3.1)	55 (3.8)
Fairly Well	29 (4.1)	41 (4.8) ⁺	41 (9.6)	34 (2.9)	41 (9.6)	34 (4.2)	33 (4.6)	34 (4.2)	33 (4.6)
Not Well	6 (4.3)	7 (4.9)	6 (10.6) ^a	5 (3.3)	6 (10.6) ^a	5 (4.4)	12 (5.0)	5 (4.4)	12 (5.0)
Smoking habit									
Yes	37 (3.8)	45 (4.4) ⁺	27 (10.1) ⁺	40 (2.8)	27 (10.1) ⁺	34 (4.2)	24 (4.6) ⁺	34 (4.2)	24 (4.6) ⁺
No	63 (3.3)	55 (3.7)	73 (6.2)	60 (2.3)	73 (6.2)	66 (2.9)	76 (2.8) [*]	66 (2.9)	76 (2.8) [*]

¹To correct for the sample design all data analyzed were weighted.

²Standard Errors (S.E.) of percentages were calculated by applying the following formula:

$$\sqrt{\frac{PQ}{\text{Unweighted \# of cases}} \cdot \text{Design Effect}} \quad P = \text{Percentage} \quad Q = 100 - P$$

The design effect estimates vary by city and ethnic group. For Cincinnati, the design effect for Whites is 1.25, for blacks is 1.45; for Milwaukee: Whites 1.20, Hispanics 1.30; for San Jose: the design factor for both whites and Hispanics were 1.30.

³At times percentages do not add up to 100% because of rounding of decimals.

*significant from whites at $p < .05$

+difference from whites at one standard error

^apercentaged based on less than 25 unweighted observations

TABLE 22

PERCENT OF THE ETHNIC POPULATION 17 YEARS OF AGE AND OVER WHO REPORTED
PAST PARTICIPATION IN HEALTH EDUCATION FOR
CINCINNATI, MILWAUKEE AND SAN JOSE, 1981-82

Past Participation in Health Education on: ¹	Cincinnati		Milwaukee		San Jose	
	Whites	Blacks	Whites	Hispanics	Whites	Hispanics
Nutrition	13 (1.6)	28 (2.6)**	14 (1.3)	17 (4.4)	17 (1.9)	17 (2.1)
Weight Control	24 (2.1)	28 (2.6)	21 (1.5)	28 (5.2)	25 (2.2)	22 (2.3)
Exercising	19 (1.9)	29 (2.6)*	22 (1.5)	23 (4.9)	30 (2.3)	25 (2.4)
Dental Care	22 (2.0)	24 (2.5)	22 (1.5)	23 (4.9)	30 (2.3)	23 (2.4)
Child Care	13 (1.6)	20 (2.4)*	14 (1.3)	20 (4.6)	18 (1.9)	20 (2.2)
Family Planning/ Birth Control ²	17 (2.4)	28 (3.6)*	24 (2.0)	33 (6.2)	31 (2.9)	27 (2.9)
Specific Illness	22 (2.0)	27 (2.6)	24 (1.6)	13 (3.9)*	26 (2.2)*	16 (2.1)**

¹All data were adjusted for age, sex, and self-perceived health.

²The information on family planning and birth control methods were only obtained from persons between the ages 14 and 45 years old.

**statistically significant from whites at $p \leq .01$.

*statistically significant from whites at $p \leq .05$.

TABLE 23

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A
 PREVENTIVE PHYSICAL EXAMINATION¹ IN THE
 ABSENCE OF ILLNESS, 1981-82

Cincinnati		
Whites	51	(2.4)
Blacks	55	(2.9)
Milwaukee		
Whites	54	(1.8)
Hispanics	48	(5.9)
San Jose		
Whites	47	(2.5)
Hispanics	40+	(2.7)

¹Information obtained from the question, "When was the last time you had a general physical examination or check-up?" People who had a physical exam within a year were included in the analysis.

+Percentage different from whites at one standard error of the difference.

TABLE 24

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED PREVENTIVE
PHYSICAL, DENTAL, AND OPTOMETRIC EXAMINATIONS¹
1976

	Preventive Physical Exam ^{2,3}		Preventive Dental Exam ⁴		Preventive Optometric Exam ⁵	
Whites	26	(0.8) ⁶	11	(0.6)	11	(0.6)
Urban Blacks	28	(4.1)	8	(2.6)	12	(2.6)
Rural Blacks	27	(3.3)	4	(1.7)*	8	(1.6)
Southwestern Hispanics	19	(4.6)+	7	(3.0)+	9	(3.3)
Total U.S. Population	26	(0.7)	10	(0.5)	11	(0.5)

¹These findings are based on the 1976 access study.

²All tests are standardized for age, sex, and self-perceived health.

³See Footnote 1, Table 15.

⁴See Footnote 1, Table 16.

⁵See Footnote 1, Table 17.

⁶Standard errors include design effect of 1.83. Standard errors for urban and rural blacks were multiplied by an additional 1.5, and those for southwestern Hispanics were multiplied by an additional 2.7.

+Percentage different from white at one standard error.

*Significant difference from whites at $p \leq .05$.

TABLE 25

PERCENT OF THE ETHNIC POPULATION 17 YEARS OF AGE AND OVER
BY HOW WELL THEY DO IN EATING NUTRITIOUS MEALS BY
SELECTED SOCIOECONOMIC CHARACTERISTICS, 1981-82

Socioeconomic Status ¹	Very Well	Fairly Well	Not Well	Very Well	Fairly Well	Not Well
	Cincinnati					
	White				Black	
Education ²						
11 Yrs or less	53(7.0)	30(7.6)*	17(8.8) ^a	50(7.1)	38(8.0)	12(9.0) ^a
12 Yrs or more	41(4.3)	48(4.1)	11(5.3)	47(5.4)	44(5.4)	9(6.8)
Family Income ³						
Low	45(5.5)	43(5.5)	12(6.5)	54(5.2)+	34(6.2)*	11(7.1)
Middle/High	42(4.9)	45(4.9)	13(6.4)	37(7.3)	57(6.3)+	7(7.7) ^a
Poverty Level ⁴						
< 1.25	48(7.6)	38(7.2)	14(8.5) ^a	50(6.1)	39(7.3)	12(8.3) ^a
1.25-2.99	48(5.6)	44(5.9)	8(6.8) ^a	49(7.3)	39(6.9)	12(9.0) ^a
3 times poverty	36(6.2)	48(6.1)	16(8.2)	41(10.7)	57(9.8)	2(9.6) ^{a+}
Total	44(3.7)	44(3.7)	12(4.3)	48(4.3)	42(4.5)	10(5.4)
	Milwaukee					
	White				Hispanics	
Education ²						
11 Yrs or less	43(4.7)	45(4.8)	12(7.0)	64(11.7) ^{a+}	58(12.0) ^a	26(17.2) ^a
12 Yrs or more	43(3.1)	49(3.2)	8(4.2)	30(12.7) ^a		13(15.6)
Family Income ³						
Low	42(3.9)	46(3.8)	12(5.4)	45(12.7) ^a	40(13.2) ^a	15(13.6) ^a
Middle/High	44(3.8)	49(3.7)	7(4.8)	46(13.0)	46(13.0)	8(11.7)
Poverty Level ⁴						
< 1.25	39(5.2)	49(4.9)	12(7.3) ^a	58(13.6)+	38(14.3) ^a	4(10.1)
1.25-2.99	41(4.4)	48(4.2)	11(5.6)	33(13.8) ^a	50(13.8) ^a	17(15.1) ^a
3 times poverty	49(4.6)	46(4.2)	4(3.7) ^a	52(21.6)	37(24.6)	11(28.1) ^a
Total	43(2.8)	48(2.7)	9(3.4)	46(9.1)	43(9.3)	11(8.9) ^a
	San Jose					
	White				Hispanics	
Education ²						
11 Yrs or less	46(8.5) ⁴	6(8.9)	8(10.9) ^a	45(5.6)	31(6.2)+	24(7.4)+
12 Yrs or more	42(4.1)	48(4.2)	10(5.0)	35(6.7)	46(5.8)	19(7.4)
Family Income ³						
Low	52(5.2)	39(6.4)	10(7.0) ^a	43(6.4)	36(6.4)	21(8.1)
Middle/High	36(5.0)	54(4.7)	10(6.1)	37(5.9)	41(5.8)+	22(6.7)+
Poverty Level ⁴						
< 1.25	50(7.0)	42(8.2)	8(7.7) ^a	41(7.0)*	37(6.7)	22(8.5)+
1.25-2.99	44(6.7)	45(7.3)	11(8.9) ^a	42(6.9)	33(7.7)	25(8.7)+
3 times poverty	31(5.3)	52(5.3)	10(7.0)	36(9.8)	46(7.7)	17(10.4) ^a
Total	42(3.6)	48(3.8)	10(4.6)	40(4.3)	39(4.3)+	22(5.3)+

¹Data was adjusted for age, sex and self-perceived health

²Levels of education were defined as the number of years of education completed by the chief wage earner at the time of the study.

³Based on the total family income reported by the respondents in 1981. Income was categorized into low (\$7999 or less) or middle/high (\$8,000+).

⁴Was calculated as the total family income reported from all sources to the poverty level cutoff for the respondent's type of family. See Methodology chapter for details.

^aPercentage based on less than 25 unweighted observations.

+Percentage different from white at 1 standard error of difference.

*Significant at $p < .05$.

TABLE 26

PERCENT OF THE ETHNIC POPULATION 17 YEARS OF AGE AND OVER
 BY HOW WELL THEY ARE MAINTAINING PROPER WEIGHT BY
 SELECTED SOCIOECONOMIC CHARACTERISTICS FOR
 CINCINNATI, MILWAUKEE, AND SAN JOSE, 1981-82

Socioeconomic Status ¹	Very Well	Fairly Well	Not Well	Very Well	Fairly Well	Not Well
	Cincinnati					
	White			Black		
Education						
11 Yrs or less	39(7.9)	33(7.8)	28(8.2)	40(8.0)	29(8.3)	31(8.2)
12 Yrs or more	41(4.5)	42(4.4)	17(4.6)	37(6.1)	40(6.1)	23(5.5)
Family Income						
Low	39(6.0)	35(5.9)	26(5.9)	37(6.1)	39(6.5)	23(6.0)
Middle/High	42(5.1)	44(5.0)	15(5.7)	39(7.9)	33(7.6)	28(7.0)
Poverty Level						
< 1.25	37(8.7)	32(7.9)	31(7.5)	29(6.9)	46(7.6)	25(6.8)
1.25-2.99	44(5.8)	38(6.1)	18(6.7)	45(7.9)	30(7.6)	25(7.4)
3 times poverty	40(6.5)	46(6.2)	14(7.1)	42(11.4)	33(12.1) ^a	25(11.1) ^a
Total	41(3.9)	40(3.8)	20(4.1)	38(4.8)	37(5.0)	25(4.6)
	Milwaukee					
	White			Hispanic		
Education						
11 Yrs or less	33(5.3)	45(4.9)	23(5.7)	52(12.7) ^a	33(13.4) ^a	15(12.3) ^a
12 Yrs or more	46(3.4)	36(3.4)	18(3.9)	38(13.0) ^a	43(13.3) ^a	19(14.9) ^a
Family Income						
Low	43(4.0)	38(4.0)	19(4.7)	40(12.0) ^a	46(13.4) ^a	15(13.6) ^a
Middle/High	42(4.0)	39(4.0)	20(4.5)	49(13.4) ^a	31(13.2) ^a	20(13.8) ^a
Poverty Level						
< 1.25	36(5.6)	43(5.1)	21(6.0)	47(14.2) ^a	42(15.0) ^a	10(12.9)
1.25-2.99	44(4.5)	37(4.6)	19(5.3)	35(14.5) ^a	40(14.0) ^a	26(15.8) ^a
3 times poverty	45(4.9)	37(5.1)	18(5.8)	58(19.9)	30(26.1)	12(21.4) ^a
Total	42(2.8)	38(2.8)	20(3.2)	44(9.2)	38(9.5)	17(9.6) ^a
	San Jose					
	White			Hispanic		
Education						
11 Yrs or less	43(9.5)	34(9.1)	23(9.8) ^a	38(5.8)	30(6.6)	32(6.7)
12 Yrs or more	40(4.4)	35(4.3)	25(4.9)	32(6.6)	40(6.4)	28(6.8)
Family Income						
Low	41(6.1)	35(5.9)	23(6.7)	41(6.3)	26(6.9)	33(7.3)
Middle/High	40(5.2)	34(7.4)	26(6.8)	30(6.0)	42(6.1)	27(6.2)
Poverty Level						
< 1.25	39(8.7)	31(7.3)	29(8.5)	39(7.0)	25(7.4)	36(7.6)
1.25-2.99	42(7.0)	44(7.4)	14(8.1) ^a	36(8.6)	39(7.7)	25(8.1)
3 times poverty	40(5.8)	32(5.9)	28(6.4)	29(9.0)	43(8.6)	28(9.2)
Total	40(4.0)	35(3.9)	25(4.4)	35(4.4)	35(4.6)	30(4.8)

¹For variables explanations, see Table 25.

^aPercentage based on less than 25 unweighted observations.

TABLE 27

PERCENT OF THE ETHNIC POPULATION 17 YEARS OF AGE AND OVER BY HOW WELL THEY ARE DOING IN REGULAR EXERCISE BY SELECTED SOCIO-ECONOMIC CHARACTERISTICS FOR CINCINNATI, MILWAUKEE AND SAN JOSE, 1981-82

Socioeconomic Status ¹	Very Well	Fairly Well	Not Well	Very Well	Fairly Well	Not Well
	Cincinnati					
	White			Black		
Education						
11 Yrs or less	32(7.2)	33(8.3)	35(8.6)	37(7.8)	42(8.9)	21(7.5)
12 Yrs or more	41(4.3)	41(4.3)	19(5.2)	46(5.8)	31(6.0)	23(5.5)
Family Income						
Low	37(5.6)	37(5.8)	26(6.6)	49(5.8)	33(6.7)	18(5.7)
Middle/High	40(5.0)	40(5.1)	20(6.1)	34(7.6)	36(7.5)	30(7.5)
Poverty Level						
< 1.25	30(7.5)	37(8.0)	32(8.5)	51(6.7)	29(7.7)	20(6.7)
1.25-2.99	44(8.2)	38(6.0)	18(7.2)	39(7.8)	34(7.8)	26(7.5)
3 times poverty	39(6.3)	40(6.4)	20(7.6)	35(11.0)	45(11.5)	20(11.7) ^a
Total	39(3.7)	39(3.8)	23(4.5)	43(4.6)	34(5.0)	22(4.6)
	Milwaukee					
	White			Hispanic		
Education						
11 Yrs or less	40(5.0)	42(5.1)	18(5.6)	56(11.1) ^a	18(13.8) ^a	26(12.1) ^a
12 Yrs or more	48(3.2)	36(3.5)	15(4.0)	32(13.3) ^a	43(14.1) ^a	25(13.7) ^a
Family Income						
Low	50(3.7)	34(4.2)	16(4.7)	40(17.0) ^a	33(14.9) ^a	27(11.9) ^a
Middle/High	42(3.9)	41(4.0)	16(4.5)	47(12.7) ^a	29(14.3) ^a	24(14.1) ^a
Poverty Level						
< 1.25	49(5.1)	37(5.3)	14(5.8)	49(14.7) ^a	25(17.4) ^a	27(13.5) ^a
1.25-2.99	45(4.2)	34(4.8)	21(5.4)	41(14.5) ^a	36(14.6)	23(14.5) ^a
3 times poverty	45(4.8)	43(5.1)	13(5.7)	40(22.8)	32(26.6)	28(22.9)
Total	46(2.7)	38(2.9)	16(3.2)	43(9.5)	31(10.3)	25(9.0)
	San Jose					
	White			Hispanic		
Education						
11 Yrs or less	41(9.0)	32(9.7)	28(10.2)	32(6.1)	32(6.5)	36(6.3)
12 Yrs or more	34(4.2)	47(4.3)	20(4.9)	36(6.7)	37(6.4)	26(6.6)
Family Income						
Low	42(5.7)	40(6.3)	18(6.7)	34(6.6)	35(7.0)	31(6.9)
Middle/High	31(5.1)	46(5.1)	23(5.9)	34(29.5)	35(6.1)	31(6.1)
Poverty Level						
< 1.25	39(7.8)	39(8.2)	22(8.2)	32(7.2)	38(7.5)	30(7.3)
1.25-2.99	44(6.7)	41(7.4)	15(8.7) ^a	35(7.6)	25(6.9)	40(7.5)
3 times poverty	29(5.6)	48(5.7)	24(6.5)	35(8.9)	41(8.6)	24(9.4)
Total	35(3.8)	44(4.0)	21(4.4)	34(4.5)	35(4.6)	31(4.6)

¹For variables explanations, see Table 25

^aPercentage based on less than 25 unweighted observations.

TABLE 28

PERCENT OF THE ETHNIC POPULATION 17 YEARS OF AGE AND OVER BY HOW WELL THEY ARE TAKING CARE OF TEETH OR DENTURES BY SELECTED SOCIOECONOMIC CHARACTERISTICS FOR CINCINNATI, MILWAUKEE, AND SAN JOSE, 1981-82

Socioeconomic Status ¹	Very Well	Fairly Well	Not Well	Very Well	Fairly Well	Not Well
	Cincinnati					
	White				Black	
Education						
11 Yrs or less	63(6.2)	30(7.9)	8(8.8) ^a	44(7.0)	47(8.0)	9(8.6) ^a
12 Yrs or more	65(3.4)	29(4.8)	6(5.2)	55(4.9)	38(5.9)	6(6.0) ^a
Family Income						
Low	64(4.5)	29(6.1)	8(6.5) ^a	50(5.3)	42(6.2)	8(6.3)
Middle/High	65(3.9)	30(5.5)	5(6.1) ^a	56(6.1)	39(7.4)	5(7.6) ^a
Poverty Level						
< 1.25	59(6.4)	31(7.8)	10(9.3) ^a	53(6.1)	37(7.3)	10(7.5) ^a
1.25-2.99	69(4.4)	26(6.4)	4(5.5) ^a	46(6.6)	47(7.5)	7(8.2) ^a
3 times poverty	63(4.9)	31(7.0)	6(8.8) ^a	52(4.0)	41(4.8)	7(4.9)
Total	64(2.9)	29(4.1)	6(4.3)	52(4.0)	41(4.8)	7(4.9)
	Milwaukee					
	White				Hispanic	
Education						
11 Yrs or less	61(4.1)	33(5.2)	6(6.1) ^a	70(9.5)	29(13.3) ^a	1(8.0) ^a
12 Yrs or more	60(2.8)	35(3.5)	5(4.2)	37(15.5) ^a	52(13.1) ^a	11(20.1) ^a
Family Income						
Low	61(3.4)	34(4.1)	6(4.9)	56(10.2)	32(15.4) ^a	12(18.5) ^a
Middle/High	60(3.2)	35(4.2)	5(5.0) ^a	49(12.2) ^a	51(12.2) ^a	3(19.4) ^a
Poverty Level						
< 1.25	56(4.7)	37(5.2)	7(6.6) ^a	62(11.1)	37(16.6) ^a	1(11.3) ^a
1.25-2.99	59(3.7)	35(4.7)	6(5.5) ^a	45(12.7) ^a	42(13.6)	13(22.1) ^a
3 times poverty	64(3.9)	32(5.4)	4(6.5)	52(20.1) ^a	47(23.2) ^a	1(11.3) ^a
Total	60(2.3)	34(2.9)	5(3.3)	52(7.8)	41(9.6)	6(10.6) ^a
	San Jose					
	White				Hispanic	
Education						
11 Yrs or less	60(7.5)	37(9.4)	4(11.2) ^a	55(5.1)	29(6.7)	17(7.3)
12 Yrs or more	62(3.4)	33(4.7)	5(4.7)	54(5.6)	38(6.4)	8(6.9) ^a
Family Income						
Low	63(4.6)	33(6.8)	4(6.4) ^a	54(3.6)	30(7.0)	17(8.1)
Middle/High	60(4.2)	35(5.4)	6(6.0) ^a	55(5.1)	36(6.1)	9(6.4)
Poverty Level						
< 1.25	62(6.1)	35(8.4)	3(7.3)	54(6.1)	29(7.6)	18(8.3)
1.25-2.99	63(5.7)	30(8.1)	7(9.2) ^a	58(6.1)	31(7.6)	11(9.5) ^a
3 times poverty	60(4.7)	35(6.0)	5(6.4) ^a	50(7.8)	43(8.8)	7(8.4) ^a
Total	61(3.1)	34(4.2)	5(4.4)	55(3.8)	33(4.6)	12(5.0)

¹For variables explanations, see Table 25.

^aPercentage based on less than 25 unweighted observations.

TABLE 29

PERCENT OF THE ETHNIC POPULATION 17 YEARS OF AGE AND OVER WHO ARE CURRENT
NON-SMOKERS BY SELECTED SOCIOECONOMIC CHARACTERISTICS FOR
CINCINNATI, MILWAUKEE AND SAN JOSE, 1981-82

Socioeconomic Status ¹	Cincinnati			Milwaukee		San Jose	
	White	Blacks	White	White	Hispanics	Whites	Hispanics
Education							
11 yrs. or less	59(6.7)	55(7.2)	56(4.3)	68(9.1)	78(3.7)	56(7.5)	78(3.7)
12 +	64(3.8)	55(4.7)	61(2.8)	77(8.4)	74(4.2)	68(3.1)	74(4.2)
Family income							
Low	58(4.8)	55(5.1)	56(3.5)	62(9.9)	77(4.1)	64(4.5)	77(4.1)
Middle/High	67(3.8)	56(6.1)	63(3.1)	84(7.0)	76(3.8)	66(3.8)	76(3.8)
Poverty level							
1.25	60(6.5)	53(6.7)	55(4.7)	61(11.1)	76(4.5)	64(5.8)	76(4.5)
1.25-2.99	58(5.0)	60(6.2)	59(3.7)	80(8.2)	78(4.5)	66(5.4)	78(4.5)
3 times poverty	71(5.2)	51(9.9)	63(4.0)	75(14.9) ^a	74(5.8)	67(4.2)	74(5.8)
Total	63(3.0)	55(3.7)	60(2.3)	73(6.2)	76(2.8)	66(2.9)	76(2.8)

¹For variables explanations see Table 25.

^apercentage based on less than 25 unweighted observations.

TABLE 30

PERCENT OF THE ETHNIC POPULATION WHO PARTICIPATED IN
HEALTH EDUCATION BY SELECTED SOCIOECONOMIC
CHARACTERISTICS FOR CINCINNATI, 1981-82

Socioeconomic Indicators ¹	Nutrition	Weight Control	Exercise	Dental Care	Child Care	Family Planning	Specific Illness
Whites							
Education							
11 yrs or less	13(3.3)	17(3.7)	13(3.3)	14(3.4)	10(2.9)	9(4.6)	25(4.2)
12 yrs or more	12(1.8)	23(2.4)	22(2.3)	24(2.4)	11(1.8)	18(2.6)	20(2.2)
Family income							
Low	11(2.3)	21(3.0)	15(2.6)	17(2.7)	10(2.2)	15(3.8)	23(3.1)
Middle/High	13(2.1)	23(2.8)	24(2.8)	26(2.9)	14(2.3)	16(2.9)	19(2.6)
Poverty level							
< 1.25	13(3.3)	24(4.2)	13(3.3)	13(3.3)	12(3.2)	11(4.5)	27(4.3)
1.25-2.99	12(2.5)	16(2.8)	15(2.8)	24(3.3)	13(2.6)	18(3.8)	19(3.0)
3 times poverty	12(2.7)	26(3.6)	30(3.8)	26(3.6)	11(2.6)	19(3.6)	19(3.2)
Total	13(1.6)	24(2.1)	19(1.9)	22(2.0)	13(1.6)	17(2.4)	22(2.0)
Blacks							
Education							
11 yrs or less	31(3.8)	28(3.7)	19(3.3)	17(3.1)	21(3.4)	21(7.6)	25(4.3)
12 yrs or more	28(2.7)	32(2.8)	32(2.4)	28(2.7)	21(3.0)	27(3.9)	27(3.3)
Family income							
Low	29(3.5)	27(3.4)	31(3.6)	25(3.3)	23(3.2)	24(4.7)	32(3.6)
Middle/High	29(4.2)	38(3.7)	26(4.1)	25(4.0)	18(2.5)	33(5.3)	24(4.0)
Poverty level							
< 1.25	27(4.0)	25(4.2)	30(4.1)	24(3.8)	28(4.0)	24(5.3)	30(4.1)
1.25-2.99	30(4.4)	33(4.5)	31(4.4)	25(4.1)	17(3.6)	26(5.3)	28(4.3)
3 times poverty	30(6.5)	40(7.0)	24(6.1)	27(6.3)	16(5.2)	18(7.3)	28(6.5)
Total	28(2.6)	28(2.6)**	29(2.6)*	24(2.5)	20(2.4)*	28(3.6)*	27(2.6)

¹For variables explanations see Table 25.

*Statistically significant from whites at $p < .05$.

**Statistically significant from whites at $p < .01$.

TABLE 31

PERCENT OF THE ETHNIC POPULATION WHO PARTICIPATED IN
HEALTH EDUCATION BY SELECTED SOCIOECONOMIC
CHARACTERISTICS FOR MILWAUKEE, 1981-82

Socioeconomic Indicators ¹	Nutrition	Weight Control	Exercise	Dental Care	Child Care	Family Planning	Specific Illness
Whites							
Education							
11 yrs or less	12(2.1)	17(2.4)	19(2.6)	19(2.6)	14(2.3)	22(4.4)	21(2.6)
12 yrs or more	15(1.6)	23(1.9)	23(1.9)	23(1.9)	14(1.6)	24(2.3)	25(1.9)
Family income							
Low	12(1.7)	15(1.9)	20(2.1)	19(2.0)	13(1.8)	23(3.2)	21(2.1)
Middle/High	16(1.1)	27(2.3)	24(2.2)	25(2.2)	15(1.8)	24(2.7)	27(2.3)
Poverty level							
< 1.25	11(2.2)	11(2.1)	19(2.7)	18(2.6)	15(2.5)	23(3.9)	19(2.7)
1.25-2.99	16(2.1)	23(2.4)	21(2.4)	23(2.4)	14(2.0)	25(3.4)	24(2.5)
3 times poverty	14(2.3)	26(2.9)	25(2.8)	24(2.8)	13(2.2)	24(3.6)	27(2.9)
Total	14(1.3)	21(1.5)	22(1.5)	22(1.5)	14(1.3)	24(2.0)	24(1.6)
Hispanics							
Education							
11 yrs or less	21(6.8)	30(7.6)	27(7.4)	15(5.9)	18(6.4)	20(8.3)	9(4.7)
12 yrs or more	14(5.9)	24(7.2)	19(6.2)	30(7.6)	29(7.7)	44(8.9)	12(5.5)
Family income							
Low	19(6.5)	26(7.3)	28(7.5)	30(7.6)	19(6.5)	28(8.3)	11(5.2)
Middle/High	15(6.1)	28(7.6)	18(6.5)	17(6.4)	29(7.7)	41(9.9)	11(5.3)
Poverty level							
< 1.25	15(6.7)	28(8.4)	23(7.9)	31(8.7)	20(7.5)	30(9.7)	5(4.1)
1.25-2.99	23(7.6)	30(8.6)	31(8.3)	27(8.0)	32(8.4)	26(9.1)	14(6.2)
3 times poverty	9(8.4) ^a	20(11.8) ^a	9(8.4) ^a	4(5.8) ^a		15(10.5)	55(17.1) ^a
Total	17(4.4)	28(5.2)	23(4.9)	23(4.9)	20(4.6)	33(6.2)	13(3.9)*

¹For footnote explanations see Table 25.

*Statistically significant from whites at $p < .05$.

^aPercentage based on less than 25 unweighted observations.

TABLE 32

PERCENT OF THE ETHNIC POPULATION WHO PARTICIPATED IN
HEALTH EDUCATION BY SELECTED SOCIOECONOMIC
CHARACTERISTICS FOR SAN JOSE, 1981-82

Socioeconomic Indicators ¹	Nutrition	Weight Control	Exercise	Dental Care	Child Care	Family Planning	Specific Illness
Whites							
Education							
11 yrs or less	14(4.1)	28(5.3)	19(4.6)	34(5.6)	9(3.4)	43(10.5)	18(4.5)
12 yrs or more	17(2.1)	23(2.3)	31(2.6)	27(2.5)	18(2.2)	28(3.1)	28(2.5)
Family income							
Low	11(2.4)	15(2.7)	17(2.9)	24(3.3)	12(2.5)	29(5.4)	19(3.0)
Middle/High	19(2.7)	30(3.0)	37(2.5)	31(3.2)	18(2.6)	30(3.6)	30(3.0)
Poverty level							
< 1.25	12(3.3)	16(3.7)	11(3.1)	29(4.6)	12(3.3)	33(8.0)	22(4.1)
1.25-2.99	13(3.2)	21(3.8)	31(4.4)	25(4.1)	16(3.5)	32(5.9)	18(3.6)
3 times poverty	19(2.9)	30(3.4)	37(3.6)	29(3.3)	18(2.8)	28(3.9)	32(3.4)
Total	17(1.9)	25(2.2)	30(2.3)	30(2.3)	18(1.9)	31(2.9)	26(2.2)
Hispanics							
Education							
11 yrs or less	19(3.1)	21(3.2)	24(3.3)	23(3.3)	26(3.4)	27(4.1)	15(2.8)
12 yrs or more	15(2.9)	27(3.6)	28(3.7)	25(3.5)	18(3.1)	31(4.1)	19(3.2)
Family income							
Low	21(3.4)	29(3.8)	29(3.8)	24(3.6)	24(3.6)	33(4.7)	23(3.5)
Middle/High	13(2.6)	20(3.0)	24(3.3)	24(3.3)	20(3.0)	27(3.8)	12(2.5)
Poverty level							
< 1.25	22(3.7)	23(3.8)	26(4.0)	22(3.7)	24(3.9)	35(5.1)	21(3.7)
1.25-2.99	14(3.3)	26(4.2)	30(4.4)	29(4.3)	28(4.3)	29(4.8)	12(3.1)
3 times poverty	14(3.8)	23(4.7)	22(4.6)	21(4.5)	13(3.7)	22(5.3)	17(4.2)
Total	17(2.1)	22(2.3)	25(2.4)	23(2.4)	20(2.2)	27(2.9)	16(2.1)**

¹For variables explanations see Table 25.

**statistically significant from whites at $p < .01$.

TABLE 33

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A PREVENTIVE PHYSICAL EXAMINATION WITHIN A YEAR BY SELECTED SOCIOECONOMIC CHARACTERISTICS FOR CINCINNATI, MILWAUKEE AND SAN JOSE, 1981-82

Socioeconomic Status ¹	Cincinnati			Milwaukee		San Jose	
	White	Blacks	White	White	Hispanics	Whites	Hispanics
Education ²							
11 yrs. or less	42 (4.8)	57 (5.0)*	53 (3.4)	52 (8.3)	39 (5.7)	38 (3.8)	
12 yrs or more	52 (2.8)	50 (3.7)	54 (2.3)	48 (8.5)	48 (2.8)	46 (4.0)	
Family income ³							
Low	56 (3.2)	54 (3.8)*	53 (2.7)	65 (8.1)	51 (3.9)	43 (4.2)	
Middle/High	43 (3.6)	59 (4.6)	55 (2.7)	35 (7.9)*	43 (3.3)	41 (3.7)	
Poverty Level ⁴							
1.25	43 (4.8)	52 (4.4)	51 (3.6)	47 (9.4)	52 (5.0)	47 (4.5)	
1.25-2.99	47 (3.8)	59 (4.7)	57 (3.0)	43 (8.9)	44 (4.7)	37 (4.6)	
3 times poverty	58 (4.1)	58 (7.0)	52 (3.4)	67(13.8) ^a	43 (3.6)	40 (5.4)	
Total	51 (2.4)	55 (2.9)	54 (1.8)	48 (5.9)	47 (2.5)	40 (2.7)	

¹For variables explanations see Table 25.

*statistically different from whites at $p \leq .05$

^aPercentage based on less than 25 unweighted observations.

TABLE 34

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A
 PREVENTIVE PHYSICAL EXAMINATION WITHIN A YEAR¹
 BY SELECTED SOCIOECONOMIC CHARACTERISTICS,
 1976

Socioeconomic Characteristics	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Education					
0-8	21(2.1)	32(7.8)	17(3.9)	13(3.4)	20(1.4)
9-12	25(1.1)	27(4.0)	30(4.4)	21(4.1)	24(0.9)
13+	30(1.5)	24(5.9)	47(9.9)	22(7.4)	29(1.3)
Family Income²					
Low	23(1.3)	21(4.2)	29(3.4)	15(3.2)	22(1.1)
Middle	23(1.3)	30(5.6)	26(5.8)	20(4.6)	24(1.1)
High	28(1.4)	32(6.5)	48(12.2)	21(6.6)	28(1.3)
Total	26(0.8)	27(3.0)	26(2.9)	18(2.4)	25(0.7)

¹See Footnote 1, Table 15.

²Refers to total family income given by respondent in 1976. Income variable was categorized into Low (\$0-7,199), Middle (\$7,200-14,999) or High (\$15,000 or more).

TABLE 35

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A
 PREVENTIVE DENTAL EXAMINATION WITHIN A YEAR¹
 BY SELECTED SOCIOECONOMIC CHARACTERISTICS,
 1976

Socioeconomic Characteristics Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.	
Education					
0-8	4(1.0)	6(4.0)	--	4(2.0)	10(1.0)
9-12	9(0.7)	6(2.2)	2(1.5)	7(2.5)	11(0.7)
13+	14(1.1)	11(4.4)	11(6.3)	14(6.2)	11(0.9)
Family income ²					
Low	8(1.0)	4(2.0)	1(0.8)	6(2.1)	11(0.8)
Middle	10(1.0)	5(2.7)	2(1.9)	8(3.1)	10(0.8)
High	11(1.0)	13(4.8)	9(7.0)	7(4.1)	12(0.9)
Total	10(0.6)	7(1.1)	2(0.9)	7(1.6)	11(0.5)

¹See Footnote 1, Table 16.

²See Footnote 2, Table 34.

TABLE 36

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A
 PREVENTIVE EYE EXAMINATION WITHIN A YEAR
 BY SELECTED SOCIOECONOMIC CHARACTERISTICS,
 1976

Socioeconomic Characteristics	Whites	Urban Blacks	Rural Blacks	S.W. Hispanics	Total U.S.
Education					
0-8	11(1.6)	14(5.8)	7(2.7)	7(2.6)	10(1.0)
9-12	11(0.8)	13(3.1)	6(2.3)	13(3.4)	11(0.7)
13+	11(1.0)	8(3.8)	9(5.7)	16(6.6)	11(0.9)
Family income ²					
Low	12(1.2)	14(3.6)	7(2.1)	10(3.5)	11(0.8)
Middle	10(1.0)	14(4.3)	9(3.9)	11(5.0)	10(0.8)
High	12(1.0)	10(4.2)	10(7.3)	13(5.4)	12(0.9)
Total	11(0.6)	13(2.3)	7(1.7)	11(2.0)	11(0.5)

¹See Footnote 1, Table 17.

²See Footnote 2, Table 34.

TABLE 37

PERCENT OF THE ETHNIC POPULATION WHO CONTACTED A
PHYSICIAN WITHIN A YEAR¹ BY PERSONAL HEALTH PRACTICES, 1981-82

Adjusted self-care Variables ²	Cincinnati			Milwaukee			San Jose		
	White	Blacks	Hispanics	White	Hispanics	Whites	Hispanics	Whites	Hispanics
Eating Nutritious Meals									
Not well	84(5.1) ³	82(7.0)	83(4.7)	83(4.7)	98(3.8) ^{a*}	74(6.7)	79(5.2)	74(6.7)	79(5.2)
Fairly well	85(2.6)	81(3.6)	80(2.1)	80(2.1)	81(7.3)	80(3.1)	82(3.4)	80(3.1)	82(3.4)
Very well	78(3.1)	85(3.1)	77(2.3)	77(2.3)	75(7.9)	82(2.8)	71(4.0)*	82(2.8)	71(4.0)*
Maintaining proper weight									
Not well	81(4.0)	83(4.0)	78(3.4)	78(3.4)	93(6.2) ^{a*}	82(3.9)	87(3.5)	82(3.9)	87(3.5)
Fairly well	85(2.8)	84(3.8)	76(2.5)	76(2.5)	75(8.5)	74(3.6)	75(4.2)	74(3.6)	75(4.2)
Very well	79(3.2)	82(3.8)	82(2.2)	82(2.2)	80(7.4)	83(3.0)	71(4.1)*	83(3.0)	71(4.1)*
Sufficient exercising									
Not well	81(4.2)	89(3.4)	77(3.7)	77(3.7)	78(8.6)	75(4.7)	76(4.2)	75(4.7)	76(4.2)
Fairly well	85(3.2)	82(4.0)	80(2.4)	80(2.4)	93(5.7)*	80(3.2)	74(4.2)	80(3.2)	74(4.2)
Very well	80(2.5)	81(3.7)	79(2.2)	79(2.2)	72(8.5)	83(3.0)	80(3.8)	83(3.0)	80(3.8)
Dental care									
Not well	93(4.7)	82(7.4) ⁺	91(4.4)	91(4.4)	62(23.7) ^{a+}	73(8.9)	66(3.6)	73(8.9)	66(3.6)
Fairly well	83(3.4)	80(3.9)	77(2.6)	77(2.6)	85(7.0) ⁺	79(3.6)	81(3.9)	79(3.6)	81(3.9)
Very well	81(2.4)	86(2.8)	79(1.9)	79(1.9)	78(6.5)	81(2.5)	77(6.5)	81(2.5)	77(6.5)
Smoking habit									
Yes	76(3.3)	79(3.6)	78(2.4)	78(2.4)	79(9.3)	75(3.8)	82(4.1) ⁺	75(3.8)	82(4.1) ⁺
No	86(2.2)	86(2.7)	80(1.9)	80(1.9)	80(5.6)	82(2.3)	75(2.8) ⁺	82(2.3)	75(2.8) ⁺
Total	82(2.3)	83(2.2)	79(1.5)	79(1.5)	80(4.7)	80(2.0)	77(2.4)	80(2.0)	77(2.4)

¹Information obtained from the question, "Did you see any doctor within the past year?"

²All self-care variables were adjusted for age, sex, and self-perceived health status.

³Number in parenthesis represents adjusted standard error. The following formula was applied to adjust for sampling design effect:

$$\frac{PQ}{\text{Unweighted } \times \text{ Design effect}} \\ \# \text{ of cases}$$

The design effects vary by city, see Methodology Chapter for details.

^aPercentage based on less than 25 unweighted observations.

*significant from whites at $p \leq .05$

**significant from whites at $p \leq .01$

+ different from whites at 1 standard error of the difference.

TABLE 38

PERCENT OF THE ETHNIC POPULATION WHO CONTACTED A
PHYSICIAN WITHIN A YEAR¹ BY PAST PARTICIPATION IN HEALTH EDUCATION,
1981-82

Adjusted self-care Variables ²	Cincinnati		Milwaukee		San Jose	
	White	Blacks	White	Hispanics	Whites	Hispanics
Nutrition						
Yes	89(3.9)	81(2.1)	82(3.4)	88(8.7) ^a	84(4.6)	74(6.0)*
No	81(2.1)	88(3.3)	78(1.7)	78(5.5)	79(2.2)	78(2.6)
Weight control						
Yes	92(2.7)	88(3.3)	90(2.3)	82(8.6)	89(3.3)	79(4.9)*
No	79(2.3)	81(2.9)	76(1.8)	79(5.7)	77(2.4)	75(2.8)
Exercising						
Yes	93(2.6)	81(4.2)*	86(2.6)	93(6.2) ^a	87(3.1)	81(4.4)
No	79(4.2)	84(2.6)	77(1.8)	76(5.8)	77(2.5)	76(2.8)
Dental care						
Yes	85(3.5)	80(4.6)	84(2.7)	87(7.1)	81(3.9)	81(4.3)
No	81(2.2)	84(2.5)	77(1.8)	78(5.9)	80(2.3)	76(2.8)
Child care						
Yes	89(3.9)	88(4.0)	86(3.3)	97(5.9) ^a +	94(3.1)	76(4.9)**
No	81(2.1)	82(2.6)	78(1.6)	75(6.0)	72(2.5)	77(2.7)
Family planning/ ³						
Birth control						
Yes	76(2.7)	82(3.0)	80(2.0)	76(5.0)	82(2.5)	78(2.7)
No	87(4.6)	85(5.7)	83(3.7)	100(2.2)	86(4.4)	83(4.4)
Specific illness						
Yes	74(3.1)	81(3.5)+	79(2.3)	64(8.2)+	80(3.0)	76(3.3)
No	93(2.5)	90(3.2)	90(2.2)	100(3.0) ^a +	93(2.4)	84(5.0)+
Total	79(2.3)	80(2.8)	75(1.8)	77(5.4)	75(2.5)	76(2.6)
Total	82(2.3)	83(2.2)	79(1.5)	80(4.7)	80(2.0)	77(2.4)

¹See Footnote 1, Table 37.

²See Footnote 2, Table 37.

³This question was asked only to people between the ages of 14 and 45. Because of this percent average was included for this variable as it is slightly different from the total.

^apercentage based on less than 25 unweighted observations.

*significant from whites at $p \leq .05$

**significant from whites at $p < .01$

+different from whites at 1 standard error of the difference.

TABLE 39

MEAN NUMBER OF M.D. VISITS¹ FOR THOSE WHO REPORTED
A CONTACT WITH A PHYSICIAN WITHIN A YEAR,
BY PERSONAL HEALTH PRACTICES, 1981-1982

Adjusted self-care Variables ²	Cincinnati			Milwaukee			San Jose		
	White	Blacks	White	White	Hispanics	Hispanics	Whites	Whites	Hispanics
Eating nutritious meals									
Not well	6.65(1.1) ³	5.10(2.4)	3.76(1.0)	4.29(1.4) ^a	4.29(1.4) ^a	4.29(1.4) ^a	6.55(1.2)	6.55(1.2)	8.14(1.2)
Fairly well	5.72(0.6)	8.75(1.2)*	5.32(0.4)	4.19(1.0)	4.19(1.0)	4.19(1.0)	5.51(0.6)	5.51(0.6)	-6.79(0.8)
Very well	6.21(0.6)	6.84(1.2)	6.44(0.4)	5.99(1.0)	5.99(1.0)	5.99(1.0)	6.86(0.6)	6.86(0.6)	8.07(0.9)+
Maintaining proper weight									
Not well	4.90(0.8)	8.89(1.4)*	5.99(0.6)	5.35(1.2) ^a	5.35(1.2) ^a	5.35(1.2) ^a	6.79(0.8)	6.79(0.8)	7.17(0.9)
Fairly well	6.75(0.6)	7.90(1.4)*	5.18(0.5)	4.04(1.1)	4.04(1.1)	4.04(1.1)	5.51(0.7)	5.51(0.7)	7.68(0.9)+
Very well	5.89(0.7)	5.99(1.4)	5.85(0.5)	5.53(1.0)	5.53(1.0)	5.53(1.0)	6.33(0.6)	6.33(0.6)	7.86(0.9)+
Sufficient exercising									
Not well	6.21(0.9)	7.82(1.4)	5.06(0.7)	3.55(1.1)	3.55(1.1)	3.55(1.1)	6.42(0.9)	6.42(0.9)	7.37(0.9)
Fairly well	6.42(0.6)	7.57(1.4)	4.95(0.5)	4.04(1.1) ^a	4.04(1.1) ^a	4.04(1.1) ^a	5.64(0.6)	5.64(0.6)	6.64(0.9)
Very well	5.52(0.6)	7.15(1.3)+	6.31(0.4)	6.07(1.1)	6.07(1.1)	6.07(1.1)	6.73(0.6)	6.73(0.6)	8.62(0.9)+
Dental care									
Not well	5.77(1.5)	6.72(2.5)	5.53(1.2)	3.66(3.1) ^a	3.66(3.1) ^a	3.66(3.1) ^a	5.64(1.7)	5.64(1.7)	7.85(1.5)
Fairly well	6.47(0.7)	6.89(1.3)	5.55(0.5)	3.62(1.1)+	3.62(1.1)+	3.62(1.1)+	5.62(0.7)	5.62(0.7)	7.78(0.9)+
Very well	5.88(0.5)	7.98(1.1)+	5.47(0.4)	6.20(0.8)	6.20(0.8)	6.20(0.8)	6.54(0.5)	6.54(0.5)	7.36(0.7)
Smoking habit									
Yes	5.83(0.7)	7.42(1.2)+	5.41(0.5)	4.82(1.2) ^a	4.82(1.2) ^a	4.82(1.2) ^a	6.17(0.7)	6.17(0.7)	8.25(1.0)+
No	6.15(0.5)	7.49(1.0)+	5.78(0.4)	4.82(0.8)	4.82(0.8)	4.82(0.8)	6.20(0.5)	6.20(0.5)	7.35(0.6)+
Total	6.04(0.4)	7.46(0.7)+	5.63(0.3)	4.98(0.6)	4.98(0.6)	4.98(0.6)	6.19(0.4)	6.19(0.4)	7.56(0.6)+

¹Mean number of total ambulatory M.D. visits within a year was constructed by adding visits to municipal health clinics, private office visits, hospital emergency rooms and outpatient departments. Those without M.D. visits were excluded from the analysis.

²See footnote, Table 37.

³Number in parenthesis represents adjusted standard errors of means. The following formula was applied to adjust standard error:

$$\frac{\sqrt{\text{Total mean square of weighted}}}{\sqrt{\text{Total unweighted \# of cases}}} \times \text{design effect}$$

Design effects vary by city. See Methodology Chapter for details

^aBased on less than 25 unweighted observations.

*Significant from whites at $p \leq .05$; ** significant from whites at $p \leq .01$.

+Different from whites at 1 standard of the difference.

TABLE 40

MEAN NUMBER OF M.D. VISITS¹ FOR THOSE WHO REPORTED
A CONTACT WITH A PHYSICIAN WITHIN A YEAR,
BY PAST PARTICIPATION IN HEALTH EDUCATION, 1981-1982

Adjusted self-care Variables ²	Cincinnati			Milwaukee		San Jose	
	White	Blacks	Hispanics	White	Hispanics	Whites	Hispanics
Nutrition							
Yes	7.31(1.0)	8.90(1.4)	8.56(1.3) ^a	7.64(0.7)	8.03(1.3)	7.73(1.0)	8.03(1.3)
No	5.84(0.4)	6.75(1.0)	4.16(0.7) ⁺	5.29(0.3)	7.50(0.6) [*]	5.84(0.4)	7.50(0.6) [*]
Weight control							
Yes	6.60(0.8)	9.28(1.3) ⁺	6.66(1.1) ^a	6.16(0.6)	9.62(1.1) ⁺	7.15(0.8)	9.62(1.1) ⁺
No	5.85(0.5)	6.54(1.0)	4.28(0.8) ⁺	5.46(0.3)	6.89(0.6) ⁺	5.82(0.5)	6.89(0.6) ⁺
Exercising							
Yes	7.62(0.8)	8.22(1.4)	7.00(1.2) ^a	6.39(0.6)	10.80(1.1) [*]	7.31(0.7)	10.80(1.1) [*]
No	5.61(0.5)	7.20(1.0) ⁺	4.26(0.7) ⁺	5.39(0.3)	6.38(0.6)	5.64(0.5)	6.38(0.6)
Dental care							
Yes	6.93(0.8)	9.24(1.6) ⁺	6.51(1.1)	6.08(0.6)	8.62(1.0) [*]	5.32(0.8)	8.62(1.0) [*]
No	5.78(0.5)	6.89(0.9) ⁺	4.47(0.8) ⁺	5.49(0.3)	7.24(0.6)	6.55(0.5)	7.24(0.6)
Child care							
Yes	8.54(1.0)	8.07(1.6)	7.36(1.1) ^a	6.62(0.1)	10.66(1.1) [*]	6.79(1.0)	10.66(1.1) [*]
No	5.67(0.4)	7.31(0.9) ⁺	4.06(0.8) ⁺	5.44(0.3)	6.64(0.6)	6.03(0.4)	6.64(0.6)
Family planning							
Birth control							
Yes	4.92(0.4)	5.77(0.7) ⁺	5.43(0.7)	5.74(0.4)	7.10(0.6) [*]	5.20(0.4)	7.10(0.6) [*]
No	6.63(0.8)	5.97(1.5)	6.49(1.1) ^a	5.84(0.8)	8.54(1.0) [*]	5.37(0.9)	8.54(1.0) [*]
Specific illness							
Yes	4.51(0.5)	5.68(0.9) ⁺	4.69(1.0)	5.71(0.5)	6.43(0.7) ⁺	5.02(0.6)	6.43(0.7) ⁺
No	6.54(0.8)	9.64(1.4) ⁺	6.49(1.4) ^a	5.80(0.6)	8.92(1.3) ⁺	6.90(0.7)	8.92(1.3) ⁺
Total	5.88(0.5)	6.48(1.0)	4.74(0.7) ⁺	5.57(0.3)	7.27(0.6) ⁺	5.88(0.5)	7.27(0.6) ⁺
Total	6.04(0.4)	7.46(0.7) ⁺	4.98(0.6)	5.63(0.3)	7.56(0.6) ⁺	6.19(0.4)	7.56(0.6) ⁺

¹See footnote 1 in Table 39.

²See footnote 2 in Table 37.

^aBased on less than 25 unweighted observations.

*Significant from whites at $p \leq .05$; ** significant from whites at $p \leq .01$.

+Different from whites at 1 standard of the difference.

TABLE 41

PERCENT OF THE ETHNIC POPULATION WHO WAS HOSPITALIZED WITHIN A
YEAR² BY PERSONAL HEALTH PRACTICES 1981-82

Adjusted self-care Variables ²	Cincinnati			Milwaukee		San Jose		
	White	Blacks	White	White	Hispanics	Whites	Hispanics	
Eating Nutritious Meals								
Not well	17(5.2)	9(5.2)+	20(5.0)		a	15(5.5)	10(3.8)	
Fairly well	9(2.1)	12(3.0)	14(1.9)		21(7.6)	11(2.4)	17(3.3)	
Very well	21(3.0)	15(3.1)+	18(2.1)		19(7.2)	10(2.2)	14(3.1)	
Maintaining proper weight								
Not well	17(3.9)	16(3.9)	16(3.0)		a	10(3.0)	12(3.4)	
Fairly well	16(2.9)	9(2.9)+	16(2.1)		19(7.7)	12(2.7)	16(3.6)	
Very well	13(2.6)	15(3.5)	16(2.1)		20(7.4)	12(2.6)	14(3.2)	
Sufficient exercise								
Not well	19(4.2)	15(3.9)	14(3.1)		25(9.0)+	11(3.4)	14(3.2)	
Fairly well	16(2.9)	12(3.4)	14(2.1)		23(9.4)	11(2.5)	13(3.3)	
Very well	12(2.5)	13(3.2)	18(2.1)		19(7.4)	11(2.5)	17(3.6)+	
Dental care								
Not well	22(7.6)	19(7.6)	18(5.9)		a	13(6.8)	14(5.4)	
Fairly well	14(3.1)	12(3.2)	16(2.3)		24(8.3)	14(3.1)	13(3.3)	
Very well	15(2.2)	13(2.7)	16(1.7)		20(6.3)	9(1.8)	15(2.7)+	
Smoking habit								
Yes	20(3.1)	10(2.7)*	17(2.1)		25(9.9)	15(3.2)	15(3.8)	
No	12(2.0)	16(2.9)	16(1.7)		21(5.7)	9(1.7)	14(2.3)	
Total	15(1.7)	13(1.9)	16(1.3)		22(4.9)+	11(1.6)	14(1.9)	

¹Information obtained from the question, "Were you a patient overnight in a hospital within the past year?"

²All self-care variables were adjusted for age, sex, and self-perceived health status.

*Significant at $p \leq .05$

**Significant at $p \leq .01$

a=based on less than 25 unweighted observations.

+ = different from whites at one standard even of the difference.

TABLE 42

PERCENT OF THE ETHNIC POPULATION WHO WAS HOSPITALIZED WITHIN A YEAR² BY PAST PARTICIPATION IN HEALTH EDUCATION, 1981-82

Adjusted self-care Variables ²	Cincinnati		Milwaukee		San Jose	
	White	Blacks	White	Hispanics	Whites	Hispanics
Nutrition						
Yes	16(4.6)	10(3.3)	20(3.5)	26(11.8) ^a	15(4.5)	15(4.9)
No	15(1.9)	14(2.4)	15(1.4)	21 (5.4)	10(1.6)	14(2.1)
Weight control						
Yes	18(3.8)	12(3.3)	17(2.9)	31(10.3) ⁺	12(3.4)	12(3.9)
No	14(1.9)	13(2.5)	16(1.5)	19 (5.5)	11(1.8)	15(2.3)
Exercising						
Yes	16(3.7)	16(3.9)	18(2.9)	24(10.4) ^a	14(3.2)	16(4.1)
No	15(2.0)	13(2.4)	15(1.5)	21 (5.3)	10(1.8)	13(2.2)
Dental care						
Yes	15(3.5)	14(4.0)	15(2.6)	28 (9.5) ^a	8(2.7)	12(3.5)
No	15(2.0)	13(2.3)	16(1.5)	21 (5.4)	12(1.9)	15(2.3)
Child care						
Yes	18(4.8)	16(4.5)	22(4.0)	31(10.3)	23(5.5) [*]	22(4.7)
No	15(1.9)	12(2.2)	15(1.4)	19 (5.5)	10(1.6)	12(2.1)
Family Planning/ Birth control ³						
Yes	15(7.2)	14(2.7)	16(1.8)	18 (5.2)	13(2.2)	13(2.2)
No	15(4.9)	9(4.6)	26(4.3)	10 (6.7) ^a	19(5.0)	21(4.8)
No	15(2.6)	16(3.3)	13(1.9)	22 (7.1) ⁺	10(2.3)	10(2.3)
Specific illness						
Yes	23(2.1) ^{*a}	19(1.2) ^{*a}	19(4.2)	29(13.8) ^a	16(0.3) ^{**}	14(2.1) ⁺
No	12(3.1)	12(2.3)	15(1.5)	20 (5.7)	9(1.7)	14(1.9)
Total	15(1.7)	13(1.9)	16(1.3)	22 (4.9) ⁺	11(1.6)	14(1.9)

¹Information obtained from the question, "Were you a patient overnight in a hospital within the past year?"

²All self-care variables were adjusted for age, sex, and self-perceived health status.

³See footnote 3 in Table 38.

*Significant at $p \leq .05$; comparison is within group.

**significant at $p \leq .01$; comparison is within group.

^abased on less than 25 unweighted observations.

⁺different from whites at one standard even of the difference.

TABLE 43

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A PREVENTIVE PHYSICAL EXAMINATION¹ WITHIN A YEAR BY PERSONAL HEALTH PRACTICES, 1981-82

Adjusted self-care Variables ²	Cincinnati			Milwaukee			San Jose	
	White	Blacks	Hispanics	White	Hispanics	Whites	Hispanics	
Eating nutritious meals								
Not well	55(6.9)	46(9.0)	38(13.8) ^a	56(5.2)	50(9.4)	50(7.7)	46(6.3)	
Fairly well	53(3.7)	57(4.5)	50(9.4)	51(2.7)	53(9.1)	45(3.8)	42(4.3)	
Very well	46(3.7)	57(4.2) ⁺	53(9.1)	57(2.7)	49(5.1) ^a	46(3.7)	40(4.3)	
Maintaining proper weight								
Not well	58(3.0) ^{**b}	54(5.3)	49(5.1) ^a	49(4.1)	46(9.0)	49(5.1)	51(5.2)	
Fairly well	57(3.9)	49(5.1) ⁺	46(9.7)	53(2.9)	52(9.2)	40(4.0)	35(4.6)	
Very well	39(3.8)	64(4.8) ^{**}	52(9.2)	57(2.9)	47(10.4)	47(4.0)	41(4.5) ⁺	
Sufficient exercising								
Not well	61(5.2) ^{*b}	55(5.5)	47(10.4)	45(4.4)	51(11.2)	42(5.3)	42(4.9)	
Fairly well	51(3.9)	61(5.1) ⁺	51(11.2)	55(3.0)	51(9.5)	47(4.0)	37(4.7) ⁺	
Very well	42(3.8)	53(4.7) ⁺	51(9.5)	56(2.7)	20(20.4) ^a	47(4.0)	47(4.8)	
Dental care								
Not well	66(8.7) ^{*b}	55(9.6)	20(20.4) ^a	58(7.6)	53(9.7)	29(9.1)	26(6.8) ^{*b}	
Fairly well	53(4.5)	50(4.9)	53(9.7)	52(3.1)	51(7.8)	47(4.4)	44(4.9)	
Very well	47(3.1)	61(3.9) [*]	51(7.8)	55(2.4)	33(10.7) ⁺	41(3.2)	44(3.8)	
Smoking habit								
Yes	43(3.9) ^{*b}	58(4.4) [*]	33(10.7) ⁺	51(2.9)	56(6.9)	43(4.4)	45(5.3)	
No	54(3.1)	55(3.9)	56(6.9)	56(2.4)	50(5.9)	48(3.0)	41(3.2) ⁺	
Total	50(2.4)	56(2.9) ⁺	50(5.9)	54(1.8)	46(2.3)	42(2.8)		

¹Information obtained from the question, "When was the last time you had a general physical examination or check-up?" People who had a physical exam within a year were included in the analysis.

²See footnote 2 in Table 42.

*Significant from whites at $p \leq .05$.

**Significant from whites at $p \leq .01$.

+Different from whites at one standard error of the difference.

^aBased on less than 25 unweighted observations.

** bSignificant at $p \leq .01$; comparison is within group.

* bSignificant at $p \leq .05$; comparison is within group.

TABLE 44

PERCENT OF THE ETHNIC POPULATION WHO OBTAINED A PREVENTIVE PHYSICAL EXAMINATION¹ WITHIN A YEAR BY PAST PARTICIPATION IN HEALTH EDUCATION, 1981-82

Adjusted self-care Variables ²	Cincinnati		Milwaukee		San Jose	
	White	Blacks	White	Hispanics	Whites	Hispanics
Nutrition						
Yes	71(5.7)**b	61(5.4)*	62(4.3)	46(13.4)b+	52(6.3)	58(6.7)*b
No	47(2.6)	54(3.5)+	54(2.0)	51(6.6)	45(2.7)	39(3.0)+
Weight control						
Yes	67(4.7)**b	63(4.8)	70(3.6)**b	56(11.1)+	53(5.2)	52(6.0)
No	45(2.8)	53(3.6)+	50(2.1)	48(7.0)	44(2.8)	39(3.1)+
Exercising						
Yes	64(4.9)**b	61(5.2)	66(3.5)	45(12.1)+	36(4.4)	51(5.6)*
No	47(2.8)	54(3.5)+	51(2.1)	52(6.8)	42(3.0)	39(3.2)
Dental care						
Yes	56(4.9)	63(5.6)	59(3.6)	53(10.6)	45(4.9)	55(5.7)+
No	48(2.8)	54(3.4)+	53(2.1)	49(7.2)	47(2.9)	38(3.1)*
Child care						
Yes	71(5.6)**b	62(5.9)+	61(4.7)	60(11.4)b	54(6.5)	55(5.4)*b
No	47(2.6)	54(3.4)+	52(2.0)	47(6.9)	44(2.7)	38(3.1)+
Family planning/ Birth control						
Yes	46(3.2)	51(3.9)	54(2.4)	52(6.8)	42(3.2)	44(3.2)
No	58(6.8)	50(8.0)	56(4.9)	60(10.9)	44(6.3)	53(5.9)
Specific illness						
Yes	65(4.6)**b	68(5.0)*b	69(3.4)**b	28(13.7)b*	59(4.7)*b	59(6.7)*b
No	46(2.8)	51(3.5)+	49(2.1)	53(6.4)	42(2.9)	38(3.0)
Total	50(2.4)	56(2.9)+	54(1.8)	50(5.9)	46(2.3)	42(2.8)

¹Information obtained from the question, "When was the last time you had a general physical examination or check-up?" People who had a physical exam within a year were included in the analysis.

²See footnote 2 in Table 42.

*Significant from whites at $p \leq .05$.

**Significant from whites at $p \leq .01$.

+different from whites at one standard error of the difference.

^aBased on less than 25 unweighted observations.

**bSignificant at $p \leq .01$; comparison is within group.

*bSignificant at $p \leq .05$; comparison is within group.

TABLE 45

RESULTS OF HYPOTHESES TESTING -- MHSP DATA

List of Hypotheses	MHSP	Results
1. Hispanics and blacks are more likely than whites to engage in S/C in the presence of illness. They are least likely to engage in health maintenance and health promotion.	X	Partially supported for rural blacks for preventive dental exams.
2. For Hispanics, self-care activities in the presence of illness are most likely to be explained by sociocultural factors while for blacks social class is relatively more significant.	NA ¹	
3. S/C varies by type (acute/chronic) and severity of illness. Hispanics and blacks engage more in S/C to treat severe health conditions than whites.	NA	
4. Within each ethnic group S/C for health maintenance will occur most often among groups with higher levels of income and education.	X	Confirmed
5. Whites are most likely to use self-care in the presence and absence of illness as a supplement to formal medical care; Hispanics and blacks are most likely to use S/C as a substitute for formal care in both presence and absence of illness.	X	Confirmed for whites, but not for Blacks and Hispanics

¹NA=not applicable for this data set.

TABLE 46

SUMMARY OF HYPOTHESES TESTING FOR THE 1976 AND MHSP STUDIES

Hypotheses	Traditional Self-Care: 1976 Study	Modern Self-Care Activities: 1976 & MHSP
1. Hispanics and blacks are more likely than whites to engage in S/C in the presence of illness. They are <u>least</u> likely to engage in maintenance and health promotion.	Rejected for the self-care measures. Regardless of ethnicity, the prevalence of S/C in the presence of illness is the same. There was indication in the data that Hispanics use homemade treatment slightly more.	Partially supported for rural blacks for preventive dental examinations (1976 study). Findings point to the opposite direction: Hispanics were most likely to non-smokers compared to whites, and blacks were more likely than whites to participate in health education.
2. For Hispanics S/C activities are most likely to be explained by sociocultural factors while for blacks socioeconomic factors are relatively more significant.	Confirmed for all S/C measures for urban blacks; for the use of homemade treatment (HT) for rural blacks, and for NPHT and HT for southw est Hispanics.	NOT APPLICABLE FOR THE MHSP DATA SET
3. The use of S/C in the presence of illness varies by type of condition (acute/chronic). Hispanics and blacks engage in S/C to treat more severe health conditions than whites.	Rejected for the self-care measures. There was indication in the data that this may be true for rural southern blacks, but findings were not significant.	NOT APPLICABLE FOR THE MHSP DATA SET
4. Within each ethnic group, S/C for health maintenance will occur most often among groups with higher levels of income and education.	NOT APPLICABLE FOR THE 1976 Access Study	Confirmed, particularly for our S/C measures on health education and the seeking of preventive examinations.
5. Whites are most likely to use S/C as a supplement to the formal medical care in the presence & absence of illness. Hispanics & Blacks use it most as a substitute.	Confirmed for blacks and southwest Hispanics. All groups, regardless of ethnicity use self-care in the presence of illness as a substitute to formal care. Exception: mean hospital days.	Rejected for preventive health services, 1976 study. Minorities who engaged in S/C sought more preventive physical, dental & eye examinations. Rejected for the MHSP data those who participated in health education and previous examinations use health service more.