HEALTH AND LIFESTYLE AMONG UTE NATIVE AMERICAN ELDERS

by

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in

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2000
ABSTRACT

Health and Lifestyle among Ute Native American Elders

by

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Utah State University, 2000

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Department: Nutrition and Food Sciences

A basic health and lifestyle questionnaire was given to a convenience sample of 103 Ute elders, age 50 and older. Fifty-three percent reported being diagnosed with diabetes. The mean BMI (body mass index) was 33.31(SD=8.72). For descriptive purposes, BMI was divided into three categories: less than 25, 25-29.99, 30 or above. Eleven percent were in the BMI category of less than 25. Thirty percent of Ute elders reported a BMI between 25-29.99. Fifty-two percent had a BMI of 30 or above. Diabetes rates among this Ute elder sample were significantly associated with a lower income, lower education level, older age, higher BMI, and having a family history of diabetes. A binary logistic regression revealed family history (Exp [B]=3.06; p<.01), age (Exp [B]=4.24; p<.01), and BMI (Exp [B]=2.21; p<.05) to be predictive of diabetes rates among this sample of Ute elders. Diabetes among Ute elders was not associated with the typical complications of hypertension, heart disease, stroke, and renal disease. However, diabetes was associated with functional decline as measured by ADL/IADL index. A
binary logistic regression revealed age to be more of a predictive factor in ADL/IADL score than diabetes.

Based on this survey, the Ute Tribe should focus future wellness programs on prevention and control of diabetes and obesity among their tribe. Prevention for these chronic diseases needs to begin with the youth as well as with the older members of the tribe. Currently, the Ute tribe has two programs to treat and prevent diabetes among their tribe. The Diabetes Prevention and Control Program is a clinic to provide intervention for those Ute members with diabetes. It also provides a small gym furnished with exercise equipment for members of the tribe to use at no cost to them. The other program for the youth of the tribe teaches about the importance of nutrition and exercise in their lifestyles. Future programs should expand upon existing programs in attempts to reach the whole tribe.

(119 pages)
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Laura L. Prestwich
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LIST OF SYMBOLS, NOTATION, DEFINITIONS

<table>
<thead>
<tr>
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<th>Definition</th>
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<tr>
<td>ADL</td>
<td>Activities of Daily Living</td>
</tr>
<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>BMI</td>
<td>Body Mass Index</td>
</tr>
<tr>
<td>CDC</td>
<td>Center for Disease Control</td>
</tr>
<tr>
<td>CHR</td>
<td>Community Health Representative</td>
</tr>
<tr>
<td>COPD</td>
<td>Chronic Obstructive Pulmonary Disease</td>
</tr>
<tr>
<td>DCCT</td>
<td>Diabetes Complications and Control Trial</td>
</tr>
<tr>
<td>df</td>
<td>degrees of freedom</td>
</tr>
<tr>
<td>e.g.</td>
<td>for example</td>
</tr>
<tr>
<td>ESRD</td>
<td>End Stage Renal Disease</td>
</tr>
<tr>
<td>Exp (B)</td>
<td>$e^{2.718}$ raised to the regression coefficient (B)</td>
</tr>
<tr>
<td>F value</td>
<td>Statistic used in ANOVA tests</td>
</tr>
<tr>
<td>IADL</td>
<td>Instrumental Activities of Daily Living</td>
</tr>
<tr>
<td>i.e.</td>
<td>for example</td>
</tr>
<tr>
<td>IHS</td>
<td>Indian Health Services</td>
</tr>
<tr>
<td>min.</td>
<td>minimum</td>
</tr>
<tr>
<td>max.</td>
<td>maximum</td>
</tr>
<tr>
<td>MS</td>
<td>Mean Squares (statistic in ANOVA test)</td>
</tr>
<tr>
<td>n</td>
<td>sample size or response rate</td>
</tr>
<tr>
<td>NHANES</td>
<td>National Health and Nutrition Examination Survey</td>
</tr>
<tr>
<td>p</td>
<td>observed significance level</td>
</tr>
<tr>
<td>R value</td>
<td>partial correlation between the dependent and each of the independent variables in a logistic regression test</td>
</tr>
<tr>
<td>SD</td>
<td>Standard Deviation of the mean</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Products and Service Solutions</td>
</tr>
<tr>
<td>SS</td>
<td>Sums of Squares in an ANOVA test</td>
</tr>
<tr>
<td>Wald value</td>
<td>the square of the ratio of B divided by standard error in a logistic regression</td>
</tr>
<tr>
<td>$\bar{x}$</td>
<td>sample mean</td>
</tr>
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</table>
CHAPTER 1
GENERAL BACKGROUND AND INTRODUCTION

The Uintah-Ouray Ute Indian Reservation is located in eastern Utah, encompassing parts of Duchesne and Uintah Counties. The Uintah-Ouray, or Northern Utes, are made up of four bands that were relocated to the reservation at Fort Duchesne from the Colorado Plateau and central Utah. The Uintah-Ouray bands are culturally affiliated with the plains Indians and the mountain tribes of Idaho and Montana. Ute Tribal rolls indicated a total Ute Tribe membership for 1997 as 3,163 people. Approximately 9.1% of the population (~300 people) is considered elderly, age 50 and over as reported by the Senior Center Director. (Statistical data specifically on the Ute tribe are limited, indicating the need for research to be done among this tribe.) Average life expectancy for the tribe is 47 years (per verbal communication from the Director of the Ute Senior Center). Those that survive past the average life expectancy are a unique segment of the Ute population.

The tribe lived a marginal existence prior to the 1950s when large oil shale deposits were discovered on the reservation and they received revenues from the mineral rights. Since the closure of the oil shale fields, there has been a decline in the economic level of the entire region. Royalties for the oil to the Ute tribes has diminished, and overall unemployment is high. The older Ute members were especially hit hard. The State of Utah Governor’s Office Demographic and Economic Analysis Report (1998) indicates that more than two thirds of the Utah Native American population over age 60 earn less than $15,000 per year, and 46.9% live below the poverty level.

When compared to the general U.S. population, Native Americans experience
different health problems. Mortality records of Native Americans reveal high rates for accidents, diabetes, liver disease, pneumonia/influenza, suicide, homicide, and tuberculosis (Mahoney & Michalek, 1998). Conversely, lower rates were found for heart disease and cancer when compared with the general U.S. population (Mahoney & Michalek, 1998). The 1993 Trends in Indian Health published by the Indian Health Service (IHS; 1994) indicate that high rates of obesity parallel the high rates of diabetes in Native American populations. Population based data collected specifically from the Uintah-Ouray Ute Tribe are not available. Most statistical data collected by the IHS and state agencies are by geographic area or health service units and not specific to tribe or culture. In addition, data vary within each reporting unit because each unit uses different criteria and coding methods for disease identification or categorization, making it difficult to determine prevalence data.

The Ute tribal council requested that a basic health and lifestyle study be done on their elderly to determine the population characteristics and disease risk for their tribe. Diabetes and obesity are known to be health problems among the Ute population. Therefore, more extensive research was done on these two conditions. However, the tribe also wished to know what other diseases and characteristics, if any, placed members of their tribe at a greater health risk. With background information from this study, the tribe desires to develop a wellness program specifically designed for the Ute population.

References


CHAPTER 2
DIABETES, RISK FACTORS, AND COMORBIDITIES

Abstract

The purpose of this study was to explore diabetes, age, and associated variables in Ute Native American elders, age 50 years and older. A cross-sectional survey was administered to a convenience sample of 103 Ute elders. Relationships between variables were assessed using one-way analysis of variance (ANOVA) and chi-square tests. Predictive value of associated variables was assessed using a binary logistic regression. Fifty-three percent of Ute elders reported being diagnosed with diabetes. Higher rate of diabetes among Ute elders was significantly associated with lower income and education levels. The diabetes rate was also significantly associated with increasing age, family history, BMI (body mass index), and declining functional ability. Increasing age was associated with lower education level and declining functional ability. The Ute Tribe programs planned to promote among upcoming generations the prevention, intervention, and control of diabetes among those already diagnosed.

Introduction

Many of the health problems that Native Americans face today have been linked to being overweight or obese (Story et al., 1999). A common definition for overweight is to exceed a standard weight based on height (Mahan & Escott-Stump, 1996). Obesity is defined as a condition in which individuals have excess fat (Mahan & Escott-Stump, 1996). With vague definitions of obesity (because weight varies with lean muscles mass
as well as with fat mass), there is no accurate way to determine ideal body weight for
height. A preferred measure to indicate adiposity is body mass index (BMI), which is
computed using weight in kilograms divided by height in meters squared. A BMI of 25
or greater is considered overweight, and 30 or greater is considered obese (Mahan &
Escott-Stump, 1996).

Obesity has been found to be widespread throughout Native American
communities; however, there is much variation between tribes (Story et al., 1999). All
age segments of the Native American population have a higher obesity rate than the U.S.
population (all races included). As is the case of other populations, the prevalence of
obesity among Native Americans continues to rise. A telephone survey that assessed
BMI in Native Americans across the country randomly selected Native Americans from
eight states (Will et al., 1999). Subjects were asked to self-report height, weight, and
other factors. They found that BMI had increased substantially among some Native
American populations to reflect a weight gain of about 0.7 to 1.4 pounds per year,
depending on gender. In the Strong Heart Study, all three groups of Native Americans
(tribes from Arizona, South Dakota, Oklahoma) studied had a total average BMI and
weight that was greater than the national averages for both men and women (Howard et

Since some Native American populations have experienced rapid increases in
average BMI, there is some concern that this may result in new cases of chronic diseases.
With every pound of weight gained, the risk of developing diabetes increases by 1.5% to
2.0% (Will et al., 1999). The Strong Heart Study assessed coronary heart disease and its
risk factors in 13 Indian communities in three geographically diverse groups of Native
Americans (located in Arizona, Oklahoma, and North and South Dakota) (Howard et al., 1995, 1996). They found that BMI was significantly correlated with diabetes in all three groups of Native Americans. Fat distribution also seems to play a role. Abdominal or central obesity is considered a significant and independent risk factor for diabetes and impaired glucose tolerance (Story et al., 1999).

Native Americans, specifically, have been shown to have a five-fold higher risk of developing diabetes when compared with Caucasians (Haffner, 1998). The Strong Heart Study showed an average of 48% of the Native Americans studied to have diabetes (Howard et al., 1995, 1996). This is 8.7 times higher than the national average of 5.5%.

Besides obesity (or a higher BMI), other risk factors for the development of diabetes are age, family history, and a lower education (Lipton et al., 1993; Pan et al., 1997). The association between income level and diabetes has been inconsistent. Income level was not significantly associated in one study examining the risk factors for type 2 diabetes among black and whites (Lipton et al., 1993); yet in China, a higher annual income was found to be an independent risk factor (Pan et al., 1997).

Diabetes not only affects individuals, but also their communities because of the many possible physiological and economical burdens associated with it. Complications include retinopathy, nephropathy, and neuropathy. Diabetic retinopathy has become the leading cause of blindness in the U.S. It is estimated that 80% of individuals who have had type 2 diabetes for 20 years will have at least some retinopathy, and approximately 20% will have proliferative retinopathy (Johsson, 1998). In those with type 1 diabetes, retinopathy affects virtually all, and proliferative retinopathy is found in 60% of those that have had it for 20 years (Johsson, 1998).
Diabetes also significantly contributes to the prevalence of nephropathy. Over the past couple of decades, the incidence of those who suffer from diabetic end stage renal disease (ESRD) has risen. In 1982, there were approximately 5,000 new cases of diabetic ESRD which consisted of 22% of all new ESRD patients (Johsson, 1998). However, in 1996, the number had risen to approximately 31,000 new cases of diabetic ESRD, comprising 42% of all new cases (Johsson, 1998). Diabetes is currently the number one cause of ESRD.

Neuropathy is also a serious complication of diabetes. Chronic hyperglycemia has been found to result in nerve damage, thus leading to peripheral and autonomic neuropathy (Mahan & Escott-Stump, 1996). If left untreated, neuropathy can result in poor wound healing and ultimately gangrenous extremities which can result in amputation. The U.S. National Hospital Discharge Survey indicated that 51% of all nontraumatic lower-extremity amputations were preformed on those with diabetes (Johsson, 1998).

Macrovascular complications of diabetes include ischemic heart disease, stroke, and peripheral vascular disease. A follow-up of the NHANES study found that diabetes was associated with 2.5 times more deaths from cardiovascular disease (12 per 1000 persons in men without diabetes and 30 per 1000 persons in men with diabetes) and greater than 3 times more deaths from ischemic heart disease (7 per 1000 persons in men without diabetes and 23 per 1,000 in men with diabetes) (Johsson, 1998).

Paradoxically, in Native American populations, the rates of hypertension and cardiovascular disease were found to be lower than in the general U.S. population despite their high rates of obesity and diabetes (Howard et al., 1995, 1996). However, the Strong
Heart Study indicated that in those Native Americans with diabetes, there was a higher prevalence of myocardial infarction and coronary heart disease, especially in women (where there was approximately double the prevalence of men) than in those Native Americans without diabetes (Howard et al., 1995 and 1996). Blood pressure was also found to be higher in those individuals with diabetes. Hypertension and coronary heart disease may not be as large a health problem for Native Americans as for the general U.S. population, there still is a concern that risk is increasing due to lifestyle and other risk factors, such as diabetes and obesity.

Research has shown that chronic hyperglycemia in patients with diabetes increases incidence of diabetic complications (Johsson, 1998). It is estimated that the average per capita health care cost (excluding nursing home care) for a person with diabetes is $11,000 per year versus only $2,600 per year for someone without diabetes (Johsson, 1998). The majority of this cost (64%) is due to inpatient hospitalization of people with diabetes, indicating that complications of this disease play a major role in its economic burden (Johsson, 1998). Better glycemic control not only reduces diabetic complications, but also significantly decreases the economic cost of this disease (Johsson, 1998).

The Ute tribal council requested that a basic health and lifestyle study be done on their elderly to determine the disease risk for their tribe. Diabetes is known to be a health problem among the Ute population. Therefore, six questions were considered in this research. First, what is the prevalence rate of diabetes among the Ute population? Second, what risk factors among other populations are associated with diabetes in the Ute elderly population? Third, among the factors associated with diabetes, which of these
factors are actually predictive and can be considered risk factors? Fourth, what complications among other populations are associated with diabetes among the Ute elderly population? Fifth, among the complications associated with diabetes, for which of these complications is diabetes actually a predictive factor and can be considered to play a causative role? Six, what role does age play in diabetes and associated risk factors and outcomes among the Ute elder population?

Methods

Sample Selection

Tribal rolls indicated that there are approximately 300 Ute members who are 50 years of age and older. All 300 Ute seniors were selected to participate in the study; 103 usable surveys were returned.

Data Collection

The survey was first administered to participants of the Ute Senior Center, and then branched out to the four communities on the Ute reservation. It was estimated that a majority of the interviews were conducted at the Ute Senior Center. The remainder of the interviews were conducted in the participants’ homes. The interviewers were of the Ute culture since they are more familiar with cultural practices (Boyden & Przestrzelski, 1995). Training of the interviewers consisted of an intense two-day session where interviewers were taught how to explain survey content, ask open-ended questions, probe for more information, and so forth.
The data for this research came from a cross-sectional questionnaire. It was constructed to allow identification of high-risk people or groups by linking risk factors with health outcomes. The baseline questionnaire was adapted from the Utah Health, Nutrition, and Lifestyle Survey of Adults 50 Years of Age and Older (Cutler et al., 1998) and included questions from the Ute Tribe Senior Intake and Needs Assessment forms (Cuch, 1998). This approach was adopted to assist the Ute Tribe in obtaining needed information for senior programs with the least amount of participant inconvenience.

The questionnaire was further adapted by pre-administering it to younger members (ages 40-49 years) of the Ute Tribe in order to assess their level of comfort and understanding of the content of the questions. This brought investigators on more common ground with the Ute population so that the survey questions were worded to decrease or eliminate cultural miscommunication, thus increasing cultural competency (Teufel, 1997). An example of how the questionnaire was adapted included changing yearly income levels to monthly income levels.

The survey questionnaire is a compilation of questions that are strongly associated with successful aging and those that identify major age-related diseases and their risk factors. The Utah health, nutrition, and lifestyle survey was based on data from literature, the National Health and Nutritional Examination Surveys, information collected from government programs for older people, and standardized questionnaires used in other aging studies (Kempen et al., 1996; Satariano, 1997; Hoeymans et al., 1997; Chapman, Ham, & Pearlman, 1996; Mueller, Schur, & O’Connell, 1997; Bender et al., 1998; Njolstad, Arnesen, & Lund-Larsen, 1998; Dorn et al., 1997). The survey also includes
factors that are considered the best predictors of aging, functional decline and mortality (Idler & Kasal, 1997; Schumamit et al., 1997; Mukamel et al., 1997). The questionnaire contains specific questions on basic demographic and lifestyle information, including height, weight, activities of daily living (ADL) and instrumental activities of daily living (IADL), medical and family history, social support networks, medication and supplement use, and tobacco and alcohol use.

The survey was designed to obtain self-reported data, which has been shown in a number of studies to have reasonable correlation (up to 80%) with medical and government records (Haapenen et al., 1997). In fact, self-perceived health and function have good predictive value for mortality. Those respondents who report they are in poor health warrant follow-up care with health providers (Turner et al., 1996; Spiers, Jagger, & Clarke, 1996).

**Demographics**

For age assessment, subjects reported actual age in years and date of birth. Actual age was used in part of the statistical analysis (e.g., one-way ANOVAs). Age was then divided into three categories (50-64, 65-74, and 75 or above) for descriptive purposes. Education level was divided into four categories: grade school or less, some high school, high school graduate or equivalent, and above high school graduate. Income level was reported as monthly income and divided into four categories: $0-600, $601-900, $901-1200, and $1201 or above.

**BMI**

BMI was calculated by using the weight in kilograms divided by height in meters.
squared. Actual BMI was used in part of the statistical analysis (e.g., one-way ANOVAs); however, BMI was divided into three categories for further analysis (e.g., binary logistic regression): less than 25, 25-29.99, and 30 or above.

**Diabetes**

A skip pattern design was used to assess health and related variables in the questionnaire. For 23 diseases, the survey asked if the subject had ever been diagnosed with the specific disease. If the subject answered yes, other questions concerning the disease were also asked. If the subject answered no, the other questions concerning the disease were skipped, and the subject moved to the next question. The subsequent questions asked if the subject was currently being treated for the disease and if the disease interferes with daily activities.

For diabetes, more questions were asked if subjects indicated that they had been diagnosed with the disease: age at diagnosis, type of diabetes, possible complications (amputation, blindness, diabetic retinopathy, diabetic neuropathy, and diabetic nephropathy). Ute elders who answered that they had not been diagnosed with diabetes were asked if they had been tested for diabetes.

**ADL and IADL Indexes**

Fourteen activities of daily living (ADL) and instrumental activities of daily living (IADL) were assessed in this study. The eight ADL that were assessed included ability to dress, bathe, feed self, get into or out of a bed or chair, use walking assistance, walk short distances within home or inside a building, walk longer distances, and use a toilet (Katz et al., 1963). The six IADL included ability to prepare meals, drive a car,
access public transportation, perform light housework, manage personal finances, and lift 10 pounds (Lawton & Brody, 1969). Three choices were offered to assess ability to perform tasks: 1) I do not need help, 2) I need some help, and 3) I cannot do this by myself at all. The possible answers were coded as follows: 0 if the subject reported ability to do the task without any help at all and 1 if the subject reported needing some help or not being able to do the task at all (Chapleski et al., 1997). This method of coding was employed in order to show a greater contrast between the functional abilities of the Ute elders. For each individual Ute elder, the codes of all 14 ADL/IADL added together portrays the number of daily tasks with which help is needed.

Due to the statistical breakdown of the ADL/IADL scores of the Ute elders (59% no impairments, 28% impairment of 1-5 tasks, and 8% impairment of 10-13 tasks), further coding was then employed. The ADL/IADL score was coded as follows: 0 if the subject reported ability to do all tasks without any help at all and 1 if the subject reported needing help with any tasks.

**Data Management and Statistical Analysis**

Data were double entered using the Microsoft Access computer software package. The database was adapted from the Utah Health, Nutrition, and Lifestyle Survey. Once entered, the data were converted into Microsoft Excel for ease of storage and analysis. Finally, the data were converted into SPSS for statistical analysis of the survey.

Associations between variables were assessed using one-way ANOVA and chi-square tests. Predictive value of variables was determined by using binary logistic regression backward entry.
Results

The basic characteristics of this population are found in Table 1. Diabetes was reported as the greatest health problem among Ute elders in this sample. Associations (using chi-square and one-way ANOVA tests) between diabetes and other variables were measured to suggest risk factors and outcomes of this disease. The predictive value was then measured using a binary logistic regression. Age was also associated with many of the risk factors and outcomes of diabetes.

Diabetes

Diabetes prevalence rates of this Ute elder sample were compared with national diabetes prevalence rates. Forty-five percent of Ute elders age 50 to 64 (n=39) reported having diabetes compared to the national prevalence rate of 6.4% for age 45-64 (Center for Disease Control [CDC], 1999). In Ute elders age 65-74 (n=19), 68% reported being diagnosed with diabetes. The national rate of diabetes for age 65-74 is 13.3% (CDC, 1999). Ninety percent of Ute elders age 75 or above (n=10) reported having diabetes versus the national prevalence rate of 11.7% for those age 75 or above (CDC, 1999).

Ute elders with diabetes (n=53, x=63 years, SD = 10.60) were significantly older than those without (n=45, x= 58 years, SD=6.86) using a one-way ANOVA test (n=98; Between groups: degrees of freedom [df]=1, sums of squares [SS]=557.20, mean square [MS]=557.20; Within Groups: df=96, SS=7918.07, MS=82.48; F=6.76; p=.01). A chi-square test revealed gender not to be significantly associated with diabetes (n=103; chi-square: Value=.24, df=1, p=.63). Fifty-one percent of Ute males (n=51) had diabetes; 53% of Ute females (n=52).
Table 1. Characteristics of the Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percentages/Means</th>
</tr>
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<tbody>
<tr>
<td>Gender (n=103)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
</tr>
<tr>
<td>Male</td>
<td>50%</td>
</tr>
<tr>
<td>Age (n=98)</td>
<td>x=60.39 years (SD=9.35)</td>
</tr>
<tr>
<td>50-64 years</td>
<td>67%</td>
</tr>
<tr>
<td>65-74 years</td>
<td>18%</td>
</tr>
<tr>
<td>75 or above</td>
<td>10%</td>
</tr>
<tr>
<td>Education Level (n=103)</td>
<td></td>
</tr>
<tr>
<td>Grade school or less</td>
<td>20%</td>
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<tr>
<td>Some high school</td>
<td>27%</td>
</tr>
<tr>
<td>High school graduate or equivalent</td>
<td>24%</td>
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<tr>
<td>More than high school graduate</td>
<td>28%</td>
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<td>Monthly Income Level (n=95)</td>
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<td>$0-600</td>
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<td>$601-900</td>
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</tr>
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<td>$1201 and above</td>
<td>21%</td>
</tr>
<tr>
<td>Body Mass Index (BMI) (n=95)</td>
<td>x=33.31 (SD=8.72)</td>
</tr>
<tr>
<td>Less than 25</td>
<td>11%</td>
</tr>
<tr>
<td>Between 25-29.99</td>
<td>30%</td>
</tr>
<tr>
<td>30 or above</td>
<td>52%</td>
</tr>
<tr>
<td>Height (n=99)</td>
<td>x=62.79 inches (SD=5.65)</td>
</tr>
<tr>
<td>Weight (n=96)</td>
<td>x=181.51 pounds (SD=31.49)</td>
</tr>
<tr>
<td>Diabetes (n=103)</td>
<td></td>
</tr>
<tr>
<td>No Test for diabetes (n=40)</td>
<td>47%</td>
</tr>
<tr>
<td>Yes</td>
<td>63%</td>
</tr>
<tr>
<td>Age of diabetes diagnosis (n=27)</td>
<td>x=47.30 years (SD=11.92)</td>
</tr>
<tr>
<td>Type of diabetes (n=49)</td>
<td></td>
</tr>
<tr>
<td>type 1</td>
<td>14%</td>
</tr>
<tr>
<td>type 2</td>
<td>71%</td>
</tr>
<tr>
<td>gestational</td>
<td>4%</td>
</tr>
<tr>
<td>Complications of diabetes (n=53)</td>
<td></td>
</tr>
<tr>
<td>Amputation</td>
<td>7%</td>
</tr>
<tr>
<td>Blindness</td>
<td>2%</td>
</tr>
<tr>
<td>Retinopathy</td>
<td>15%</td>
</tr>
<tr>
<td>Neuropathy</td>
<td>6%</td>
</tr>
<tr>
<td>Nephropathy</td>
<td>2%</td>
</tr>
<tr>
<td>No complications</td>
<td>66%</td>
</tr>
<tr>
<td>Family History of Diabetes (n=96)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>18%</td>
</tr>
<tr>
<td>Yes</td>
<td>51%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>25%</td>
</tr>
<tr>
<td>ADL/IADL Index (n=100)</td>
<td>x=1.75 (SD=3.44)</td>
</tr>
<tr>
<td>No problems</td>
<td>59%</td>
</tr>
<tr>
<td>At least one problem</td>
<td>38%</td>
</tr>
</tbody>
</table>

Note: ADL = activities of daily living. IADL = instrumental activities of daily living.

Frequency rates are reported as a percentage of the total 103 participants even though actual response rates varied for each question.
A chi-square test revealed diabetes in Ute elders to be associated with education level. Ute elders with a lower education level had higher rates of diabetes (n=103; chi-square: Value=16.66, df=3, p<.01). Ninety-one percent of those with a grade school education level or less (n=21) had diabetes. Fifty-four percent of those with some high school (n=28) had diabetes. Those with a high school diploma or equivalent (n=25) and above high school graduate education (n=29) levels had decreasing rates of diabetes with 44% and 35%, respectively.

Income level was also found to be associated with diabetes using a chi-square test. There was a significant difference between categories of income level and diabetes (n=95; chi-square: Value=10.12, df=3, p=0.02); however, there was no definite pattern. Ute elders who reported the lowest socioeconomic status (n=46), a monthly income of $600 or less, indicated the second highest level of diabetes at (63%). Diabetes levels peak at 78% among the next monthly income level of $601-900 (n=18) and then declined. For the next two income levels, $901-1200 (n=9) and $1201 or above (n=22), diabetes levels were 44% and 32%, respectively.

A chi-square test revealed that having a family history of diabetes was associated with having diabetes (n=96; chi-square: Value=14.24, df=2, p<0.01). Of those that indicated having a family history of diabetes among immediate family member, i.e., children, siblings, and parents (n=52), 67% reported having diabetes. Seventeen percent of those without a family history of diabetes (n=18) had diabetes. Forty-six percent of those that did not know of a family history of diabetes (n=26) reported having diabetes.

Diabetes was found to be associated with BMI using a one-way ANOVA. Ute elders with a higher BMI had a significantly higher rate of diabetes (n=95; Between
Groups: df=1, SS=538.11, MS=538.11; Within Groups: df=93, SS=6605.16, MS=71.02; F=7.58; p<0.01). The average BMI for those with diabetes was 35.39 (n=54, SD=9.90). Those Ute elders without diabetes had an average BMI of 30.58 (n=41, SD=5.94).

Predictive value of the previous variables (BMI, age, family history, income, education level) found associated with diabetes was determined by a binary logistic regression. For this regression, all variables were used in the categorical form. Age was divided into three categories: 50-64, 65-74, 75 and greater. BMI was divided into three categories: less than 25, 25-29.99, 30 and greater. The first variable removed from the regression was monthly income level because log likelihood decreased by less than .01 percent. From there, education level was removed because log likelihood decreased by less than .01 percent. The last three variables were left in the equation in the following order: family history (Exp [B]=3.1; p<.01), age categories (Exp [B]=4.2; p<.01), and BMI categories (Exp [B]=2.2; p=.05). A summary of the regression is found in Table 2.

Diabetes prevalence rate among Ute elders was not associated with the typical diabetes comorbidities of hypertension, heart disease, stroke, and renal disease according to chi-square test results. Thirty percent of Ute elders who reported having diabetes (n=53) also reported having hypertension (n=98; chi-square: Value=1.33, df=1, p>.05).

Conversely, 20% of those without diabetes (n=45) had hypertension. Only 10%

<table>
<thead>
<tr>
<th>Variable</th>
<th>R</th>
<th>Wald</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family History</td>
<td>.2532</td>
<td>8.9526</td>
<td>3.0634**</td>
</tr>
<tr>
<td>Age</td>
<td>.2244</td>
<td>7.4597</td>
<td>4.2371**</td>
</tr>
<tr>
<td>BMI</td>
<td>.1272</td>
<td>3.7549</td>
<td>2.2140*</td>
</tr>
<tr>
<td>Education level</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income level</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: BMI = Body Mass Index

*p=.05, ** p<.01
of those with diabetes (n=51) reported having heart disease (n=97; chi-square: Value=.04, df=1, p>.05). Nine percent of Ute elders without diabetes (n=46) reported having heart disease. Fifteen percent of Ute elders who reported having diabetes (n=55) also reported having a stroke (n=102; chi-square: Value=.89, df=1, p>.05). Nine percent of those who did not report having diabetes (n=47) had a stroke. Seven percent of Ute elders who had diabetes (n=54) reported having renal disease (n=101; chi-square: Value=.45, df=1, p>.05). Four percent of those Ute elders who did not have diabetes (n=47) did not have renal disease.

Ute elders with diabetes had less functional ability as measured ADL/IADL index. A one-way ANOVA revealed that those Ute elders with diabetes (n=52) had a significantly higher average score of 2.54 (SD=4.11) (n=99; Between Groups: df=1, SS=31.87, MS=31.87; Within Groups: df=94, SS=94146.12, MS=1001.56; F=.03; p<.01). Ute elders without diabetes (n=47) had an average score of 0.74 (SD=2.03). ADL/IADL score was broken down into two categories: 1) no help needed with any tasks, and 2) help needed on tasks for further analysis. A chi-square test revealed a higher diabetes rate to be significantly associated with help being needed with any of the ADL/IADL tasks (n=99; chi-square: Value=4.35, df=1, p<.05). Forty-eight percent of those with diabetes (n=52) needed help with at least one ADL/IADL task versus 28% of those without diabetes (n=47) needing help with at least one task.

Age

Age category was significantly associated with BMI (n=92; Between Groups: df=2, SS=416.20, MS=208.10; Within Groups: df=89, SS=6045.91, MS=67.93; F=3.06; p=.05). Those who were between age 50-64 had an average BMI of 32.33 (n=65,
SD=7.12). For the age group that was 65-74, the average BMI was 31.88 (n=17, SD=7.83). Those Ute elders that were age 75 or above had an average BMI of 39.05 (n=10, SD=14.21).

Ute elders who had obtained a lower education level were significantly older than those with a higher education level (n=98; Between Groups: df=3, SS=1380.10, MS=460.03; Within Groups: df=94, SS=7095.16, MS=75.48; F=6.10; p<.01). Those who obtained grade school or less had an average age of 66.90 (n=20, SD=10.35). The average age of Ute elder who had an education level of some high school was 60.28 (n=25, SD=9.53). Ute elders who achieved a high school diploma or equivalent or above high school graduate had average ages of 60.16 (n=25, SD=9.30) and 56.04 (n=28, SD=5.46), respectively.

There was not a significant difference, using a one-way ANOVA test, between the age and monthly income level (n=91; Between Groups: df=3, SS=431.85, MS=143.95; Within Groups: df=87, SS=7752.83, MS=89.11; F=1.62; p>.05). For those with the lowest socioeconomic status, monthly income of $600 or less, the mean age was 60.67 years (n=42, SD=9.15). The mean age of those with a higher monthly income varied: $601-900 was 64.17 years (n=18, SD=11.06), $901-1200 was 57.44 years (n=9, SD=9.44), and $1201 or above was 58.32 years (n=22, SD=8.54).

Even though age was associated with diabetes, it was not associated with hypertension, heart disease, or renal disease using one-way ANOVA tests. Ute elders who had hypertension (n=24) had an average age of 61.42 years (SD=11.21) (n=94; Between Groups: df=1, SS=53.55, MS=53.55; Within Groups: df=92, SS=7156.92, MS=77.79; F=.69; p>.05). Those who did not have hypertension (n=70) had an average...
age of 59.69 years (SD=7.86). The average age of Ute elders with heart disease (n=8) was 60.63 years (SD=10.90) (n=92; Between Groups: df=1, SS=10.67, MS=10.67; Within Groups: df=90, SS=6438.29, MS=71.54; F=.15; p>.05). Those Ute members without heart disease (n=84) had a mean age of 59.42 years (SD=8.23). The average age of those who have been diagnosed with renal disease (n=6) was 55.67 years (SD=5.24) (n=97; Between Groups: df=1, SS=121.82, MS=121.82; Within Groups: df=95, SS=7143.09, MS=75.19; F=1.62; p>.05). Those without renal disease (n=91) had an average age of 60.32 years (SD=8.82).

A one-way ANOVA revealed that Ute elders who reported being diagnosed with a stroke were significantly older (n=95; Between Groups: df=1, SS=597.87; MS=597.87; Within Groups: df=96, SS=7877.40, MS=82.06; F=7.29; p<.01) than those who had not been diagnosed with a stroke. The average age of Ute elders who reported having a stroke was 67 years (n=12, SD=9.51). Those who did not report having a stroke had an average age of 59.47 years (n=86, SD=9.00).

Age was found to be associated with mean ADL score. A one-way ANOVA showed that Ute elders who were older had a significantly higher ADL score than those who were younger (n=95; Between Groups: df=2, SS=209.16, MS=104.58; Within Groups: df=92, SS=914.78, MS=9.94; F=10.52; p<.01). Those Ute members who were age 50-64 had an average score of 1.11 (n=68, SD=2.95). Ute elders of age 65-74 had an average score of 1.94 (n=18, SD=2.80). The average ADL/IADL score of Ute members age 75 or above was 6.22 (n=9, SD=4.99). When age categories were analyzed using ADL/IADL categories, those in need of help with at least one ADL/IADL task was significantly associated (n=95; Pearson Chi-square: Value=11.53, df=2, p<.01) with
increasing age. Thirty-one percent of Ute elders of age 50-64 (n=68) needed help with at least one task. The percent of those who were 65-74 (n=18) who needed help with one task was 44%. Eighty-nine percent of those 75 or above (n=9) needed help with at least one ADL/IADL task.

**ADL/IADL Index**

A binary logistic regression using backward entry was run to determine predictive ability of age and diabetes on functional ability. Diabetes was removed from the regression equation. Age, however, was left in the regression equation with an Exp (B) value of 2.9 (p=.01). A summary of the regression is found in Table 3.

**Discussion**

The six objectives of this study were revealed through the results of this study. First, the Ute elder reported diabetes prevalence rate was 53%. (This was much higher than the national average.) Second, the risk factors among this Ute elder sample that are associated with diabetes are similar to the national risk factors: family history, age, BMI, education level, and income level. Third, only family history, age, and BMI were found to be predictive of diabetes among Ute members. Fourth, the typical diabetes complications of hypertension, stroke, heart disease, and renal failure were not associated with diabetes in this Ute sample. However, diabetes was associated with an increase in

Table 3. Regression Summary for Predictors of Functional Ability (ADL/IADL Index)

<table>
<thead>
<tr>
<th>Variable</th>
<th>R</th>
<th>Wald</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.2348</td>
<td>9.0052</td>
<td>2.9342*</td>
</tr>
<tr>
<td>Diabetes</td>
<td>.487</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *p=.01
ADL/IADL score (which indicates functional decline). Fifth, diabetes was not found to significantly play a causative role for any complications, including ADL/IADL score. Sixth, age is associated with increase in diabetes prevalence among Ute elders in this sample. As age increases, the diabetes prevalence rate increases. Age was also associated with BMI, education level, stroke prevalence, and ADL/IADL score, but not income level, hypertension, and heart disease. Age was found to significantly play a causative role in function decline among Ute elders. Further discussion follows.

Diabetes is the main health problem among the Ute population. Subjects may have underreported diabetes due to some denial that occurs with diagnosis of any disease. If the disease is not acknowledged, one does not have to deal with all the concern that comes with the disease. Also, it is known that many individuals with diabetes are not aware of it (Mahan & Escott-Stump, 1996). Additionally, individuals who participate in health surveys may be healthier than those members of their population who do not participate.

On the other hand, those Ute elders who participated in the survey may be those most concerned with their health because of health problems (e.g., diabetes). The act of participating in a health and lifestyle survey could be viewed as a method of seeking for help with their health problems. Diabetes is known to be a health problem among the Ute Tribe, and health education programs have provided the Ute population with much exposure to information about the disease. Individuals may think that they have diabetes when they have not actually been diagnosed with the disease. Therefore, because of this, the diabetes prevalence rate from this sample could be an overestimate.

Even though there are some obvious biases in this study due to self-reported data.
and a small convenience sample, the Ute diabetes prevalence rate is comparable to the rates found for other Native American tribes in the Strong Heart Study (Howard et al., 1995, 1996). Therefore, the Ute self-reported diabetes prevalence rate is assumed to be fairly accurate.

Factors that are associated with this disease among the Ute population are similar to those that affect most populations: age, education level, income level, family history, BMI, and functional ability. Age was clearly associated with diabetes and can be considered a risk factor among this sample. The older Ute Native Americans are, the more likely they are to develop diabetes. Age is a known risk factor of diabetes (Kotulak, 1998). This is perhaps due to functional decline of beta cells in pancreas as one ages or an interaction between age and genetic susceptibility to diabetes.

Having a family history of diabetes was also clearly associated with incidence of the disease. Genetic traits among families have been found to be risk factors for many diseases. Also, families pass on many lifestyle habits that could place a person at risk for developing diabetes. Most likely, it is a combination of genetic susceptibility and lifestyle habits shared by family members that places a person at risk for diabetes.

Higher BMIs were also associated with increased rates of diabetes. Obesity is a known risk factor in the development of type 2 diabetes (Jaspan, 1997). The body’s demand for insulin rises as body weight increases. Over time, with this high demand for insulin and genetic susceptibility, the beta cells of the pancreas reach a point where production of insulin does not meet demand. This could possibly be due to exhaustion of the beta cells. Another consequence of obesity is insulin resistance (Mudaliar & Henry, 1997).
Ute elders with diabetes were found to have obtained a lower educational level. The older Ute elders were also found to have achieved a lower educational level. Because of sample size, interaction between these variables cannot be measured. However, the opportunities for education and emphasis placed on obtaining education were most likely less for older Ute members. Those Ute elders who obtained a lower education level may not have learned the importance of lifestyle in determining health. This could lead to a lifestyle that results in higher BMIs. Obesity could promote development of diabetes in susceptible individuals. Therefore, while there is obviously some interaction and perhaps overlap between these variables, it is difficult to know the extent of interaction and actual predictive value of these three variables.

Ute elder monthly income level’s association with diabetes could be due to the fact that those with a lower income level may not be aware that a healthy lifestyle (healthy eating and exercise) plays a role in the prevention and control of diabetes. Individuals with a lower socioeconomic status may not know how to incorporate healthy lifestyle habits into their life. A lower income level would possibly prevent individuals from seeking professional help in making healthy lifestyle changes because of cost. Those with a lower income level may not place importance on a healthy lifestyle and choose to focus on other aspects of life. With the data obtained through this survey, income level as it relates to poverty level was not obtainable.

Diabetes was not associated with the typical diabetes complications (heart disease, stroke, hypertension, and renal failure) among this Ute elder sample. Since the Ute life expectancy is considerably lower than the national life expectancy, Ute members with diabetes may not live long enough to develop the complications associated with
diabetes in the general population. Genetic factors may also play a role in protecting Ute members from developing the typical diabetes complications. While diabetes was not associated with typical diabetes complications, it was associated with a higher ADL/IADL score. Diabetes is a debilitating disease with complications that could affect an individual's functional ability. Peripheral neuropathy is damage to the nerves that control the hands and feet (Mahan & Escott-Stump, 1996). However, without preventive measures taken, the neuropathy moves up from the feet to the legs and from the hands to the arms. Without sensation and control of these body parts, an individual's ability to perform ADL and IADL would most likely be impaired. Due to the small sample size, the binary logistic regression test may not accurately portray predictive value of diabetes on functional ability.

The association of age with ADL/IADL score is also found in the general population. Age has been shown to be a good predictor of functional decline (Chapleski et al., 1997).

This study has many limitations, such as, a convenience sample, self-reported data, and a small sample size. Because of the small sample size, it is assumed that the accuracy of the diabetes prevalence rate and other variables is inaccurate. With a larger sample size that more accurately represented the Ute elder population, it is estimated that the diabetes prevalence rate would most likely have been smaller. Despite the obvious limitations of this study, it is clear that diabetes has become an epidemic among the Ute elder population. The Ute Tribe is concerned about the effects that this health problem is having among the Ute population. Due to this, the Ute Tribe has already taken measures
for prevention and intervention in attempts to curtail the devastating effects that diabetes has begun to take upon their population.

Funded by Indian Health Services (IHS), a Diabetes Prevention and Control Program is available for the all of Ute population on the reservation in Fort Duchesne, Utah. This provides a central place where Ute members with diabetes may go for complete medical attention for this disease. The staff of diabetes educators includes a dietitian, nurse practitioner, and physical fitness director. Also available in the office is a fitness center where members of the tribe may go to exercise free of cost.

Even though the Diabetes Prevention and Control Program provides intervention for those of the Ute population with diabetes, another program that the Ute Tribe has available for educating its members is the Summer Youth Nutrition and Fitness Program. The program is for children in grades 3-6. It combines basic nutrition and fitness lessons with actual hands-on learning activities with food and exercise to promote healthy eating and exercise habits in young Ute Native Americans. Longitudinal research is needed to determine the efficacy of such programs in the prevention of obesity and diabetes among the youth of the Ute tribe. Obesity and consequently diabetes development is rapidly increasing among Native American youth (Story et al., 1999). The need for prevention programs among young Native Americans is imperative. Rosenbloom et al. (1999) even went so far as to call the emerging problem of obesity and diabetes among this population an epidemic.

Since diabetes appears to be one of the Ute’s main health problems, prevention and intervention programs should include all age groups of their population. Not only do children and youth benefit from making healthy lifestyle changes (healthy eating and
exercise), but adults (of all ages) would also benefit in public health programs that were focused on prevention and intervention of obesity and diabetes.

As with other Native American populations, diabetes is one of their main health problems. However, the Ute Tribe is taking measures to prevent and control diabetes among their members. This research will be useful to them to link risk factors and outcomes with diabetes more specific to the elder population and help with further research in the future.

References


CHAPTER 3
HEALTH AND LIFESTYLE

Abstract

A cross-sectional survey of basic health and lifestyle factors was administered to a convenience sample of Ute Native American elders. Self-reported data were collected on demographics, living arrangements, education level, income level, use of special aids, BMI, and disease rates. The average BMI was 33.31 (SD=8.75). Seventy-two percent of Ute elders in this sample reported heights and weights that can be classified as overweight or obese. Disease rates were compared to national disease rates. Ute elders reported higher disease rates in diabetes, stroke, hypertension, pneumonia, cataracts, and allergies. The diabetes rate for this sample of Ute elders was 53%. The Ute Tribe wishes to use this data to develop a wellness program for their tribe. Considering results in this study, future wellness programs should expand existing programs on prevention and control of diabetes and obesity.

Introduction

Many health programs to help Native Americans are introduced by other ethnic groups only to fail miserably (Zechetmayr, 1997). Health programs should instead be run by members of the tribe so that the program can be administered in a manner that will be culturally acceptable to other members of the tribe (Zechetmayr, 1997). If qualified Native American health professionals are not available to provide these services, those individuals responsible for providing wellness programs to Native Americans should
move away from the usual intervention methods to a culturally sensitive mental approach (LaFromboise, Trimble, & Mohatt, 1990). Wellness providers will find more success by maintaining Native American values and beliefs rather than trying to impose other ethnic group practices on them.

Not only does the culture of Native Americans need to be addressed, but also wellness programs also need to focus on factors that enhance the wellness of elderly participants. Fitch and Slivinske (1988) found that elderly wellness participants benefited from joining in the effort of health promotion. Those who participated in the health promotion effort enhanced their perception of wellness. Other focuses of wellness programs among the elderly should be to increase perceived control and muscular strength and flexibility.

Native Americans need to be put in a position to take control of their lives. Much of their hopelessness and apathy has come from rejection and lack of government concern (Zechetmayr, 1997). However, recently, government attentions have been turned to Native Americans and their problems. Funds and support are available to begin to provide the attention and resources that were lacking in the past.

Successfully treating adult obesity of all ethnic groups has become a tremendous problem in today’s society (Story et al., 1999). Despite the avid research in this area, there is no one method that will cure society of its adult obesity problem. The answer is perhaps to turn to the children. Instead of waiting until obesity is a huge health problem, efforts should be aimed at preventing children’s health behaviors that lead to obesity (Story et al., 1999). Childhood and adolescence are when adult behaviors begin to take root. These times of life are also when new habits are learned, and there is more ability...
to change existing habits.

Children are perhaps the best answer to the adult obesity problem. By helping the youth to create healthy new lifestyles, adult lifestyles may also be changed. If children and their families work together creating supportive environments which encourage healthful eating and exercise, both ends of the spectrum may reap the benefits.

Because of the high prevalence rates of diabetes, a wellness program for Native Americans should also include a portion that focuses on reducing the burden of diabetes. Clark (1998, p. C30) identified four program objectives to facilitate this goal:

1. Increase public awareness of the seriousness of diabetes, its risk factors, and potential strategies for preventing diabetes and its complications.
2. Improve understanding of diabetes and its control to promote self-management behaviors among people with diabetes.
3. Improve health care providers’ understanding of diabetes and its control to promote an integrated approach to care.
4. Promote health care policies that improve the quality of and access to diabetes care.

The Ute tribal council requested that a basic health and lifestyle study be done on their elderly to determine the population characteristics and disease risk for their tribe. Diabetes and obesity are known to be health problems among the Ute population. Therefore, four questions were considered in this research. First, what are the most serious and prevalent public health problems among Ute elders? Secondly, how do the disease prevalence rates among Ute elders compare to national prevalence rates by age? Thirdly, what are basic demographic characteristics of the Ute elder population? Fourth,
how can this descriptive information on the elders of the Ute tribe be used to design a wellness program that fits the needs of the tribe?

Methods

Sample Selection

Ute Tribal rolls obtained from the Senior Center director indicated that there are approximately 300 Ute members who are 50 years of age and older. All 300 Ute seniors were selected to participate in the study; 103 usable surveys were returned.

Data Collection

The survey was first administered to participants of the Ute Senior Center, and then branched out to the four communities on the Ute reservation. It was estimated that a majority of the interviews were conducted at the Ute Senior Center. The remainder of the interviews were conducted in the participants' homes. The interviewers were of the Ute culture since they are more familiar with cultural practices (Boyden & Przestrzelski, 1995). Training of the interviewers consisted of an intense two-day session wherein interviewers were taught how to explain survey content, ask open-ended questions, and probe for more information.

Questionnaire

The data for this research came from a cross-sectional questionnaire. It was constructed to allow identification of high-risk people or groups by linking risk factors with health outcomes. The baseline questionnaire was adapted from the Utah Health, Nutrition, and Lifestyle Survey of Adults 50 Years of Age and Older (Cutler et al., 1998)
and included questions from the Ute Tribe Senior Intake and Needs Assessment forms (Cuch, 1998). This approach was adopted to assist the Ute Tribe in obtaining needed information for senior programs with the least amount of participant inconvenience.

The questionnaire was further adapted by pre-administering it to younger members (ages 40-49 years) of the Ute Tribe in order to assess their level of comfort and understanding of the content of the questions. This brought investigators on more common ground with the Ute population so that the survey questions were worded to decrease or eliminate cultural miscommunication, thus increasing cultural competency (Teufel, 1997). An example of how the questionnaire was adapted included changing yearly income levels to monthly income levels.

The survey questionnaire is a compilation of questions that are strongly associated with successful aging and those that identify major age related diseases and their risk factors. The Utah Health, Nutrition, and Lifestyle Survey was based on data from literature, the National Health and Nutritional Examination Surveys, information collected from government programs for older people, and standardized questionnaires used in other aging studies (Kempen et al., 1996; Satariano, 1997; Hoeymans et al., 1997; Chapman, Ham, & Pearlman, 1996; Mueller, Schur, & O’Connell, 1997; Bender et al., 1998; Njolstad, Arnesen, & Lund-Larsen, 1998; Dorn et al., 1997). The survey also includes factors that are considered the best predictors of aging, functional decline and mortality (Idler & Kasal, 1997; Schulamit et al., 1997; Mukamel et al., 1997). Survey questions and possible answers are found in Table 4.

The survey consists of self-reported data, which have been shown in a number of studies to have reasonable correlation (up to 80%) with medical and government records
Table 4. Survey Questions

<table>
<thead>
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<th>Reported Answers</th>
</tr>
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<tbody>
<tr>
<td>What is your ethnicity?</td>
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</tr>
<tr>
<td>What is your mother’s ethnicity?</td>
<td>Native American [Tribe], Other [Specify]</td>
</tr>
<tr>
<td>What is your father’s ethnicity?</td>
<td>Street, City, State, Zip Code, County</td>
</tr>
<tr>
<td>What is your mailing address?</td>
<td>Ute, English, Ute &amp; English, Other [Specify]</td>
</tr>
<tr>
<td>What is your primary language?</td>
<td>Age in Years*</td>
</tr>
<tr>
<td>What is your age?</td>
<td>Male, Female</td>
</tr>
<tr>
<td>What is your gender?</td>
<td>Single, Married, Separated/Divorced, Widowed, A member of an unmarried couple</td>
</tr>
<tr>
<td>What is your marital status?</td>
<td>Grade School or Less, Some High School, High School Graduate or Equivalent, Above High School Graduate</td>
</tr>
<tr>
<td>Which best describes your level of education?</td>
<td>Own Car, Family, Friend, Public Transportation, Senior Transportation, Other [Specify]</td>
</tr>
<tr>
<td>What is your primary source of transportation?</td>
<td>Live Alone, Live with Spouse, Live with Spouse and Children, Live with relative [Who?], Live with Friend or Companion, Live in Nursing Home or Care</td>
</tr>
<tr>
<td>What is your present living arrangement?</td>
<td>Facility, Other [Describe]</td>
</tr>
<tr>
<td>How many people live in your household?</td>
<td>Number of People</td>
</tr>
<tr>
<td>Do you have someone to help with household chores?</td>
<td>Yes [Who?], No</td>
</tr>
<tr>
<td>Have you ever had children?</td>
<td>Yes, No [Number of biological, adopted, and living children [Number of living children who live within 50 miles]], Don’t Know</td>
</tr>
<tr>
<td>Please check all sources that contribute to your financial support.</td>
<td>$0-600, $601-900, $901-1200, $1201 or above</td>
</tr>
<tr>
<td>What is your monthly income level?</td>
<td>More than Adequate, Adequate, Less than Adequate</td>
</tr>
<tr>
<td>Is your income adequate to meet your needs?</td>
<td>Yes, No, Don’t Know</td>
</tr>
<tr>
<td>Did you use any of the following services this past year?</td>
<td>Senior Center</td>
</tr>
<tr>
<td>What are some of the reasons why you attend the Senior Center in your</td>
<td>Socialization, Meals, Arts and Craft Classes, Legal Information and Services, Educational Activities, Health Information and Screening, Information and Referrals, Recreational Activities, Other [Specify]</td>
</tr>
<tr>
<td>community?</td>
<td>Yes, No [Why?]</td>
</tr>
<tr>
<td>Do you attend the Senior Center for meals?</td>
<td>Lack of Transportation, Senior Center are for the Elderly, Location not Central in my Community, Too Busy, Don’t Know the Location, Not Interested [Why?], Other [Specify]</td>
</tr>
<tr>
<td>What are some of the reasons why you do NOT attend your Senior Center in your community?</td>
<td>Yes, No [Why?]</td>
</tr>
<tr>
<td>Do you support the New Senior Center in Fort Duchesne?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Would you like to receive health services at your Senior Center?</td>
<td>Exercise Classes, Educational Classes</td>
</tr>
<tr>
<td>Would you like to participate in the following activities at the Senior Center?</td>
<td></td>
</tr>
<tr>
<td>Questions</td>
<td>Reported Answers</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>How would you rate your health?</td>
<td>Poor, Fair, Good Excellent</td>
</tr>
<tr>
<td>Do you need, have, and use any of the following special aids?</td>
<td>Walker/Cane, Wheelchair, Hearing Aid, Eyeglasses, Contact Lenses Dentures, Artificial Limb, Other</td>
</tr>
<tr>
<td>What is your current weight?</td>
<td>[Specify], None, Unknown</td>
</tr>
<tr>
<td>What is your current height?</td>
<td>Height in Inches</td>
</tr>
<tr>
<td>Have you ever been diagnosed with any of the following: Chronic Obstructive Pulmonary Disease (COPD), Arthritis, Hearing Impairment, Diabetes, Asthma, Stroke, Cancer, Pneumonia, Cataracts, Seizures, Ulcers, Gallbladder Problems, Dehydration, Anemia, Foot Problems, Heart Disease, Allergies [foods, pollen, dust, animals, drugs or medication, anything else], Migraine Headaches, Hip Fracture, Renal Disease, Yellow Jaundice or Cirrhosis of the Liver, Hypertension?</td>
<td>Weight in Pounds**</td>
</tr>
<tr>
<td>Have any of your blood relatives been diagnosed with the following: Diabetes, Stroke, Cancer, Arthritis, Hypertension, Heart Disease, Allergies, Hip Fracture?</td>
<td>No, Don’t Know, Yes</td>
</tr>
<tr>
<td>Have you ever smoked cigarettes, cigars, or a pipe, or chewed tobacco on a regular basis?</td>
<td>No, Yes</td>
</tr>
<tr>
<td>Please indicate what forms of tobacco you used.</td>
<td>Cigarettes, Cigars, Pipe, Chew/Smokeless Tobacco</td>
</tr>
<tr>
<td>Have you ever drunk beer, wine, or liquor?</td>
<td>No, Yes</td>
</tr>
<tr>
<td>Do you drink alcoholic beverages on various occasions now?</td>
<td>Yes, No</td>
</tr>
</tbody>
</table>

[ ] indicates the further question(s) asked if positive response.

*Age was divided into three categories for descriptive purposes: 50-64, 65-74, 75 or above.

** BMI was obtained by dividing weight in kilograms by height in meters squared. For descriptive purposes, BMI was divided into three categories: less than 25, 25-29.99, 30 or above.

(Haapenen et al., 1997). In fact, self-perceived health and function have good predictive value for mortality. Those respondents who report they are in poor health warrant follow-up care with health providers (Turner et al., 1996; Spiers, Jagger, & Clarke, 1996).

**Data Management and Statistical Analysis**

Data were double entered using the Microsoft Access computer software package.

The database was adapted from the Utah Health, Nutrition, and Lifestyle Survey. Once
entered, the data were converted into Microsoft Excel for ease of storage and analysis. Finally, the data were converted into SPSS for statistical analysis of the survey.

Simple descriptive statistics were run on all the data to obtain frequency rates for categorical data and averages, standard deviations, minimums and maximums on continuous data. Since the response rate for each question varied, the response rate was reported (i.e., \([n=]\)) for all questions. Frequency rates are reported as a percentage of the total 103 participants even though actual response rates varied for each question.

Results

Demographics

While all participants surveyed were Ute Native American, there was a few that claimed to be of different tribes or mixed blood. Of the Ute elders surveyed, 99% (\(n=101\)) claimed to be of the Northern Ute Tribe. One reported being of the Southern Ute Tribe. Maternal tribes (\(n=92\)) include Northern Ute Tribe (99%) and Southern Ute Tribe (1%). The Ute elders fathers (\(n=86\)) were not all Native American. Ninety-nine percent claimed to have Native American fathers, and 1% claimed a father of Hispanic ethnicity. Of the Native American fathers, 95% were from the Northern Ute Tribe, 4% from the Southern Ute Tribe, and 1% from a mix of tribes including Ute.

The cities (\(n=100\)) Ute elders lived in varied. The Ute elders mostly lived in Fort Duchesne, Utah (59%). Nine percent lived in both Myton and Randlett, Utah. Eight percent lived in Whiterocks, Utah. Five percent lived in both Roosevelt and Neola. Two percent lived in Lapoint, Utah, and 1% lived in El Prado, New Mexico.
The average age of Ute elders in this sample was 60.39 years (n=98; SD=9.35) with a range from 50 to 95 years. When age was broken down into three categories (50-64, 65-74, and 75 or above), 67% fit into the 50-64 age group, 18% were between the ages of 65-74, and 10% reported being 75 or above. Gender was evenly distributed between male and female: 49.5% were male, 50.5% were female.

Primary language spoken (n=103) among the Ute elders was fairly evenly distributed between Ute and English. Among the Ute elders, 30% spoke primarily the Ute language. Twenty-five percent indicated English as their primary language. Forty-five percent of Ute elders claimed to speak a mixture of Ute and English. One percent reported also speaking Spanish.

Marital status (n=102) was varied. Of the Ute elders surveyed, 12% claimed to be single (never married). Forty-three percent reported being married. Nineteen percent were separated or divorced. Twenty-one percent of Ute elders claimed to be widowed. Lastly, 4% admitted being a member of an unmarried couple.

Ute elder education level (n=103) was fairly evenly distributed among the four categories. Twenty percent completed grade school or less education. Twenty-seven percent of Ute elders finished only some high school. There were 24% that achieved a high school diploma or equivalent. The majority (28%) made it to the college level or above.

Source of transportation (n=103) was divided into four categories. Most (81%) Ute elders had their own car to use as their main transportation source. Twelve percent relied on family members for transportation. Four percent used public transportation.
There was only 1% that used senior transportation. Two percent did not have any source of transportation.

The living arrangements (n=103) for Ute elders varied widely. Eighteen percent lived alone. Twenty percent lived with a spouse. Twenty-three percent lived with a spouse and children. There were 24% who lived with a child or children. Eleven percent lived with a relative. Three percent lived with a friend or companion. The mean for the number of people that lived in the household was 3.20 (n=90; SD=2.03) with a minimum of 0 and a maximum of 11 people. Of the Ute elder, 68% (n=101) claimed to have someone to help with household chores.

Eighty-five percent (n=100) of Ute elders have had children. The mean number of biological children was 4.24 (n=85; SD=2.81), and a range from 0 to 14 children. The mean number Ute elders that indicated having adopted was 0.44 (n=65; SD=1.25), and a range from 0 to 7 children. The mean number of living children was 3.78 (n=78; SD=2.48), and a range from 0 to 11 children. The mean number of children that lived within 50 miles was 2.33 (n=63; SD=1.65), and a range of 0 to 7 children.

Twenty-two percent of Ute elders reported being retired (n=92) versus 67% that did not consider themselves as being retired. Many sources contributed to the Ute elders' financial support (n=94). The percentages of Ute elders that claimed each contributing source are as follows: 35% employment, 20% social security, 2% unemployment, 3% savings, 1% family/relatives, 1% veteran benefits, 6% disability benefits, 5% retirement pension, 5% welfare, 5% Medicare, 6% Medicaid, and 47% tribal benefits.

Monthly income level (n=95) was divided into four categories. Forty-five percent reported obtaining a monthly income of $0-600. Eighteen percent had a monthly income
of $601-900. Nine percent claimed a monthly income of $901-1200. Twenty-one percent had a monthly income level of $1201 or above. A majority (58%) of Ute elders felt their income was adequate (n=101). Forty percent reported that their income was less than adequate. Eight percent of Ute elders admitted skipping a meal within the past month because there was not enough food or money to buy food.

Ute Senior Center

Ute elders from this sample showed varying rates among questions that dealt with the use of the Ute Senior Center available to them in Fort Duchesne. (See Table 5.) Only 11% of Ute elders reported using the Senior Center available to them in Fort Duchesne. Yet, 20% claimed to socialize at the Senior Center. Thirty-four percent ate meals there.

Table 5. Use of Ute Senior Center

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used Senior Center (n=98)</td>
<td>11%</td>
</tr>
<tr>
<td>Reasons for Attending Senior Center (n=40)</td>
<td></td>
</tr>
<tr>
<td>Socialization</td>
<td>20%</td>
</tr>
<tr>
<td>Meals</td>
<td>34%</td>
</tr>
<tr>
<td>Art and Craft Classes</td>
<td>4%</td>
</tr>
<tr>
<td>Legal Information and Services</td>
<td>5%</td>
</tr>
<tr>
<td>Educational Activities</td>
<td>3%</td>
</tr>
<tr>
<td>Health Information &amp; Screening</td>
<td>8%</td>
</tr>
<tr>
<td>Information &amp; Referrals</td>
<td>11%</td>
</tr>
<tr>
<td>Recreational Activities</td>
<td>5%</td>
</tr>
<tr>
<td>Reasons for not Attending Senior Center (n=76)</td>
<td></td>
</tr>
<tr>
<td>Lack of Transportation</td>
<td>9%</td>
</tr>
<tr>
<td>For the elderly</td>
<td>2%</td>
</tr>
<tr>
<td>Location not central to my community</td>
<td>17%</td>
</tr>
<tr>
<td>Too busy</td>
<td>28%</td>
</tr>
<tr>
<td>Do not know location</td>
<td>1%</td>
</tr>
<tr>
<td>Positive Support for Senior Center (n=97)</td>
<td>76%</td>
</tr>
<tr>
<td>Like to Receive Health Services at Senior Center (n=90)</td>
<td>64%</td>
</tr>
<tr>
<td>Would Participate in Exercise Classes at Senior Center (n=92)</td>
<td>16%</td>
</tr>
<tr>
<td>Would participate in Educational Classes at Senior Center (n=92)</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note: Frequency rates are reported as a percentage of the total 103 participants even though actual response rates varied for each question.
While reported use of the Senior Center varied, 76% of Ute elders reported that they supported the Senior Center. Sixty-four percent would like to receive health services there. Sixteen percent would participate in exercise classes offered at the Senior Center. Twelve percent would participate in educational classes offered at the Senior Center.

**Health and Lifestyle**

When asked to rate their health (n=102), 5% reported poor, 39% indicated fair, 48% reported good health, and 8% indicated having excellent health. Only 17% of Ute elders claimed that their health prevented them from attending social functions.

The survey asked about needing (n=99), having and using (n=92) seven special aids. They include a walker, wheelchair, hearing aid, eyeglasses, contact lenses, dentures, and artificial limbs. Eighteen percent of Ute elders indicated needing a walker. Less Ute elders (16%) actually had and used a walker. Seven percent needed a wheelchair to get around. Only 6% claimed to have and use a wheelchair. Sixteen percent of the Ute elders needed, had and used a hearing aid. Of all the special aids surveyed, the need for glasses (72%) was indicated the most. There were more Ute elders (84%) who claimed to have and use glasses. Six percent needed contact lenses. Only 3% had and used contact lenses. Forty-four percent of Ute elders reported needing dentures. However, 46% of Ute elders had and used dentures. None of the Ute elders claimed to need or have and use an artificial limb.

The average body mass index (BMI) for this Ute elder sample was 33.31 (SD=8.72) with a range from 21.08 to 65.01. When BMI is broken down into three categories (less than 25, 25-29.99, and 30 or above), 11% had a BMI of less than 25, 30%
reported having a BMI between 25-29.99, and 52% indicated having a BMI of 30 or greater.

Ute elder reported disease prevalence rate and national prevalence rates are summarized in Table 6. The disease prevalence rates of the Ute elders for Chronic Obstructive Pulmonary Disease (COPD), arthritis, asthma, cancer, seizures, ulcers, and migraine headaches were all similar to the national rates for these diseases.

Diabetes rates were higher than the national prevalence rate. Forty-five percent of the Ute elders age 50 to 64 (n=39) reported being diagnosed with diabetes compared to the national prevalence rate of 6.4% for age 45-64 (CDC, 1999). For those Ute elders age 65-74 (n=19), 68% reported being diagnosed with diabetes. The national rate of diabetes for age 65-74 is 13.3% (CDC, 1999). Ninety percent of Ute elders age 75 or above (n=10) reported having diabetes versus the national prevalence rate of 11.7% for those age 75 or above (CDC, 1999).

Ute prevalence rates appeared to be higher than the national rates for stroke. Seven percent of Ute elders age 50-64 (n=69) reported having a stroke versus 1.5% nationally for ages 45-64. For those age 65-74, Ute prevalence rate was 16% (n=19) and national rate was 5%. In the age group 75 or above, the national prevalence rate was 10% versus the Ute rate of 40% (n=10).

Hypertension among the Ute elders in this sample was slightly higher than the national rate in the oldest and the youngest age group. The Ute prevalence rate for hypertension is 26% for ages 50-64. Nationally, the prevalence rate is 22% among those that are 45-64. In the age group 65-74, 11% of Ute members reported having hypertension versus the national rate of 39%. Fifty-six percent of Ute elders age 75 or above (n=10) reported having hypertension.
Table 6. National and Ute Prevalence Rates of Diseases among Different Age Groups

<table>
<thead>
<tr>
<th>Disease</th>
<th>Ute Age</th>
<th>Ute Age</th>
<th>U.S. Age</th>
<th>Ute Age</th>
<th>U.S. Age</th>
<th>Ute Age</th>
<th>U.S. Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;50</td>
<td>50-64</td>
<td>45-64</td>
<td>65-74</td>
<td>65-74</td>
<td>&gt;75</td>
<td>&gt;75</td>
</tr>
<tr>
<td>COPD (n=102)</td>
<td>3%</td>
<td>1%</td>
<td>.024%</td>
<td>4%</td>
<td>.27%</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Arthritis (n=101)</td>
<td>30%</td>
<td>23%</td>
<td>23%</td>
<td>50%</td>
<td>45%</td>
<td>33%</td>
<td>55%</td>
</tr>
<tr>
<td>Hearing Impairment (n=101)</td>
<td>27%</td>
<td>11%</td>
<td>8%</td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes (n=103)</td>
<td>53%</td>
<td>45%</td>
<td>6%</td>
<td>68%</td>
<td>13%</td>
<td>90%</td>
<td>12%</td>
</tr>
<tr>
<td>Asthma (n=102)</td>
<td>11%</td>
<td>10%</td>
<td>5%</td>
<td>11%</td>
<td>5%</td>
<td>10%</td>
<td>3%</td>
</tr>
<tr>
<td>Stroke (n=102)</td>
<td>12%</td>
<td>7%</td>
<td>2%</td>
<td>16%</td>
<td>5%</td>
<td>40%</td>
<td>10%</td>
</tr>
<tr>
<td>Cancer (n=101)</td>
<td>3%</td>
<td>4%</td>
<td>.24%</td>
<td>0%</td>
<td>1%</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Pneumonia (n=102)</td>
<td>9%</td>
<td>7%</td>
<td>.01%</td>
<td>14%</td>
<td>.22%</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Cataracts (n=101)</td>
<td>16%</td>
<td>13%</td>
<td>2%</td>
<td>11%</td>
<td>11%</td>
<td>40%</td>
<td>24%</td>
</tr>
<tr>
<td>Seizures (n=95)</td>
<td>2%</td>
<td>2%</td>
<td>.64%</td>
<td>6%</td>
<td>.81%</td>
<td>0%</td>
<td>.41%</td>
</tr>
<tr>
<td>Ulcers (n=100)</td>
<td>6%</td>
<td>6%</td>
<td>3%</td>
<td>11%</td>
<td>3%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Gallbladder (n=99)</td>
<td>13%</td>
<td>11%</td>
<td>1%</td>
<td>1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dehydration (n=101)</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
<td></td>
<td></td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Anemia (n=100)</td>
<td>7%</td>
<td>6%</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
<td>33%</td>
<td>3%</td>
</tr>
<tr>
<td>Foot Problems (n=101)</td>
<td>15%</td>
<td>11%</td>
<td>2%</td>
<td>1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart Disease (n=97)</td>
<td>9%</td>
<td>7%</td>
<td>6%</td>
<td>9%</td>
<td>12%</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Allergies (n=102)</td>
<td>22%</td>
<td>29%</td>
<td>12%</td>
<td>11%</td>
<td>8%</td>
<td>0%</td>
<td>6%</td>
</tr>
<tr>
<td>Migraine Headaches (n=101)</td>
<td>13%</td>
<td>17%</td>
<td>6%</td>
<td>5%</td>
<td>3%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Hip fracture (n=100)</td>
<td>5%</td>
<td>3%</td>
<td></td>
<td>2%</td>
<td></td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Renal disease (n=101)</td>
<td>6%</td>
<td>9%</td>
<td>2%</td>
<td>0%</td>
<td>3%</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Liver disease (n=100)</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension (n=98)</td>
<td>24%</td>
<td>26%</td>
<td>22%</td>
<td>11%</td>
<td>39%</td>
<td>56%</td>
<td>42%</td>
</tr>
</tbody>
</table>

Note: Sample size reported is for the total prevalence rate age 50 or above. Five subjects did not report age or birthdate and are therefore excluded from the age group analysis.

--- Indicates the age groups of 65-74 and 75 or above were combined for analysis due to national prevalence rates. A blank cell indicates that national prevalence rates for the disease were not found.
above reported having hypertension. The national rate for this age group is 42%.

Heart disease prevalence rates among the Ute elders were comparable to the national rate. In the youngest age group, 7% of Ute members (age 50-64) versus the national rate of 6% (age 45-64). Nine percent of Ute elders reported having heart disease among the age group of 65-74, while the rate was 12% nationally for this age group. For the oldest age group (75 or above), 14% of Ute members claimed to have heart disease. The national rate for this age group is 16%.

Renal disease (either kidney disease or failure) was higher among the younger age group. Ute elders age 50-64 had a prevalence rate for renal disease of 9%. The national rate is 2% for those 45-64. For the age group (65 or above), no Ute members reported having renal disease versus the national rate of 3%.

Pneumonia prevalence rates appeared to be slightly higher among Ute elders than it was nationally. Ute prevalence rates for ages 50-64 was 7%, while the national rate for ages 45-64 was 0.01%. In the older age group (65 or above), 14% of Ute elders reported having pneumonia. The national rate is only 0.22% for ages 65 or above.

Cataracts among this Ute elder sample appeared to be higher than the national prevalence rate. In the younger age group (50-64), 13% reported having cataracts among the Ute members. The national prevalence rate for cataracts in ages 45-64 is 2%. The Ute and national prevalence rate for ages 65-74 was 11%. For the oldest age group (75 or above), 40% of Ute elders reported having cataracts while the national prevalence rate for this age is 24%.

Ute prevalence rates for anemia were comparable to national rates except in the oldest age group where Ute rates were surprisingly higher. The Ute prevalence rate was...
6% for ages 50-64. The national rate was 2% for ages 45-64. In the age group of 65-74, the Ute rate was 0% while the national rate was 1%. For the oldest age group (75 or above), the Ute prevalence rate for anemia was 33%, which is much larger than the national rate of 3% for this age group.

Ute elders in this sample reported a higher allergy rate than the national rate. In the age group of 50-64, 29% of Ute members reported having allergies. Conversely, the national rate is only 12%. The Ute prevalence rate for allergies is 11% among those that are 65-74 years. Eight percent is the national prevalence rate for ages 65-74. No Ute elders age 75 or above reported having allergies. The national rate for this age group is 6%.

Genetic susceptibility has become known as an important risk factor for many diseases. Ute elders reported if an immediate member of their family had specific diseases. The percentages of those with a family history of the diseases are as follows: 6% stroke, 8% cancer, 16% arthritis, 17% hypertension, 11% heart disease, 13% allergies, 4% hip fracture, and 51% diabetes.

Fifty-three percent of Ute elders admitted to smoking cigarettes, cigars, a pipe, or chewing tobacco at some point in their life. Cigarettes were smoked by the majority (59%) of Ute elders. No one claimed to have ever smoked a cigar or used a pipe. Three percent of Ute elders used chewing tobacco at some point in their life.

Seventy-four percent of Ute elders claimed to have partaken of alcohol at some point in their life. Among those, 25% admitted to drinking some alcohol now.
Discussion

The four objectives of this study can be summarized as follows: 1) Obesity and diabetes stood out as the two most serious and prevalent health problems among this Ute elder sample. 2) The disease prevalence rates for COPD, arthritis, asthma, cancer, heart disease, hypertension, seizures, ulcers, and migraine headaches were all similar to the national rates for these diseases. Diabetes, renal disease, pneumonia, cataracts, anemia, and allergy prevalence rates were higher than the national rates. 3) Demographic characteristics of this sample include the majority of sample participants living in Fort Duchesne, speaking primarily Ute and English, being married, having their own car, not being retired, obtaining their financial support from tribal benefits, and having a monthly income of $0-600. The focus of this discussion will focus on the fourth objective of how to design a wellness center that fits the needs of the Ute elder population.

There were many survey questions in which the nonresponse rate was fairly high. Additionally, the sample size only consisted of a third of the Ute elder population. Selective nonresponse may lead to the bias in estimating prevalence of disease and associations (Hoeymans et al., 1998). However, the bias that nonresponse causes varies according to disease and health outcome, making it difficult to predict (Hoeymans et al., 1998). Factors that may have contributed to the nonresponse rates of Ute elders include long-length of the survey and old age (Eakers et al., 1998).

It is difficult to determine if diabetes rates are accurate. On the one hand, subjects may have underreported diabetes rates due to conflicts between reporting of diabetes rates and use of diabetic medication. When adjustment was made for the subjects that did not report being diagnosed with diabetes but did report use of a diabetic medication, the
diabetes prevalence rate was 60%. Further underreporting also could be assumed due to some denial that occurs with diagnosis of any disease. If the disease is not acknowledged, one does not have to deal with all the concern that comes with the disease. Also, it is known that many individuals with diabetes are not aware of it (Mahan & Escott-Stump, 1996). Additionally, individuals who participate in health surveys may be the healthier than those members of their population who do not participate.

On the other hand, diabetes rates may be overestimated in this sample. Those Ute elders who participated in the survey may be those most concerned with their health because of health problems (e.g., diabetes). The act of participating in a health and lifestyle survey could be viewed as a method of seeking for help with their health problems. Diabetes is known to be a health problem of the Ute Tribe, and health education programs have provided the Ute population with much exposure to diabetes. Individuals may think that they have diabetes when they have not actually been diagnosed with the disease. Therefore, because of this, the diabetes prevalence rate from this sample could be overestimated.

Even though the diabetes prevalence rate may have been overestimated, other health problems could have been underestimated. Heart disease and other diabetes complication rates are comparable to those of the general United States population. This is somewhat surprising due to the high rates of diabetes among this Ute elder sample. There may be many of the Ute elders that do not know if they have heart disease or other health problems unless they have been diagnosed with a heart attack or other outward sign of the disease. Diabetes is emphasized in many Ute health programs. Heart disease and other problems may not receive as much attention. Therefore, the Ute members may
not be aware of the signs and symptoms of heart disease and other health problems and may not seek screening and medical advise concerning these diseases. Underreporting of the heart disease and other health problems could be a sign that the health programs for the Ute tribe only focus on diabetes and fail to educate the tribe concerning other health problems.

To create a wellness program specifically for the Ute elder population, many things must be taken into consideration. Perhaps the first thing is where Ute elders live. The majority of Ute elders live on the reservation in Fort Duchesne, which is fairly central to the other towns of residence (Figure 1). In Fort Duchesne, there is a Senior Center available for the use of the elderly of the tribe and their spouses. The Ute Senior Center is a fairly new program among the Ute elders. The survey indicated that already some of the Ute elders use the resources offered at the Senior Center. However, a
majority of those Ute elders reported supporting the Senior Center. Also a majority of the Ute elders would like to receive health services at the Senior Center. Therefore, it seems reasonable that the location of the wellness center should be in Fort Duchesne at the Senior Center. The Diabetes Prevention and Control Program is located nearby as well as the Indian Health Services (IHS) hospital for the Ute Tribal members.

Among the Ute elders, a strong majority of them have their own car to use as transportation. For those without transportation, there is a bus that can be used by the senior to get around, although only 1% of Ute elders report using it. Transportation to and from a wellness center should not be the factor that limits attendance.

A majority of Ute elders reported living with someone. Therefore, most of the elders have someone to provide support if they took part in a wellness program. This is also shown by a majority reporting having someone to talk to about problems, and for those that want more social contact, participation in a wellness program would give them that extra contact that they desire.

The majority of Ute elders reported being not retired. This seems to indicate that most of the Ute elders may still be in the workforce. Age distribution also indicates most of the survey participants were in the youngest category of 50-64. The wellness program would have to accommodate this segment of their population by providing classes and services after working hours as well as during the day.

Since the majority of Ute elders reported having the lowest category of monthly income, the wellness program would most likely obtain the most participation if services were free of charge. Funds for such programs may be found through grants from the government.
The focus of the wellness program should meet the needs of their participants. Among the Ute elders surveyed, two health problems stood out the most: obesity and diabetes. Obesity appears to be an outstanding health problem among the Ute elders with the average BMI above 30. Over half (52%) of Ute elders fall into the obese category. Thirty percent were in the overweight category. To go along with the high obesity rates, the diabetes rates among this sample of Ute elders were significantly greater than the national level. Risk for diabetes has been found to go hand in hand with obesity. High rates for obesity and diabetes are becoming typical of many Native American Tribes (Howard et al., 1995, 1996).

The wellness center should provide the majority of their programs and services to preventing and controlling diabetes and obesity among the Ute Native American population of all ages. However, this should not be the only focus of their wellness program. Achieving health and well being is not only being free from obesity and diabetes, but it also includes being informed about prevention and intervention for all types of health problems. Even though this study did not show an association between diabetes and its typical complications, a wellness program should also educate the tribe on prevention and intervention of diabetes complications as well as other health problems.

The best preventative measures should include the youth as well as adolescents and adults of the tribe (Story et al., 1999). Not as much can be done to prevent obesity, diabetes, and other chronic health problems in the adult population as with the youth of the tribe. However, a wellness program that was set up to serve the whole tribe should not only include efforts to teach healthy lifestyle habits (healthy eating, exercise, etc.) to
the youth and elderly. Prevention and intervention efforts will probably achieve the most success by including aspects for all age segments of the Ute population.

Other issues that were surprisingly high among the Ute elders are the use of glasses and dentures. The need for glasses could result from genetic predisposition or uncontrolled diabetes, but the need for dentures may be the direct result of poor dental care. A wellness center could also provide portions of their programs that educate the Ute tribe on dental care and eye health (through controlling diabetes, etc.) to prevent the need for these special aids in the future.

Ideally, a wellness program should employ a nurse, a fitness director, and a dietitian. The nurse would be responsible for taking and analyzing blood samples for screening and evaluating progress. He or she should also be a certified diabetes educator in order to provide counsel to wellness program participants as the need arises. The fitness director would play an integral role in weight loss and maintenance through exercise. A key point to providing such services for the elderly is to provide them with physical activity that accommodates their fitness level. Exercise classes could be provided at night and during the day. A gym could also be available for a certain amount of time each day. All aspects of fitness should be addressed such as aerobic, flexibility, and weight training. The dietitian should provide individual diet analysis and counsel as well as group classes that instruct individuals how to prevent and control diabetes and its complications.

After receiving permission from their physicians, individuals beginning the wellness program should receive a baseline health screening and fitness assessment (Roitman et al., 1998). Specific customized questionnaires can give more specific
information on risk factors, personal medical history, family history, lifestyle and health behaviors, and previous exercise history (Roitman et al., 1998). To be specific for diabetes prevention and control, the health screening should also provide baseline measurements of height, weight, dietary intake, blood pressure, total cholesterol, HDL cholesterol, triglyceride level, blood sugar, and hemoglobin A1c (HbA1c). The baseline fitness assessment should measure aerobic capacity, body composition, muscular strength, endurance, and flexibility.

Once a baseline measurement has been taken, individualized goals should be set by the participant and wellness providers. Follow-up should ideally evaluate goal progress, blood sugar, weight, and blood pressure at least every month. A diet record, total cholesterol, HDL cholesterol, triglyceride level and HbA1c should ideally be taken at least every three months. Evaluation of these measures must be incorporated into the program to prove effectiveness. Additional funding from grant sources to continue or expand services will be based on how effective they prove to be by keeping details records of results.

The best participation and results would most likely be obtained if individuals of the Ute culture administer the wellness program. If trained and qualified Ute Native Americans are not available when a wellness program is first developed, those administering the program should work together with the Ute Tribe, Indian Health Services, and the Diabetes Prevention and Control Program. The tribe and wellness providers should strive to train and employ individuals of the Ute culture as soon as possible. The wellness program exists to help the Ute tribe; therefore, tribal input should be welcomed and sought after to meet the Ute cultural needs.
For more integrated care, referrals to and from IHS and the Diabetes Prevention and Control Program would help to link health care. The wellness center should also refer its participants to existing resources around the area for any other needs.

If there is a lack of participation in the wellness center because of travel distance or lack of transportation, the wellness center could take the classes and services to those that need it the most. Once a week or month, the traveling wellness center could go to differing locations to offer their services.

Screening efforts could also be taken on the road to increase the Ute public awareness of diabetes, its risk factors, complications, and methods for prevention. If all members of the tribe were screened via a questionnaire (concerning diabetes risk factors), obtained blood tests (blood sugar, HbA1c, cholesterol, triglyceride), had basic height, weight, blood pressure, etc. measurements performed on them once a year, not only would new cases of diabetes be found faster, but the Ute tribe would also be more aware of diabetes.

Since resources for setting up a new wellness program may be limited, an alternate option might be to expand the existing Diabetes Prevention and Control Program facilities and staff (Vinicor, 1998). Many resources for such a program are already part of the Diabetes Prevention and Control Program.

A wellness program designed to fit the needs of the Ute Tribe is a noble cause. Diabetes and obesity are becoming epidemics for many Native American tribes. A wellness program will help the Ute Tribe in preventing and treating this epidemic.
References


CHAPTER 4

GENERAL CONCLUSION

Based on this sample of elders (age 50 and older) of the Ute Native American Tribe, diabetes is a major health concern for this tribe. More than half of the Ute elders in this study reported having diabetes. Also more than half are overweight or obese. Risk factors that were associated with diabetes in Ute elders were family history of diabetes, age, BMI, education level, and income level. Family history of diabetes was the most predictive, followed by age and BMI. Diabetes was not associated with any of the usual comorbidities (heart disease, stroke, hypertension, and renal disease) among this sample. However, diabetes was associated with functional decline (as measured by ADL/IADL index). Age, however, appears to be more predictive of functional decline than diabetes.

Diabetes and obesity are the areas that should be focused on when the Ute Tribe develops a wellness program. However, there are already several diabetes prevention and control programs available to the Ute Tribe. Future plans for wellness programs should expand upon existing resources.
Please encourage the respondents to answer every question. Write the answers on the line provided or check the appropriate response. Let everyone know that this survey has been approved by the Ute Business Committee, and that we greatly appreciate their help. Their answers will benefit the Ute elders as well as future generations of Ute youth. Remember, if you need help, please give us a call at 1-888-403-1081 or 1-435-797-0896.

**Demographics**
To begin with, we would like to obtain some background information from you.

A1. What is today's date?  
   Month  Day  Year

A2. What is your name?  
   Last name  First name  Middle initial

A3. What is your mailing address?

<table>
<thead>
<tr>
<th>Street</th>
<th>City (n=100)</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>El Prado, New Mexico (n=1) - 1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fort Duchesne, Utah (n=61) - 59%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lapoint, Utah (n=2) - 2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Myton, Utah (n=9) - 9%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neola, Utah (n=5) - 5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Randlett, Utah (n=9) - 0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roosevelt, Utah (n=5) - 5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Whiterocks, Utah (n=8) - 8%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Missing (n=4) - 3%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zip code</th>
<th>County (n=98)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Uintah (n=81) - 79%</td>
</tr>
<tr>
<td></td>
<td>Duchesne (n=18) - 17%</td>
</tr>
<tr>
<td></td>
<td>Missing (n=5) - 5%</td>
</tr>
</tbody>
</table>

A3a. Is this your permanent address?  No  Yes
A4. What is your residential address?

_____________________________________________________________________

Street

City

State

Zip code

County

A5. Please give directions to your home ____________________________________

_____________________________________________________________________

A6. What is your phone number? (______) _________________________________

Area code

A7. What is your social security number? _____ - _____ - _____

A8. What is your date of birth? _____ _____ _____

Month Day Year

A9. What is your age? _______ years (n=98) \( \bar{x}=60.39, \ SD=9.35, \ min.=50, \ max.=95 \)

50-64 years (n=69) – 67%

65-74 years (n=19) – 18%

75 or above (n=10) – 10%

Missing (n=5) – 5%

A10. What is your sex? (n=103)

______ Male (n=51) – 49.5%

______ Female (n=52) – 50.5%

Missing (n=0) – 0%

A11. What is your ethnicity?

______ Native American (n=103) – 100%

Tribe (n=101)

Northern Ute (n=100) – 97%

Southern Ute (n=1) – 1%

Missing (n=2) – 2%

______ Other (n=0) – 0%

Missing (n=0) – 0%
A11a. What category best describes the ethnicity of your mother? (n=103)

- Native American (n=103)  
  Tribe (n=92)  
  Northern Ute (n=91) - 88%  
  Southern Ute (n=1) - 1%  
  Missing (n=11) - 11%

- Other (n=0) - 0%  
  Missing (n=0) - 0%

A11b. What category best describes the ethnicity of your father? (n=101)

- Native American (n=98) - 95%  
  Tribe (n=85)  
  Northern Ute (n=81) - 79%  
  Southern Ute (n=3) - 3%  
  Mixed blood Ute (n=1) - 1%

- Other (n=3) - 3%  
  Specify (n=1): Hispanic - 1%  
  Missing (n=2) - 2%

A12. What is your primary language? (n=103)

- Ute (n=31) - 30%  
- English (n=26) - 25%  
- Ute/English (n=46) - 45%  
- Other (n=1) - 1% [Spanish]  
  Missing (n=0) - 0%

A13. What is your marital status? (n=102)

- Single (never married) (n=12) - 12%  
- Married (n=44) - 43%  
- Separated/Divorced (n=20) - 19%  
- Widowed (n=22) - 21%  
- A member of an unmarried couple (n=4) - 4%  
  Missing (n=1) - 1%

A14. Which best describes your level of education? (n=103)

- Never attended school or only Kindergarten (n=2) - 2%  
- Grade School (n=19) - 18%  
- Some High School (n=28) - 27%  
- High School Diploma or equivalent (n=24) - 23%  
- Some College/Trade School (n=26) - 25%  
- College or Baccalaureate Degree (B.S., B.A.) (n=3) - 3%  
- Some Graduate School (n=1) - 1%
A15. What is your primary source of transportation? (n=103)

- Own car (n=83) – 81%
- Family (n=12) – 12%
- Public Transportation (n=4) – 4%
- Senior Transportation (n=1) – 1%
- None (n=2) – 2%
- Other (n=1) – 1%

A16. Do you need any of the following special aids? (Check all that apply) [n=99]

- Walker/Cane: Yes (n=18) – 18%; No (n=81) – 79%
- Wheelchair: Yes (n=7) – 7%; No (n=92) – 89%
- Hearing aid: Yes (n=16) – 16%; No (n=83) – 81%
- Eyeglasses: Yes (n=74) – 72%; No (n=25) – 24%
- Contact Lenses: Yes (n=6) – 6%; No (n=93) – 90%
- Dentures: Yes (n=45) – 44%; No (n=54) – 52%
- Artificial Limb: Yes (n=0) – 0%; No (n=99) – 96%
- Other: Yes (n=2) – 2% [1-oxygen]; No (n=97) – 94%
- None: Yes (n=18) – 18%; No (n=81) – 79%
- Unknown: Yes (n=0) – 0%; No (n=99) – 96%
- Missing (n=4) – 4%

A16a. Do you need any of the following special aids? (Check all that apply) [n=92]

- Walker/Cane: Yes (n=17) – 17%; No (n=75) – 73%
- Wheelchair: Yes (n=6) – 6%; No (n=86) – 84%
- Hearing aid: Yes (n=16) – 16%; No (n=76) – 74%
- Eyeglasses: Yes (n=86) – 84%; No (n=6) – 6%
- Contact Lenses: Yes (n=3) – 3%; No (n=89) – 86%
- Dentures: Yes (n=47) – 46%; No (n=45) – 44%
- Artificial Limb: Yes (n=0) – 0%; No (n=92) – 96%
- Other: Yes (n=3) – 3% [1-oxygen, 1-partials, 1-amputation]; No (n=89)-86%
- Missing (n=11) – 11%

A17. What is your present living arrangement? (n=103)

- Live alone (n=19) – 18%
- Live with spouse (n=21) – 20%
- Live with spouse and children (n=24) – 23%
- Live with child or children (n=25) – 24%
- Live with relative (n=11) – 11% [3-sibling, 3-child, 4-grandchild, 1-family, 1-Cheryle Pawwinnee]
- Live with friend or companion – (n=3) – 3%
- Live in nursing home or care facility (n=0) – 0%
- Other: (n=0) – 0%
- Missing (n=0) – 0%
A17a. How many people live in your household? (n=90) \( \bar{x}=3.2, \ SD=2.03, \ min.=0, \ max.=11 \)

A18. Do you have someone to help with household chores? (n=101)

- Yes (n=70) - 68%
- No (n=31) - 30%
- Missing (n=2) 2%

A18a. [If yes] Who helps with household chores? (n=64)

- Spouse (n=17) - 17%
- Child/In-law (n=23) - 22%
- Family (spouse & children) [n=11] - 11%
- Sibling (n=2) - 2%
- Child & grandchildren (n=9) - 9%
- Grandchild/ Niece or nephew (n=1) - 1%
- Friend/Partner (n=1) - 1%
- Missing (n=39) - 38%

A19. Have you ever had children? (n=100)

- No (n=12) - 12%
- Yes (n=87) - 85%
- Don’t know (n=1) - 1%
- Missing (n=3) - 3%

A19a. [If yes] How many biological children did you have? (n=85) \( \bar{x}=4.24, \ SD=2.81, \ min.=0, \ max.=14 \)

A19b. [If yes] How many adopted children did you have? (n=65) \( \bar{x}=4.5, \ SD=1.25, \ min.=0, \ max.=7 \)

A19c. [If yes] How many living children do you have? (n=78) \( \bar{x}=3.78, \ SD=2.48, \ min.=0, \ max.=11 \)

A19c1. [If have living children] How many of your children live within 50 miles of where you live? (n=63) \( \bar{x}=2.33, \ SD=1.65, \ min.=0, \ max.=7 \)

A20. Do you have someone to talk to when you have problems? (n=101)

- No (n=16) - 16%
- Yes (n=85) - 83%
- Missing (n=2) - 2%
A21. How often are you with someone who doesn’t live with you, such as when you attend clubs or church, visit with friends, do things with others, or talk with people on the telephone? (n=99)
   ______ Once a day or more (n=39) - 38%
   ______ 2-6 times a week (n=33) - 32%
   ______ Once a week (n=12) - 12%
   ______ 1-3 times a month (n=4) - 4%
   ______ Rarely or not at all (n=6) - 6%
   ______ Don’t know (n=5) - 5%
   Missing (n=4) - 4%

A22. What type of housing do you live in? (n=87)
   ______ Mobile home (n=10) - 10%
   ______ Apartment (n=4) - 4%
   ______ Hotel (n=1) - 1%
   ______ Group home (n=1) - 1%
   ______ Single family home (n=60) - 58%
   ______ Room in a home (n=7) - 7%
   ______ Other (n=4) - 4%

A23. Do you: (n=96)
   Own your residence? (n=83) - 81%
   Rent your residence? (n=13) - 13%
   ______ If own a home
     About how many years will you be paying on you home? (n=53) $x=2.83$, $SD=6.56$, min.=0, max.=25

A24. Are you retired? (n=92)
   ______ Yes (n=23) - 22%
   ______ No (n=69) - 67%
     Missing (n=11) - 11%
   ______ If retired
     Did you move into a different home when you stopped working? (n=58)
     ______ No (n=54) - 52%
     ______ Yes (n=4) - 4%
   ______ If yes
     How long ago? (n=1) - 1% [4 year ago]
   ______ If not retired
     Do you plan to move to a different home after you retire? (n=75)
     ______ No (n=67) - 65%
     ______ Yes (n=8) - 8%
A24b1. [If yes] Why? (n=7) – 7% [1-to move to the city, 1-stay and live on ranch, 1-Myton after repairs, 1-for peace and quiet, 2-to live in my own home, 1-would like to]

A25. If you had a choice, which living arrangement would you prefer? (n=102)

- My own home: Yes (n=89) – 86%; No (n=13) – 13%
- Apartment complex with assisted living services: Yes (n=4) – 4%; No (n=98) – 95%
- Group home with peers: Yes (n=1) – 1%; No (n=101) – 98%
- Live with my family in their home: Yes (n=7) – 7%; No (n=95) – 92%
- Move to a senior community: Yes (n=4) – 4%; No (n=98) – 95%
- Other: Yes (n=1) – 1% [living alone]; No (n=101) – 98%

A26. Does your home need any repairs? (n=96)

- Yes (n=76) – 74%
- No (n=20) – 19%
- Missing (n=7) – 7%

A26a. [If yes]

Does your home need any of the following repairs? (Check all that apply.)

[n=97]

- Plumbing: Yes (n=40) – 39%; No (n=57) – 55%
- Electrical: Yes (n=34) – 33%; No (n=63) – 61%
- Window repairs: Yes (n=41) – 40%; No (n=56) – 54%
- Ramps: Yes (n=12) – 12%; No (n=85) – 83%
- Wall repairs: Yes (n=31) – 30%; No (n=66) – 64%
- Roofing: Yes (n=37) – 36%; No (n=60) – 58%
- Foundations: Yes (n=19) – 18%; No (n=78) – 75%
- Doorway repairs: Yes (n=39) – 38%; No (n=58) – 56%
- Handrails: Yes (n=17) – 17%; No (n=80) – 78%
- Other: Yes (n=29) – 28% [1-entire bathroom, 9-floor, 1-handicap for security, 2-handrails, 4-heating, 1-mirrors, 4-paint job, 3-rain gutters, 3-siding, 1-waterheater, bathtub, toilet, 1-whole house]

Missing (n=6) – 5%

A26b. Can you afford to have these items repaired? (n=78)

- Yes (n=9) – 9%
- No (n=69) – 67%

A26b1. [If no] Which items can you not afford to repair? (n=62) – 60% [47-all, 2-doorknob, 1-electrical, 4-door, 3-floor, 2-paint job, 1-driveway, 3-plumbing, 4-roof, 1-ramp, handrail, 1-windows]
A26b2. Are there other barriers that prevent you from having the needed repairs done on your home? (n=75)

- Transportation: Yes (n=4) - 4%; No (n=71) - 69%
- Health: Yes (n=13) - 13%; No (n=62) - 60%
- Do not know how to make repairs: Yes (n=41) - 40%; No (n=34) - 33%
- Do not know about any programs or services that can help: Yes (n=17) - 17%; No (n=58) - 56%
- Do not know how to access existing programs or services available: Yes (n=16) - 16%; No (n=59) - 57%
- None: Yes (n=13) - 13%; No (n=62) - 60%
- Other: Yes (n=10) - 10% [6-lack of money, waiting for help from tribe, 1-old, 1-yes]; No (n=63) - 61%

Missing (n=28) - 27%

A27. Are you aware of the Housing Rehabilitation Program (Housing Improvement Program (HIP)), Tribal Housing Repair under the Tribal Business Committee or HUD Housing Improvement Program? (n=98)

- Yes (n=63) - 61%
- No (n=35) - 34%
- Missing (n=5) - 5%

A28. Are you aware of the reverse mortgage plan for seniors? (n=98)

- Yes (n=5) - 5%
- No (n=93) - 90%
- Missing (n=5) - 5%

A29. Would you consider living in a residential facility? (n=96)

- Yes (n=5) - 5%
- No (n=91) - 88%
- Unsure (n=34) - 33%

A29a. [If yes] How far from your family would you be willing to move in order to live in a residential facility? (n=33)

- Do not intend to move (n=25) - 24%
- 30-60 miles (n=4) - 4%
- 61-100 miles (n=2) - 2%
- More than 100 miles (n=2) - 2%
- Missing (n=70) - 68%

A30. Would you consider living in an apartment complex that is accessible to both seniors and younger persons that have disabilities? (n=96)

- Yes (n=10) - 10%
- No (n=52) - 51%
- Unsure (n=34) - 33%
A30a. [If no] Why? (n=39) – 38% [19-have own home, 2-like living by self, 12-prefer to stay where at, 4-can take care of self, family to care for or cares for me, 2-already have]

A31. What factors would make you more likely to live in a group home? (n=97)

- Failing health: Yes (n=33) – 32%; No (n=63) – 62%
- A move into town for security reasons: Yes (n=2) – 2%; No (n=95) – 92%
- Not to be a burden on my family: Yes (n=20) – 19%; No (n=77) – 75%
- To be with others like myself: Yes (n=11) – 11%; No (n=86) – 84%
- More access to senior services: Yes (n=6) – 6%; No (n=91) – 88%
- No other choice is available: Yes (n=38) – 37%; No (n=59) – 57%
- I would never live in a group home: Yes (n=30) – 29%; No (n=67) – 65%

A32. Please check all sources that contribute to your financial support: (n=94)

- Employment earnings: Yes (n=37) – 36%; No (n=57) – 55%
- Social Security: Yes (n=21) – 20%; No (n=73) – 71%
- Unemployment: Yes (n=2) – 2%; No (n=92) – 89%
- Savings/Investments: Yes (n=3) – 3%; No (n=91) – 88%
- Family/Relatives: Yes (n=5) – 5%; No (n=89) – 86%
- Veterans benefits: Yes (n=5) – 5%; No (n=89) – 86%
- Disability benefits: Yes (n=6) – 6%; No (n=88) – 85%
- Retirement pension: Yes (n=5) – 5%; No (n=89) – 86%
- Welfare: Yes (n=5) – 5%; No (n=89) – 86%
- Medicare: Yes (n=5) – 5%; No (n=89) – 86%
- Medicaid: Yes (n=6) – 6%; No (n=88) – 85%
- Other: Yes (n=49) – 48% [49-tribal benefits]; No (n=45) – 44%
- Missing (n=9) – 9%

A33. What is your monthly income? (n=95)

- $0-300 (n=11) – 11%
- $301-600 (n=35) – 34%
- $601-900 (n=18) – 18%
- $901-1200 (n=9) – 9%
- $1201-1500 (n=14) – 14%
- $1501-1800 (n=4) – 4%
- $1801-2100 (n=2) – 2%
- $2101 or above (n=2) – 2%
- Missing (n=8) – 8%
A34. Is your income adequate to meet your needs? (n=101)

- More than adequate (n=4) - 4%
- Adequate (n=56) - 54%
- Less than adequate (n=41) - 40%
- Missing (n=2) - 2%

Please explain: (n=24) - 23% [14-cost of living, low paying job, 2-sole provider, lot to care for, 2-only care for self, 3-get by on what I get, 2-not saving for retirement, 1-spouse still employed]

A34a. How much of your income do you spend on utilities and housing (rent or mortgage)? (n=98)

- Less than 30% (n=24) - 23%
- 30-50% (n=44) - 43%
- More than 50% (n=23) - 22%
- Don’t know (n=7) - 7%
- Missing (n=5) - 5%

A34b. During the past month did you skip any meals because there was not enough food or money to buy food? (n=103)

- Yes (n=8) - 8%
- No (n=85) - 83%
- Don’t know (n=10) - 10%

A35. Did you use any of the following services this past year? (Check all that apply.)

- Home health care: Yes (n=8) - 8%; No (n=85) - 83%
- Nursing home: Yes (n=0) - 0%; No (n=98) - 95%
- Senior center: Yes (n=11) - 11%; No (n=87) - 85%
- Home delivered meals: Yes (n=21); 20%; No (n=77) - 75%
- Chore service: Yes (n=0) - 0%; No (n=98) - 95%
- Referral/information: Yes (n=7) - 7%; No (n=91) - 88%
- Social services: Yes (n=10) - 10%; No (n=88) - 85%
- Other: Yes (n=5) - 5% [1-CHR, 1-insurance, 1-food pantry, 1-Liheap program, 1-oxygen]; No (n=93) - 91%
- Did not use any services: Yes (n=44) - 43%; No (n=54) - 52%
- Adult day care: Yes (n=0) - 0%; No (n=98) - 95%
- Emergency assistant programs: Yes (n=7) - 7%; No (n=91) - 88%
- Lifeline: Yes (n=1) - 1%; No (n=97) - 94%
- Congregate meals: Yes (n=20) - 19%; No (n=78) - 76%
- Diabetic blood screening: Yes (n=13) - 13%; No (n=85) - 83%
- Housing assistance: Yes (n=3) - 3%; No (n=95) - 92%
- Missing (n=5) - 5%
A36. What are some barriers that may prevent you from using the services listed above? (Check all that apply.) [n=100]

- Cost: Yes (n=6) – 6%; No (n=94) – 91%
- Transportation: Yes (n=19) – 18%; No (n=81) – 79%
- Health: Yes (n=18) – 18%; No (n=82) – 80%
- Other: Yes (n=9) – 9% [2-still working, 3-independent, 1-care for husband, 1-health going down, 1-needs are being met, 1-not a Tribal member]; No (n=91) – 88%
- None: Yes (n=58) – 57%; No (n=42) – 41%
- Do not know about the service: Yes (n=8) – 8%; No (n=92) – 89%
- Do not know how to access program: Yes (n=6) – 6%; No (n=94) – 91%
- Missing (n=3) – 3%

A37. What are some of the reasons why you attend a senior center in your community? (Check all that apply.) [n=40]

- Socialization: Yes (n=20) – 19%; No (n=20) – 19%
- Meals: Yes (n=33) – 32%; No (n=7) – 7%
- Arts and craft classes: Yes (n=4) – 4%; No (n=36) – 35%
- Legal information and services: Yes (n=5) – 5%; No (n=35) – 34%
- Educational activities: Yes (n=3) – 3%; No (n=37) – 36%
- Health information: Yes (n=8) – 8%; No (n=32) – 31%
- Information and referrals: Yes (n=11) – 11%; No (n=29) – 28%
- Other: Yes (n=3) – 3% [1-temporary employment, 1-shy]; No (n=37) – 36%
- Missing (n=63) – 61%

A38. Do you attend a Senior Center for meals? (n=40)

- Yes (n=5) – 5%
- No (n=35) – 34%
- Missing (n=63) – 61%

A38a. [If no] Why? (n=16) – 16% [6-home delivered meals, 1-health, 2-not ready for it, 2-cook for self, 1-work, 3-sometimes, 1-at dialysis center]

A38b. If yes, how many times a week would you like meals available in your Senior Center? (n=44)

- 1 day (n=3) – 3%
- 2 days (n=0) – 0%
- 3 days (n=0) – 0%
- 4 days (n=18) – 18%
- 5 days (n=20) – 19%
- Other (n=3) – 3% [1-seven days, 1-for older folks, 1-outings]
- Missing (n=59) – 57%
A39. Since you don't attend a Senior Center for social activities, where do you spend your social time? (Check all that apply.) [n=89]

- Regular family get-togethers: Yes (n=75) - 73%; No (n=14) - 14%
- Church activities: Yes (n=14) - 14%; No (n=75) - 73%
- Home activities: Yes (n=36) - 35%; No (n=53) - 52%
- Bottle Hollow: Yes (n=1) - 1%; No (n=88) - 85%
- Bowling alley: Yes (n=3) - 3%; No (n=86) - 84%
- I am not aware of Senior Center activities: Yes (n=2) - 2%; No (n=87) - 84%
- Other: Yes (n=8) - 8% [1-bingo, 1-colorguard at Pow Wows, 1-friends, 1-home alone, 1-Pow Wows, 1-sports]; No (n=81) - 77%

Missing (n=14) - 14%

A40. What are some of the reasons why you do NOT attend your Senior Center in your community? (Check all that apply.) [n=76]

- Lack of transportation: Yes (n=9) - 9%; No (n=67) - 65%
- Senior Centers are for the elderly: Yes (n=2) - 2%; No (n=74) - 72%
- Location not central in my community: Yes (n=17) - 17%; No (n=59) - 57%
- Too busy: Yes (n=29) - 28%; No (n=47) - 46%
- Don't know the location: Yes (n=1) - 1%; No (n=75) - 73%
- Not interested: Yes (n=15) - 15% [1-grandchildren to care for, 1-no time, 1-not a tribal person, 1-private person, 1-too far, 1-used to being alone]; No (n=61) - 59%
- Other: Yes (n=16) - 16% [5-health problems, 2-for seniors, 1-need evening activities, 2-do not want to leave home, 1-need busing, 2-spend time with family, 2-work, 1-other things to do]; No (n=60) - 58%

Missing (n=27) - 26%

A41. Do you support the New Senior Center in Fort Duchesne? (n=97)

- Yes (n=78) - 76%
- No (n=19) - 18%

A41a. [If no] Why? (n=14) - 14% [5-not around, 4-no time, 2-glad it is here for people, 1-not interested, 1-no transportation, 1-for people who need help]

A42. Would you like to receive health services at your Senior Center? (n=90)

- Yes (n=66) - 64%
- No (n=24) - 23%

A42a. [If yes] Which ones? (n=45) - 44% [17-any, 9-health or medical checkups, 3-blood tests, 2-diabetes, 2-blood pressure, 2-optomitrist, 2-exercise, 2-nurse, 2-transportation, 2-help with utilities, 1-podiatrist, 1-flu shots]
A43. Would you like to participate in any of the following activities at a Senior Center? (n=92)

- Cards/Hand games: Yes (n=17) - 17%; No (n=75) - 73%
- Sewing: Yes (n=17) - 17%; No (n=75) - 73%
- Exercise class: Yes (n=16) - 16%; No (n=76) - 74%
- Support groups: Yes (n=7) - 7%; No (n=85) - 83%
- Day trips: Yes (n=18) - 18%; No (n=74) - 72%
- Overnight trips: Yes (n=31) - 30%; No (n=61) - 60%
- None: Yes (n=31) - 30%; No (n=61) - 59%
- Bingo: Yes (n=23) - 22%; No (n=69) - 67%
- Crafts: Yes (n=15) - 15%; No (n=77) - 75%
- Educational classes: Yes (n=12) - 12%; No (n=80) - 78%
- Picnics: Yes (n=24) - 23%; No (n=68) - 66%
- Pow Wows or Bear Dances, etc.: Yes (n=39) - 38%; No (n=53) - 52%

A43a. Are there activities or services you would like that are not offered at your Senior Center? (Please specify.) (n=8) - 8% [3-transportation, 2-exercise equipment, 1-cultural/language/heredity information, 1-spiritual matters, 1-movies]

**Community Information**

A44. How often do you leave your home to go out into the community? (n=97)

- A few times a week (n=72) - 70%
- Once a week (n=7) - 7%
- Couple times a month (n=10) - 10%
- Once a month (n=4) - 4%
- Less than once a month (n=4) - 4%
- Missing (n=6) - 6%

A45. Do you participate in any religious or traditional activities? (Check all that apply.) [n=85]

- Pow Wows: Yes (n=72) - 70%; No (n=13) - 13%
- Sundance: Yes (n=60) - 58%; No (n=25) - 24%
- Bear Dance: Yes (n=47) - 46%; No (n=38) - 37%
- Peyote Meetings: Yes (n=14) - 14%; No (n=71) - 69%
- Church: Yes (n=35) - 34% [6-Baptist, 3-Catholic, 5-Episcopal, 12-Indian beliefs, 4-LDS, 1-Protestant, 1-Community Church of God]; No (n=50) - 49%
- Other: Yes (n=6) - 6% [1-attend with Senior Center, 1-Indian beliefs, 1-partying, 1-stay home, 1-sweat lodge]
- Missing (n=18) - 18%
A46. How often, on average, do you attend religious or traditional services or activities? (n=87)

- Never (n=14) – 14%
- Less than once a month (n=42) – 41%
- 1 to 3 times a month (n=14) – 14%
- Once a week (n=9) – 9%
- More than once a week (n=8) – 8%
- Missing (n=16) – 16%

A47. Would you like to have more social contact with people in your community? (n=95)

- Yes (n=21) – 20%
- No (n=29) – 28%
- Don’t know (n=45) – 44%
- Missing (n=8) – 8%

A47a. [If no] Explain. (n=17) – 17% [6-have enough contact, 5-do not want to, like to be alone, 4-too busy, 2-they think differently than I]

A48. How would you rate your health? (n=102)

- Poor (n=5) – 5%
- Fair (n=40) – 39%
- Good (n=49) – 48%
- Excellent (n=8) – 8%
- Missing (n=1) – 1%

A49. Describe any current health problems: (n=38) – 37% [11-diabetes, 8-arthritis, 6-heart problems, 5-hypertension, 4-getting old, memory problems, 3-asthma, 3-back problems, 3-renal problems, 3-neuropathy, 3-stroke, 1-overweight, 1-hip problems]

A50. Describe services currently being received: CHR (n=17), IHS (n=14), Diabetes Clinic (n=7), health care (n=6), meals (n=5), V.A. (n=4), medication (n=2), Senior Center (n=1), transportation (n=1), dialysis (n=1)

A51. Does your health prevent you from attending social functions? (n=96)

- Yes (n=17) – 17%
- No (n=79) – 77%
- Missing (n=7) – 7%
A52. What best describes your perceptions of a nursing home? (n=99)

______ A place old people go to die: Yes (n=11) - 11%; No (n=88) - 85%
______ A place for people to go when they need long term medical care:
    Yes (n=49) - 48%; No (n=79) - 77%
______ An alternative to independent living for the elderly: Yes (n=20) - 19%;
    No (n=79) - 77%
______ A place for the elderly who have no one to care for them:
    Yes (n=57) - 55%; No (n=42) - 41%
______ An institution: Yes (n=7) - 7%; No (n=92) - 89%
______ A safe place for elderly who need medical attention: Yes (n=65) - 63%;
    No (n=34) - 33%
______ Other: Yes (n=1) - 1% [to be with own age group]; No (n=98) - 95%
    Missing (n=8) - 8%

A53. Do you have a person who helps you with any personal care? (n=102)

______ Yes (n=33) - 32%
______ No (n=69) - 67%
    Missing (n=1) - 1%

A53a. Who is your primary personal caregiver? (n=41)

______ Spouse (n=14) - 14%  ______ Daughter-in-law (n=0) - 0%
______ Daughter (n=10) - 10%  ______ Son-in-law (n=0) - 0%
______ Son (n=2) - 2%  ______ Paid Individual (n=0) - 0%
______ Sister (n=5) - 5%  ______ Friend/Individual (n=0) - 0%
______ Brother (n=1) - 1%  ______ Other (n=11) - 11% [3-self, 1-niece]
______ Grandchildren (n=4) - 4%
    Missing (n=62) - 60%

A53b. How many hours of personal care do you receive each week? (n=26)

______ 1-5 hours (n=19) - 18%
______ 6-10 hours (n=0) - 0%
______ 11-15 hours (n=0) - 0%
______ 16-20 hours (n=1) - 1%
______ More than 20 hours (n=16) - 16%
    Missing (n=77) - 75%

A53c. How long have you been receiving personal care from another person?
    (n=15) - 15% [4-a long time, 1-five years, 1-daughter lives with me,
    1-always, 1-two years, 1-not too long, 1-once in a great while, 1-one year,
    1-since been married, 1-three years, 1-when I go home, 1-when need it]

A54. Do you have a disability? (n=96)

______ Yes (n=21) - 20%
______ No (n=75) - 73%
    Missing (n=7) - 7%
Permanent disabilities

A55. What is your disability? (n=18) – 17% [5-vision problems, 3-arthritis, 3-heart problems, 3-stroke paralysis, 2-renal problems, 2-hearing loss, 1-hypertension, 1-diabetes, 1-liver, 1-lung problems, 1-back problems, 1-lost left tricep]

A56. If an apartment facility were available with four bedrooms per apartment, would you live with other people who are disabled? (n=22)

- Yes (n=3) - 3%
- No (n=8) - 8%
- Don’t know/unsure (n=11) - 11%
- Missing (n=81) - 79%

A56a. [If no] Why? (n=5) – 5% [1-do not like to bother, 1-like to have own room, 1-too many people, 1-not unless 75 or older, 1-would not trust anyone but close family]

A57. If available, would any of your family members with a disability use a residential facility if it was located in the Uintah Basin and there were no age restrictions? (n=21)

- Yes (n=7) - 7%
- No (n=3) - 3%
- Don’t know/unsure (n=11) - 11%
- Missing (n=82) - 82%

A57a. [If no] Why? (n=0) – 0%

A58. As a person with a disability, do you know how and where to access services within your community? (n=21)

- Yes (n=15) - 15%
- No (n=6) - 6%
- Missing (n=82) - 80%

A58a. [If no] Why? (n=3) – 3% [1-except for physical therapy, 1-not interested, 1-old folks care center be only for tribal members]
A59. If you have any comment you would like to make about your current situation please do you now. (n=6) – 6%
1-I’m getting old. Someone checks on me here at home. Sometimes I almost get sick, but I’m okay. Go eat at the old folks place.
1-Even if you are not a senior with a disability, you should be treated the same.
1-I’m unable to care for myself and am getting old. I do not like hospitals.
1-I do not have transportation for medical needs and rely on the Senior Center for meals and transportation needs. But I am glad that I have a daughter who checks on me.
1-I have been told my lifetime could stop and I know that I’m living on borrowed time, but continue to live on. I am thankful for the days I have left to be with my family.
1-The Ute Tribe does not let people know about benefits or services. They do not let people know about age limit on what they qualify for.

Employment

A60. What is your current primary employment status? (n=98)

_______ Employed for wages: Yes (n=40) - 39%; No (n=58) - 56%
_______ Self-employed: Yes (n=4) - 4%; No (n=94) - 92%
_______ Retired: Yes (n=14) - 14%; No (n=83) - 81%
_______ Homemaker: Yes (n=15) - 15%; No (n=83) - 81%
_______ Student: Yes (n=0) - 0%; No (n=98) - 95%
_______ Able to work but unemployed less than one year: Yes (n=2) - 2%;
                 No (n=96) - 93%
_______ Able to work but unemployed more than one year: Yes (n=10) - 10%;
                 No (n=88) - 85%
_______ Disabled, unable to work: Yes (n=17) - 17%; No (n=81) - 79%
_______ Other: Yes (n=) - %; No (n=) - %
Missing (n=5) – 5%

A60a. [If employed] Do you work: (n=48)

________ Full time (n=42) - 41%
________ Part time (n=6) - 6%
Missing (n=55) – 53%
A61. What primary kind of work have you done for the majority of your working life? 
(n=94)

_____ Professional of technical work, owner, or manager: Yes (n=21) - 20%; No (n=73) - 71%
____ Sales or service work: Yes (n=7) - 7%; No (n=87) - 85%
____ Office work: Yes (n=22) - 21%; No (n=72) - 70%
____ Production work or manual labor: Yes (n=29) - 28%; No (n=65) - 63%
____ Farming, ranching, fishing or forestry: Yes (n=13) - 13%; No (n=81) - 79%
____ Armed services: Yes (n=3) - 3%; No (n=91) - 88%
____ Homemaker: Yes (n=10) - 10%; No (n=84) - 82%
____ Never employed: Yes (n=8) - 8%; No (n=86) - 84%
____ Other: Yes (n=6) - 6% [1-Ute Tribe employee, 1 janitor, 1 educational, 2 health care, 1 seamstress]
Missing (n=9) = 9%

A61a. [If employed] Do you work: (n=62)

_____ Full time (n=56) - 54%
_____ Part time (n=6) - 6%
Missing (n=41) - 40%

A62. Describe your level of physical activity on that job. (n=84)

_____ Mostly sitting (n=18) - 18%
_____ Light physical work (n=15) - 15%
_____ Between light and heavy physical work (n=43) - 42%
_____ Heavy physical work (n=8) - 8%
Missing (n=19) - 18%

A63. What was the most recent job you had or have currently? (n=71)

_____ Professional of technical work, owner, or manager (n=13) - 13%
_____ Sales or service work (n=3) - 3%
_____ Office work (n=11) - 11%
_____ Production work or manual labor (n=20) - 20%
_____ Farming, ranching, fishing or forestry (n=3) - 3%
_____ Armed services (n=0) - 0%
_____ Homemaker (n=6) - 6%
_____ Never employed (n=5) - 5%
_____ Other (n=10) - 10% [1-babysitter, 1-bailiff, 1-consultant, 1-disabled, 1-haven’t worked for a while, 2-janitor, 1-seamstress, 1-teacher, 1-Ute Tribe employee]
Missing (n=32) - 31%

A63a. [If employed] Do you work: (n=54)

_____ Full time (n=43) - 42%
_____ Part time (n=11) - 11%
Missing (n=49) - 48%
A 64. Describe your level of physical activity on that job. (n=56)

- Mostly sitting (n=18) - 18%
- Light physical work (n=13) - 13%
- Between light and heavy physical work (n=22) - 21%
- Heavy physical work (n=3) - 3%
- Missing (n=47) - 46%
Personal Characteristics

B1. What is your current height? (n=99) \( \bar{x}=62.79, \ SD=5.65, \ min.=48, \ max.=73, \)
    Missing (n=4) - 4%

B2. What was your maximum height during your lifetime? (n=55) \( \bar{x}=64.98, \ SD=4.02, \)
    min.=51, max.=71, Don’t know (n=48) - 47%

B3. What is your current weight? (n=96) \( \bar{x}=181.51, \ SD=31.49, \ min.=113, \ max.=269, \)
    Missing (n=7) - 7%

B4. What was the most you ever weighed? (n=64) \( \bar{x}=201.84, \ SD=38.74, \ min.=115, \)
    max.=330, Don’t know (n=41) - 40%
Activities of Daily Living
We would like to ask you about activities that you often do as part of your daily life.

C1. Do you need help dressing yourself, including putting clothes on, taking clothes off, fastening clothes together, or putting on shoes? (n=103)
   - I do not need any help. (n=92) - 89%
   - I need some help. (n=11) - 11%
   - I cannot dress by myself at all. (n=0) - 0%

   Missing (n=0) - 0%

C2. Do you need help bathing, including running the water, washing any part of your body, washing your hair, or getting in and out of the bath or shower? (n=103)
   - I do not need any help. (n=94) - 91%
   - I need some help. (n=8) - 8%
   - I cannot bath by myself at all. (n=1) - 1%

   Missing (n=0) - 0%

C3. Do you need help preparing meals for yourself, for example, a hot meal, a sandwich, a TV dinner, or microwaving food? (n=103)
   - I do not need any help. (n=90) - 87%
   - I need some help. (n=10) - 10%
   - I cannot prepare meals by myself at all. (n=3) - 3%

   Missing (n=0) - 0%

C4. Do you need help feeding yourself, for example, serving your food, using utensils, or drinking from a glass or cup? (n=103)
   - I do not need any help. (n=100) - 97%
   - I need some help. (n=3) - 3%
   - I cannot do this by myself at all. (n=0) - 0%

   Missing (n=0) - 0%

C5. Do you need help getting into or out of a bed or chair? (n=102)
   - I do not need any help. (n=93) - 90%
   - I need some help. (n=8) - 8%
   - I cannot do this by myself at all. (n=1) - 1%

   Missing (n=1) - 1%

C6. Do you use a cane, walker, or some other form of assistance to help you walk? (n=103)
   - I do not use any assistance to help me walk. (n=89) - 86%
   - I need some assistance to help me walk. (n=7) - 7%
   - I always use a cane, walker, or other form of assistance to help me walk. (n=7) - 7%

   Missing (n=0) - 0%
C7. Do you need help walking short distances within your own home or inside a building? (n=103)

- I do not need help walking short distances. (n=93) - 90%
- I need some help to walk short distances. (n=8) - 8%
- I cannot walk short distances by myself at all. (n=2) - 2%
  Missing (n=0) - 0%

C8. Do you need help walking longer distances? (n=103)

- I do not need help walking long distances. (n=87) - 85%
- I need some help walking long distances. (n=11) - 11%
- I cannot walk long distances by myself at all. (n=5) - 5%
  Missing (n=0) - 0%

C9. Do you need help using the toilet, including adjusting clothing, cleaning yourself, getting onto and off of the toilet, or reminders to use the toilet? (n=103)

- I do not need any help. (n=97) - 94%
- I need some help. (n=6) - 6%
- I cannot do this by myself at all. (n=0) - 0%
  Missing (n=0) - 0%

C10. Can you drive a car by yourself? (n=103)

- I can drive a car by myself. (n=77) - 75%
- I cannot drive a car by myself. (n=4) - 4%
- I do not drive. (n=22) - 21%
  Missing (n=0) - 0%

C11. If available, are you able to access public transportation, including bus, taxi, or other transportation services, to get around town? (n=100)

- I am able to use available public transportation without help. (n=87) - 85%
- I need someone to help me use public transportation. (n=13) - 13%
  Missing (n=3) - 3%

C12. Do you need help doing light housework, such as dusting, washing dishes, vacuuming, sweeping, or doing laundry? (n=103)

- I do not need any help. (n=84) - 82%
- I need some help. (n=15) - 15%
- I cannot do light housework by myself at all. (n=4) - 4%
  Missing (n=0) - 0%

C13. Do you need help managing your personal finances, such as paying the bills or keeping a checking or savings account? (n=103)

- I do not need any help. (n=90) - 87%
- I need some help. (n=13) - 13%
- I cannot manage my finances by myself at all. (n=0) - 0%
  Missing (n=0) - 0%
C14. Do you need help lifting items like a sack of potatoes or sugar, or a full grocery sack (about 10 pounds)? (n=103)
   _____ I do not need any help. (n=75) - 73%
   _____ I need some help. (n=23) - 22%
   _____ I cannot lift 10 pounds by myself at all. (n=5) - 5%
     Missing (n=0) - 0%

C15. Were any of the activities mentioned above limited by an accidental injury, surgery, or birth defect (e.g., loss of a limb, physical deformities, etc.)? (n=101)
   _____ No (n=94) - 91%
   _____ Yes (n=6) - 6% [1- bad back, bad legs, 1-blind, 3- surgery, 1-stroke ]
   _____ Don’t know (n=1) - 1%
     Missing (n=2) - 2%

C16. Have you fallen during the past year? (n=99)
   _____ No (n=76) - 74%
   _____ Don’t know (n=2) - 2%
   _____ Yes (n=21) - 20%
     Missing (n=4) - 4%

C16a. How many times did you fall this past year? (n=21) [3-zero times, 6-one time, 6-two times, 2-three times, 2-four times, 2-five times]

C16b. Did any of your falls result in injuries? (n=25)
   _____ No (n=16) - 16%
   _____ Yes (n=9) - 9%
   _____ Don’t know (n=0) - 0%
     Missing (n=78) - 76%
Health

D1. **Chronic Obstructive Pulmonary Disease (COPD or Emphysema)?** (n=102)

- No (n=99) - 96%
- Yes (n=3) - 3%
- Missing (n=1) - 1%

D1a. Are you currently being treated for this problem? (n=4)

- No (n=1) - 1%
- Yes (n=3) - 3%
- Missing (n=99) - 96%

D1b. Does this problem interfere with daily activities? (n=3)

- No (n=2) - 2%
- Yes (n=1) - 1%
- Missing (n=100) - 97%

D2. **Arthritis?** (n=101)

- No (n=71) - 69%
- Yes (n=30) - 29%
- Missing (n=2) - 2%

D2a. Are you currently being treated for this problem? (n=30)

- No (n=10) - 10%
- Yes (n=20) - 20%
- Missing (n=73) - 71%

D2b. Does this problem interfere with daily activities? (n=29)

- No (n=19) - 18%
- Yes (n=10) - 10%
- Missing (n=74) - 72%

D3. **Hearing impairment (deafness)?** (n=102)

- No (n=75) - 73%
- Yes (n=27) - 26%
- Missing (n=1) - 1%

D3a. Are you currently being treated for this problem? (n=26)

- No (n=9) - 9%
- Yes (n=17) - 17%
- Missing (n=77) - 75%

D3b. Does this problem interfere with daily activities? (n=26)

- No (n=20) - 19%
- Yes (n=6) - 6%
- Missing (n=77) - 75%
D4. Diabetes? (n=103)
   _____ No (n=48) - 47%
   _____ Yes (n=55) - 53%
   Missing (n=0) - 0%

D4a. [If no] Have you been tested for diabetes (or sugar diabetes?) (n=40)
   _____ No (n=10) - 10%
   _____ Yes (n=30) - 29%
   Missing (n=63) - 61%

D4b. At what age were you diagnosed with diabetes? (n=27)x=47.30, SD=11.93, min.=25, max.=85

D4c. Are you currently being treated for this problem? (n=55)
   _____ No (n=5) - 5%
   _____ Yes (n=50) - 49%
   _____ Don’t know (n=0) - 0%
   Missing (n=48) - 47%

D4d. Does this problem interfere with daily activities? (n=55)
   _____ No (n=51) - 50%
   _____ Yes (n=4) - 4%
   Missing (n=48) - 47%

D4e. Which of the following types of diabetes do you have? (n=49)
   _____ Type 1 (n=8) - 8%
   _____ Type 2 (n=39) - 38%
   _____ Gestational diabetes (n=2) - 2%
   Missing (n=49) - 48%

D4f. Would you say your case of diabetes is or was: (n=55)
   _____ Mild (n=23) - 22%
   _____ Moderate (n=26) - 25%
   _____ Severe (n=6) - 6%
   Missing (n=48) - 47%

D4g. Have you experienced any of the following problems as a result of diabetes? (n=54)
   _____ Amputation (n=4) - 4%
   _____ Blindness (n=1) - 1%
   _____ Diabetic retinopathy (n=8) - 8%
   _____ Diabetic neuropathy (n=3) - 3%
   _____ Diabetic nephropathy (n=1) - 1%
   _____ Other (n=1) - 1% [1-disoriented]
   _____ I have not experienced any problems (n=36) - 35%
   Missing (n=49) - 48%
D5. **Asthma?** (n=102)
- No (n=91) - 88%
- Yes (n=11) - 11%
- Missing (n=1) - 1%

D5a. Are you currently being treated for this problem? (n=10)
- No (n=5) - 5%
- Yes (n=5) - 5%
- Don’t know (n=0) - 0%
- Missing (n=93) - 90%

D5b. Does this problem interfere with daily activities? (n=10)
- No (n=7) - 7%
- Yes (n=3) - 3%
- Missing (n=93) - 93%

D6. **Stroke (Cerebrovascular Accident)?** (n=102)
- No (n=90) - 87%
- Yes (n=12) - 12%
- Missing (n=1) - 1%

D3a. Are you currently being treated for this problem? (n=9)
- No (n=6) - 6%
- Yes (n=3) - 3%
- Don’t know (n=0) - 0%
- Missing (n=94) - 91%

D3b. Does this problem interfere with daily activities? (n=10)
- No (n=6) - 6%
- Yes (n=4) - 4%
- Missing (n=93) - 90%

D7. **Cancer?** (n=101)
- No (n=98) - 95%
- Yes (n=3) - 3%
- Missing (n=2) - 2%

D7a. What type(s) of cancer do you have? (n=2) [1-papillary thyroid, 1-prostate]

D7b. Are you currently being treated for this problem? (n=2)
- No (n=2) - 2%
- Missing (n=101) - 98%

D7c. Does this problem interfere with daily activities? (n=1)
- No (n=1) - 1%
- Missing (n=102) - 99%
D8. Pneumonia? (n=102)
   ______ No (n=93) - 90%
   ______ Yes (n=9) - 9%
   Missing (n=1) - 1%

D8a. Are you currently being treated for this problem? (n=8)
   ______ No (n=6) - 6%
   ______ Yes (n=2) - 2%
   Missing (n=95) - 92%

D8b. Does this problem interfere with daily activities? (n=8)
   ______ No (n=8) - 8%
   Missing (n=95) - 92%

D9. Cataracts? (n=101)
   ______ No (n=85) - 83%
   ______ Yes (n=16) - 16%
   Missing (n=2) - 2%

D9a. Are you currently being treated for this problem? (n=18)
   ______ No (n=9) - 9%
   ______ Yes (n=8) - 8%
   ______ Don’t know (n=1) - 1%
   Missing (n=85) - 83%

D9b. Does this problem interfere with daily activities? (n=18)
   ______ No (n=13) - 13%
   ______ Yes (n=5) - 5%
   Missing (n=85) - 83%

D10. Seizures? (n=95)
   ______ No (n=93) - 80%
   ______ Yes (n=2) - 2%
   Missing (n=8) - 8%

D10a. Are you currently being treated for this problem? (n=3)
   ______ No (n=2) - 2%
   ______ Yes (n=1) - 1%
   Missing (n=100) - 97%

D10b. Does this problem interfere with daily activities? (n=2)
   ______ No (n=2) - 2%
   Missing (n=101) - 98%
D11. Ulcers? (n=100)
   _____ No (n=94) - 91%
   _____ Yes (n=6) - 6%
   Missing (n=3) - 3%

D11a. What type of ulcer(s) do you have? (n=2) [2-gastric]

D11b. Are you currently being treated for this problem? (n=7)
   _____ No (n=3) - 3%
   _____ Yes (n=4) - 4%
   Missing (n=96) - 93%

D11c. Does this problem interfere with daily activities? (n=6)
   _____ No (n=5) - 5%
   _____ Yes (n=1) - 1%
   Missing (n=97) - 94%

D12. Gallbladder problems? (n=99)
   _____ No (n=86) - 84%
   _____ Yes (n=13) - 13%
   Missing (n=4) - 4%

D12a. Have you had your gallbladder removed?
   _____ No (n=3) - 3%
   _____ Yes (n=15) - 15%
   Missing (n=85) - 83%

D12b. Are you currently being treated for this problem? (n=15)
   _____ No (n=15) - 15%
   Missing (n=88) - 85%

D3b. Does this problem interfere with daily activities? (n=15)
   _____ No (n=15) - 15%
   Missing (n=88) - 85%
D13. Dehydration? (n=101)
   - No (n=97) - 94%
   - Yes (n=4) - 4%
   - Missing (n=2) - 2%

D13a. Are you currently being treated for this problem? (n=4)
   - No (n=3) - 3%
   - Yes (n=1) - 1%
   - Missing (n=99) - 96%

D13b. Does this problem interfere with daily activities? (n=4)
   - No (n=3) - 3%
   - Yes (n=1) - 1%
   - Missing (n=99) - 96%

D14. Anemia? (n=100)
   - No (n=93) - 90%
   - Yes (n=7) - 7%
   - Missing (n=3) - 3%

D14a. Are you currently being treated for this problem? (n=6)
   - No (n=4) - 4%
   - Yes (n=2) - 2%
   - Missing (n=97) - 94%

D14b. Does this problem interfere with daily activities? (n=7)
   - No (n=5) - 5%
   - Yes (n=2) - 2%
   - Missing (n=96) - 93%

D15. Foot problems? (n=101)
   - No (n=86) - 84%
   - Yes (n=15) - 15%
   - Missing (n=2) - 2%

D15a. Are you currently being treated for this problem? (n=14)
   - No (n=4) - 4%
   - Yes (n=10) - 10%
   - Missing (n=89) - 86%

D15b. Does this problem interfere with daily activities? (n=7)
   - No (n=7) - 7%
   - Yes (n=7) - 7%
   - Missing (n=89) - 96%
### D16. Heart Disease (Atherosclerosis or Hardening of the Arteries)? (n=97)

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<th>Count</th>
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**D16a. Are you currently being treated for heart disease?**

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<tr>
<td>Yes</td>
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**D16b. Does heart disease interfere with daily activities?**

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<td>93%</td>
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**D16c. Have you ever had a heart attack?**

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<td>3%</td>
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<tr>
<td>Missing</td>
<td>96</td>
<td>93%</td>
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**D16d. Have you ever had any other heart trouble?**

<table>
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<tr>
<td>Yes</td>
<td>6</td>
<td>6%</td>
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<tr>
<td>Missing</td>
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<td>90%</td>
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### D17. Allergies? (n=102)

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<td>77%</td>
</tr>
<tr>
<td>Yes</td>
<td>23</td>
<td>22%</td>
</tr>
<tr>
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**D17a. Are you allergic to any foods?**

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<td>18%</td>
</tr>
<tr>
<td>Yes</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Missing</td>
<td>80</td>
<td>78%</td>
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**D17b. Are you allergic to pollen?**

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<td>6%</td>
</tr>
<tr>
<td>Yes</td>
<td>19</td>
<td>18%</td>
</tr>
<tr>
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<td>78</td>
<td>76%</td>
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**D17c. Are you allergic to dust?**

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<td>11%</td>
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<tr>
<td>Yes</td>
<td>11</td>
<td>11%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Missing</td>
<td>80</td>
<td>78%</td>
</tr>
</tbody>
</table>
D17d. Are you allergic to animals?
   _____ No (n=17) – 17%
   _____ Yes (n=3) – 3%
   _____ Don’t Know (n=1) – 1%
   Missing (n=82) – 80%

D17e. Are you allergic to drugs or medication?
   _____ No (n=11) – 11%
   _____ Yes (n=17) – 17%
   Missing (n=75) – 73%

D17f. Are you allergic to anything else?
   _____ No (n=22) – 21%
   _____ Yes (n=2) – 2% [1-hay, Russian olive trees, 1-sun]
   _____ Don’t Know (n=2) – 2%
   Missing (n=77) – 75%

D17g. Are you currently being treated for your allergies?
   _____ No (n=14) – 14%
   _____ Yes (n=12) – 12%
   Missing (n=77) – 75%

D17h. Do your allergies interfere with daily activities?
   _____ No (n=18) – 18%
   _____ Yes (n=7) – 7%
   Missing (n=78) – 76%

D18. Migraine Headaches? (n=101)
   _____ No (n=88) – 85%
   _____ Yes (n=13) – 13%
   Missing (n=2) – 2%

D18a. Are you currently being treated for migraine headaches?
   _____ No (n=10) – 10%
   _____ Yes (n=2) – 2%
   _____ Don’t Know (n=1) – 1%
   Missing (n=90) – 87%

D18b. Do your migraine headaches interfere with daily activities?
   _____ No (n=7) – 7%
   _____ Yes (n=6) – 6%
   Missing (n=90) – 87%
D19. **Hip Fracture?** (n=100)

- No (n=95) – 92%
- Yes (n=5) – 5%
- Missing (n=3) – 3%

**D19a. Are you currently being treated for a hip fracture?**

- No (n=4) - 4%
- Yes (n=1) - 1%
- Missing (n=98) - 95%

**D19b. Does your hip fracture interfere with daily activities?**

- No (n=4) - 4%
- Yes (n=1) - 1%
- Missing (n=98) - 95%

**D19c. In what year were you diagnosed with a hip fracture?** (n=4) [1953, 1991, 1994, 1996]

D20. **Renal (kidney) Disease?** (n=101)

- No (n=95) - 93%
- Yes (n=6) - 6%
- Missing (n=2) - 2%

**D20a. Are you currently being treated for renal disease?**

- No (n=3) - 3%
- Yes (n=3) - 3%
- Missing (n=97) - 94%

**D20b. Does renal disease interfere with daily activities?**

- No (n=2) - 2%
- Yes (n=4) - 4%
- Missing (n=97) - 94%

D21. **Kidney Failure?** (n=101)

- No (n=98) - 95%
- Yes (n=3) - 3%
- Missing (n=2) - 2%

**D21a. Are you currently being treated for kidney failure?**

- No (n=1) - 1%
- Yes (n=3) - 3%
- Missing (n=99) - 96%

**D21b. Does kidney failure interfere with daily activities?**

- No (n=1) - 1%
- Yes (n=2) - 2%
- Missing (n=100) - 97%
D22. **Yellow Jaundice or Cirrhosis of the Liver?** (n=100)
- No (n=98) - 95%
- Yes (n=2) - 2%
- Missing (n=100) - 97%

D22a. Are you currently being treated for jaundice or cirrhosis?
- No (n=2) - 2%
- Missing (n=101) - 98%

D22b. Does jaundice or cirrhosis interfere with daily activities?
- No (n=2) - 2%
- Missing (n=101) - 98%

D23. **Hypertension (High Blood Pressure)?** (n=98)
- No (n=73) - 71%
- Yes (n=25) - 24%
- Missing (n=5) - 5%

D23a. Are you currently being treated for hypertension?
- No (n=3) - 3%
- Yes (n=22) - 21%
- Missing (n=78) - 76%

D23b. Does hypertension interfere with daily activities?
- No (n=20) - 19%
- Yes (n=4) - 4%
- Missing (n=79) - 77%

D23c. About how long has it been since you last had your blood pressure checked by a doctor, nurse, or other health professional? (n=31)
- 0-6 months ago (n=24) - 23%
- 6-12 months ago (n=7) - 7%
- Missing (n=72) - 70%

D24. How many siblings do you have? (n=67) \( \bar{x} = 5.75, SD = 3.70, \text{min.}=1, \text{max.}=22 \)

D24a. How many biological siblings do you have? (n=60) \( \bar{x} = 5.32, SD = 3.89 \)
- \( \text{min.}=1, \text{max.}=22 \)

D24b. How many adopted siblings do you have? (n=56) \( \bar{x} = 0.39, SD = 0.85, \text{min.}=0, \text{max.}=4 \)
Have any of your blood (biological) relatives (children, parents, brothers, sisters, etc.) been diagnosed with the following conditions:

D25. Diabetes? (n=96)
   - No (n=18) – 18%
   - Don’t Know (n=26) – 25%
   - Yes (n=52) – 51%
   - Missing (n=7) – 7%

[I]yes[/]
D25a. Were your children diagnosed with diabetes?
   - No (n=32) – 31%
   - Yes (n=15) – 15% [8-one, 3-two, 1-three, 1-four]
   - Missing (n=56) – 54%

D25b. Were your siblings diagnosed with diabetes?
   - No (n=13) – 13%
   - Yes (n=28) – 27% [9-one, 4-two, 5-three, 1-four, 1-six, 1-eleven]
   - Missing (n=62) – 60%

D25c. Were your parents diagnosed with diabetes?
   - No (n=14) – 14%
   - Yes (n=34) – 33% [16-one, 11-two]
   - Missing (n=55) – 53%

D26. Stroke (Cerebrovascular Accident)? (n=96)
   - No (n=72) – 70%
   - Don’t Know (n=18) – 18%
   - Yes (n=6) – 6%
   - Missing (n=7) – 7%

[I]yes[/]
D26a. Were your children diagnosed with a stroke?
   - No (n=6) – 6%
   - Missing (n=97) – 94%

D26b. Were your siblings diagnosed with a stroke?
   - No (n=6) – 6%
   - Yes (n=1) – 1% [1-two]
   - Missing (n=96) – 93%

D26c. Were your parents diagnosed with a stroke?
   - No (n=2) – 2%
   - Yes (n=5) – 5% [5-one]
   - Missing (n=96) – 93%
D27. Cancer? (n=98)
   ______ No (n=69) – 67%
   ______ Don’t Know (n=21) – 20%
   ______ Yes (n=8) – 8%
   Missing (n=5) – 5%

[If yes]
D27a. Were your children diagnosed with cancer?
   ______ No (n=8) – 8%
   Missing (n=95) – 92%

D27b. Were your siblings diagnosed with cancer?
   ______ No (n=4) – 4%
   ______ Yes (n=3) – 3% [2-one, 1-three] – lung, stomach cancer
   Missing (n=96) – 93%

D27c. Were your parents diagnosed with cancer?
   ______ No (n=3) – 3%
   ______ Yes (n=6) – 6% [4-one, 1-two] – breast, reproductive, stomach cancer
   Missing (n=98) – 95%

D28. Arthritis? (n=98)
   ______ No (n=52) – 51%
   ______ Don’t Know (n=30) - 29%
   ______ Yes (n=16) – 16%
   Missing (n=5) – 5%

[If yes]
D28a. Were your children diagnosed with arthritis?
   ______ No (n=11) – 11%
   ______ Yes (n=3) – 3% [1-one, 2-two]
   Missing (n=89) – 86%

D28b. Were your siblings diagnosed with arthritis?
   ______ No (n=8) – 8%
   ______ Yes (n=3) – 3% [1-one]
   Missing (n=92) – 89%

D28c. Were your parents diagnosed with arthritis?
   ______ No (n=3) – 3%
   ______ Yes (n=13) – 13% [9-one, 3-two]
   Missing (n=87) – 85%
D29. **Hypertension (High Blood Pressure)? (n=97)**
- No (n=48) - 47%
- Don’t Know (n=32) - 31%
- Yes (n=17) - 17%
- Missing (n=6) - 6%

[If yes]

D29a. **Were your children diagnosed with hypertension?**
- No (n=11) - 11%
- Yes (n=3) - 3% [2-one, 1-two]
- Missing (n=89) - 86%

D29b. **Were your siblings diagnosed with hypertension?**
- No (n=8) - 8%
- Yes (n=4) - 4% [2-one, 1-five]
- Missing (n=91) - 88%

D29c. **Were your parents diagnosed with hypertension?**
- No (n=5) - 5%
- Yes (n=12) - 12% [10-one]
- Missing (n=93) - 90%

D30. **Heart Disease (Atherosclerosis)? (n=98)**
- No (n=67) - 65%
- Don’t Know (n=20) - 19%
- Yes (n=11) - 11%
- Missing (n=5) - 5%

[If yes]

D30a. **Were your children diagnosed with heart disease?**
- No (n=9) - 9%
- Yes (n=1) - 1% [1-one]
- Missing (n=93) - 90%

D30b. **Were your siblings diagnosed with heart disease?**
- No (n=4) - 4%
- Yes (n=5) - 5% [3-one, 2-two]
- Missing (n=94) - 91%

D30c. **Were your parents diagnosed with heart disease?**
- No (n=4) - 4%
- Yes (n=6) - 6% [5-one, 1-two]
- Missing (n=97) - 94%
D31. Allergies? (n=97)
   _____ No (n=42) - 41%
   _____ Don't Know (n=42) - 41%
   _____ Yes (n=13) - 13%
   Missing (n=6) - 6%

   [If yes]
   D31a. Were your children diagnosed with allergies?
   _____ No (n=2) - 2%
   _____ Yes (n=11) - 11 [5-one, 5-two, 1-three]
   Missing (n=90) - 87%

   D31b. Were your siblings diagnosed with allergies?
   _____ No (n=8) - 8%
   _____ Yes (n=4) - 4% [1-one, 1-six]
   Missing (n=91) - 88%

   D31c. Were your parents diagnosed with allergies?
   _____ No (n=9) - 9%
   _____ Yes (n=2) - 2% [2-one]
   Missing (n=92) - 89%

D32. Hip Fracture? (n=97)
   _____ No (n=71) - 69%
   _____ Don't Know (n=22) - 21%
   _____ Yes (n=4) - 4%
   Missing (n=6) - 6%

   [If yes]
   D32a. Were your children diagnosed with a hip fracture?
   No (n=3) - 3%
   _____ Yes (n=1) - 1% [1-one]
   Missing (n=99) - 96%

   D32b. Were your siblings diagnosed with a hip fracture?
   No (n=3) - 3%
   _____ Yes (n=1) - 1% [1-one]
   Missing (n=99) - 96%

   D32c. Were your parents diagnosed with a hip fracture?
   No (n=2) - 2%
   _____ Yes (n=2) - 2% [1-two]
   Missing (n=99) - 96%
These next questions are about your last eye exam and about how you usually feel.

D33. When was the last time you had an eye exam during which your pupils were dilated? This would have made you temporarily sensitive to bright light. (n=99)
   ______ 0 to 1 month ago (n=25) – 24%
   ______ 1 to 12 months ago (n=32) – 31%
   ______ 1 to 2 years ago (n=12) – 12%
   ______ 2 or more years ago (n=7) – 7%
   ______ I have never had an eye exam during which my pupils were dilated. (n=11) – 11%
   ______ Don’t Know (n=12) – 12%

D34. Has there ever been a period of two weeks or longer when you felt unusually sad, blue, or depressed? (n=97)
   ______ No (n=54) – 52%
   ______ Yes (n=43) – 42%
   Missing (n=6) – 6%

D34a. [If yes] Are you experiencing this sort of sadness or depression? (n=58)
   ______ No (n=33) – 32%
   ______ Yes (n=25) – 24%
   Missing (n=45) – 44%

D35. Do you feel content most of the time? (n=94)
   ______ No (n=11) – 11%
   ______ Yes (n=83) – 81%
   Missing (n=9) – 9%

D36. Do you often feel slowed down, tired out, or fatigued? (n=96)
   ______ No (n=33) – 32%
   ______ Yes (n=63) – 61%
   Missing (n=7) – 7%

D37. During the past 10 years, have you even had a period of two weeks or more when you had sleeping problems? (n=99)
   ______ No (n=61) – 59%
   ______ Don’t Know (n=5) – 5%
   ______ Yes (n=33) – 32%
   Missing (n=4) – 4%
D37a. /If yes/ Please check which statements are true for you. (Check all that apply.)

- Trouble falling asleep: Yes (n=20) – 20%;
  No (n=79) – 77%
- Trouble staying asleep: Yes (n=11) – 11%;
  No (n=87) – 85%
- Wake up too early: Yes (n=20) – 19%; No (n=79) – 77%
- Sleep too much: Yes (n=12) – 12%; No (n=86) – 84%

D38. Are you currently experiencing sleeping problems? (n=99)

- No (n=81) – 79%
- Yes (n=18) – 18%
  Missing (n=4) – 4%

D39. Is there anything you would like to discuss or comment on about your health or health care? (n=10)

1-Anemia-treatment is to periodically receive Procrit injections. It interferes only to the extent that I feel fatigued easily at times. Renal disease-I use traditional and alternative medicine to treat. It interferes moderately by causing the anemia and hypertension.

1-At this time, I am doing fine just as long as I keep on taking my medication on a daily basis.

1-Eye lens right and left implantation in 1986 and 1988

1-I am doing pretty good. I have felt depressed off and on (not always). I did have foot surgery over three years ago, and this was the cause of my resignation from my employment. It has given me problems off and on during this time.

1-I would like someone from the Senior Center with nursing to make weekly home visits. In case of emergencies or sickness, it could be caught in time.

1-Need health care for the elders only!!! Check on each patient! No time limit!

1-No liver.

1-Only problem is being overweight. Other than that I have been lucky to be in good health.

1-I wish that they could treat people the same.
**Medications:** The next questions are about medications that you took on a regular basis during the past year. Have you taken medication for...

**E1. High Blood Pressure or Water Retention (e.g., Diuretics)? (n=97)**

- No (n=72) – 70%
- Don’t Know (n=2) – 2%
- Yes (n=23) – 22%
- Missing (n=6) – 6%

**E1a.** On average over the past year, how many times per week did you take the medication? (n=17) $\bar{x}=5.12$, SD=2.80, min.=0, max.=7

**E1b.** What was the name(s) of the medication? (n=12) [4-Hydrochlorothiazide, 2-Doxazosin Mesylate, 2-water pills, 1-Lisinopril, 1-Nifedipine, 1-Norvasc]

**E1c.** Did a doctor prescribe the medication? (n=18)

- No (n=1) – 1%
- Yes (n=17) – 17%
- Missing (n=85) – 83%

**E1d.** Have you taken a diuretic in the past 2 weeks? (n=19)

- No (n=3) – 3%
- Yes (n=15) – 15%
- Don’t know (n=1) – 1%
- Missing (n=84) – 82%

**E2. Heart Disease (Heart Medicine)? (n=98)**

- No (n=88) – 85%
- Don’t Know (n=1) – 1%
- Yes (n=9) – 9%
- Missing (n=5) – 5%

**E2a.** On average over the past year, how many times per week did you take the medication? (n=8) $\bar{x}=7$, SD=0, min.=7, max.=7

**E2b.** What was the name(s) of the medication? (n=7) [1-Antolol, 1-Digoxin, 1-Dipyridamole, 1-Lisinopril, 1-Nifedipine, 1-Simvastatin, 1-Playvix]

**E2c.** Did a doctor prescribe the medication? (n=9)

- Yes (n=9) – 9%
- Missing (n=94) – 91%

**E2d.** Have you taken the medication in the past 2 weeks? (n=9)

- Yes (n=9) – 9%
- Missing (n=94) – 91%
E3. Inflammation or Swelling (Anti-inflammatory Drugs, e.g., Prednisone, Cortisone, Cyclosporin)? (n=96)

- No (n=84) – 82%
- Don’t Know (n=2) – 2%
- Yes (n=10) – 10%
- Missing (n=7) – 7%

E3a. On average over the past year, how many times per week did you take the medication? (n=9) \( \bar{x} = 10.89, \text{SD}=9.21, \text{min.}=2, \text{max.}=30 \)

E3b. What was the name(s) of the medication? (n=8) [3-Prednisone, 1-Hydroxychloroquine Sulfate, 1-Ibuprofen, 1-Methotrexate, 1-Quinine Sulfate, 1-Sulindac]

E3c. Did a doctor prescribe the medication? (n=10)

- Yes (n=10) – 10%
- Missing (n=93) – 90%

E3d. Have you taken the medication in the past 2 weeks? (n=10)

- No (n=1) – 1%
- Yes (n=9) – 9%
- Missing (n=93) – 90%

E4. Chronic Pain due to Injury or Illness (Prescription Pain Medicine)? (n=96)

- No (n=83) 81%
- Don’t Know (n=1) – 1%
- Yes (n=12) – 12%
- Missing (n=7) – 7%

E4a. On average over the past year, how many times per week did you take the medication? (n=11) \( \bar{x} = 10.64, \text{SD}=9.73, \text{min.}=1, \text{max.}=30 \)

E4b. What was the name(s) of the medication? (n=8) [2-Hydrocodone, 2-Propoxyphene Napsylate, 1-Bayers, 1-Cyclobenzaprine, 1-Motrin, 1-Tylenol]

E4c. Did a doctor prescribe the medication? (n=13)

- Yes (n=13) – 13%
- Missing (n=90) – 87%

E4d. Have you taken the medication in the past 2 weeks? (n=14)

- No (n=4) – 4%
- Yes (n=10) – 10%
- Missing (n=89) – 86%
E5. **Headaches or Other Pain (Over-the-Counter Pain Medicine, e.g., aspirin, Tylenol, Advil, etc.)?** (n=98)
   - No (n=48) – 47%
   - Don’t Know (n=2) – 2%
   - Yes (n=48) – 47%
   - Missing (n=5) – 5%  

E5a. On average over the past year, how many times per week did you take the medication? (n=42) \( \bar{x}=2.43, SD=1.74, \min.=0, \max.=8 \)

E5b. What was the name(s) of the medication? (n=48) [29-Tylenol, 11-Bayers, 3-aspirin, 2-Advil, 1-Ibuprofen, 1-Usana, 1-Anacin]

E5c. Have you taken the medication in the past 2 weeks? (n=48)
   - No (n=12) – 12%
   - Yes (n=24) – 23%
   - Don’t Know (n=2) – 2%
   - Missing (n=48) – 47%

E6. **Asthma (e.g., Bronchiodialators)?** (n=97)
   - No (n=91) – 88%
   - Yes (n=6) – 6%
   - Missing (n=6) – 6%

E6a. On average over the past year, how many times per week did you take the medication? (n=5) \( \bar{x}=5.20, SD=5.45, \min.=1, \max.=14 \)

E6b. What was the name(s) of the medication? (n=4) [1-Asthma Cort, 1-Ibuterol Inhaler, 1-Prednisone, 1-Theodore]

E6c. Did a doctor prescribe the medication? (n=5)
   - Yes (n=5) – 5%
   - Missing (n=98) – 95%

E6d. Have you taken the medication in the past 2 weeks? (n=5)
   - No (n=2) – 2%
   - Yes (n=3) – 3%
   - Missing (n=98) – 95%
E7. Glaucoma (Glaucoma Medicine)? (n=93)
   ______ No (n=88) – 85%
   ______ Don’t Know (n=2) – 2%
   ______ Yes (n=3) – 3%
   Missing (n=10) – 10%

E7a. On average over the past year, how many times per week did you take the medication? (n=3) \( \bar{x}=11.67 \), SD=14.15, min.=3, max.=28

E7b. What was the name(s) of the medication? (n=3) [1-Trusoft, 1-Timolol, 1-eyedrops in the morning]

E7c. Did a doctor prescribe the medication? (n=3)
   ______ Yes (n=3) – 3%
   Missing (n=100) – 97%

E7d. Have you taken the medication in the past 2 weeks? (n=3)
   ______ Yes (n=3) – 3%
   Missing (n=100) – 97%

E8. Diabetes (e.g., Insulin Shots, Diabetic Pills)? (n=101)
   ______ No (n=47) – 46%
   ______ Yes (n=54) – 52%
   Missing (n=2) – 2%

E8a. On average over the past year, how many times per day did you take the medication? (n=53) \( \bar{x}=2.13 \), SD=1.69, min.=1, max.=7

E8b. What was the name(s) of the medication? (n=46) [33-Glyburide, 6-Insulin, 3-Tolazamide, 1-Glucon, 1-Metformin, 1-pills, 1-D]

E8c. Have you taken the medication in the past 2 weeks? (n=53)
   ______ No (n=2) – 2%
   ______ Yes (n=51) – 50%
   Missing (n=50) – 49%
**E9. Stomach Problems (e.g., Xantac, Maalox, Tagamet, PepcidAC, etc.)? (n=98)**

<table>
<thead>
<tr>
<th>Option</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>82</td>
<td>80%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Yes</td>
<td>14</td>
<td>14%</td>
</tr>
<tr>
<td>Missing</td>
<td>5</td>
<td>5%</td>
</tr>
</tbody>
</table>

**E9a. On average over the past year, how many times per week did you take the medication? (n=15)**

- $\bar{x}=2.75$, $SD=2.35$, min.=0.25, max.=7

**E9b. What was the name(s) of the medication? (n=15)**

- 3-Alkaseltzer, 2-Peptobismal, 2-Tagament, 2-Zantac, 1-Maalox, 1-Pepcid AC, 1-Prilsec, 1-Ranitidine, 1-Rolaids, 1-Tums

**E9c. Did a doctor prescribe the medication? (n=15)**

- No (8) - 8%
- Yes (7) - 7%
- Missing (88) - 85%

**E9d. Have you taken the medication in the past 2 weeks? (n=14)**

- No (5) - 5%
- Yes (9) - 9%
- Missing (89) - 86%

**E10. Tums? (n=97)**

<table>
<thead>
<tr>
<th>Option</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>89</td>
<td>86%</td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
<td>8%</td>
</tr>
<tr>
<td>Missing</td>
<td>6</td>
<td>6%</td>
</tr>
</tbody>
</table>

**E10a. On average over the past year, how many times per week did you usually take Tums? (n=8)**

- $\bar{x}=3.75$, $SD=6.65$, min.=1, max.=7

**E10b. What was the dose you took each time? (n=7)**

- 5-one tablet, 2-two tablets

**E11. Rolaids? (n=96)**

<table>
<thead>
<tr>
<th>Option</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>91</td>
<td>88%</td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Missing</td>
<td>7</td>
<td>7%</td>
</tr>
</tbody>
</table>

**E11a. On average over the past year, how many times per week did you usually take Rolaids? (n=3)**

- $\bar{x}=3.33$, $SD=3.21$, min.=1, max.=7

**E11b. What was the dose you took each time? (n=4)**

- 2-one tablet, 2-two tablets
E12. Any medication not mentioned previously? (n=90)
   _______ No (n=81) – 79%
   _______ Yes (n=9) – 9%
   Missing (n=13) – 13%

E12a. On average over the past year, how many times per week did you take other medicines? (n=7) $\bar{x}=6.43$, SD=7.30, min.=1, max.=21

E12b. What was the name(s) of the medicines? (n=12) [3-Levothyroxine, 1-allergy medicine, 1-Delabrite, 1-estrogen, 1-Sertraline, 1-Sudifed, 1-Supercold Tablets for nasal decongestant (antihistamine), 1-antibiotics, 1-calcium, 1-Hydroizone]

E12c. Did a doctor prescribe the medicine(s)? (n=8)
   _______ No (n=2) – 2%
   _______ Yes (n=6) – 6%
   Missing (n=95) – 92%

E12d. Have you taken this other medicine in the past 2 weeks? (n=8)
   _______ No (n=1) – 1%
   _______ Yes (n=8) – 8%
   Missing (n=95) – 92%
Food Supplements
The questions below are about your intake of supplements such as multivitamins, herbs, or other food supplements.

F1. Have you taken vitamin or mineral supplements during the past year?
   ----- No (n=76) – 74%
   ----- Yes (n=15) – 15%

   [If yes] Have you taken any of the following supplements for at least one week during the past year?

F2. Multivitamins (e.g., One-A-Day, Flintstones, etc.)? (n=57)
   ----- No (n=44) – 43%
   ----- Yes (n=13) – 13%
   ----- Missing (n=46) – 45%

   F2a. On average during the past year, how many times per week did you usually take multivitamin supplements? (n=12) \( \bar{x} = 5.58, \ SD = 1.83, \ min. = 1, \ max. = ? \)

   F2b. What was the name of the multivitamin you usually took? (n=11)
   [7-One-A-Day, 2-Silver, 1-Ocutri, 1-Nephrocaps]

   F2c. What was the amount you took each time? (n=13) [13-one pill per day]

F3. Not counting the multivitamins above, did you take any other supplements, in a pill or tablet, by themselves for at least one week during the past year? (n=85)
   ----- No (n=79) – 77%
   ----- Yes (n=4) – 4%
   ----- Don’t Know (n=2) – 2%
   ----- Missing (n=18) – 18%

   F3a. Name of supplement. (n=5) [2-calcium, 2-vitamin E, 1-stomach herbal]

   F3b. Average times taken per week during past year. (n=4) \( \bar{x} = 7, \ SD = 0, \ min. = 7, \ max. = 7 \)

   F3c. Amount taken each time. (n=5) [2-one pill/capsule, 1-two pills, 1-three pills]
Fiber Supplements

F4. Do you consume fiber supplements? (e.g., Metamucil)? (n=89)

- No (n=84) - 82%
- Don’t Know (n=1) - 1%
- Yes (n=4) - 4%
- Missing (n=14) - 14%

F4a. What brand or type of fiber supplement do you usually consume? (n=4)

[2-Metamucil, 1-Bran Flakes, 1-Vegetables]

F4b. On average over the past year, how many times did you usually consume fiber supplements? (n=3) [1-one time, 1-three times, 1-seven times]

F4c. What was the amount you took each time? (n=3) [1-one cup, 1-one teaspoon, 1-bowl]

Herbs or Herbal Supplements

F5. Did you take herbs or herbal supplements by themselves for at least one week during the past year? (n=86)

- No (n=82) - 80%
- Yes (n=4) - 4%
- Missing (n=17) - 17%

F5a. Name of the Herbs. (n=5) [1-St. John’s Wort, 1-Stomach Herbal, 1-Usana, 1-Evenings Primrose Oil, 1-Provex CV]

F5b. Why do you use the herbs? (n=5) [1-depression, my health, 1-arthritis, 1-to help lose weight, 1-to help with my heart]

F5c. Preparation of the Herbs. (n=5) [3-pills, 1-boiled, 1-pour hot water and drink]
FOR WOMEN ONLY: Please tell us about your pregnancies and reproductive history.

G1. Have you ever been pregnant? (n=50)
   _____ No (n=2) – 4%
   _____ Yes (n=48) – 94%
   Missing (n=1) – 2%

   G1a. [If yes] How many times have you been pregnant? (n=44)
        \(\bar{x}=5.05,\ SD=2.96,\ min.=1,\ max.=12\)

   G1b. How many children have you had (not including stillborns)? (n=45)
        \(\bar{x}=4.49,\ SD=2.59,\ min.=1,\ max.=11\)

   G1c. How old were you when you had your first pregnancy? (n=37)
        \(\bar{x}=20.24,\ SD=3.95,\ min.=13,\ max.=30\)

   G1d. How old were you when you had your last pregnancy? (n=33)
        \(\bar{x}=32.09,\ SD=6.26,\ min.=20,\ max.=47\)

G2. Do you still have a period (menstrual cycle)? (n=47)
   _____ No (n=42) – 82%
   _____ Yes (n=3) – 10%
   Missing (n=4) – 8%

   G2a. How old were you when you had your last menstrual period? (n=21)
        \(\bar{x}=45.52,\ SD=9.69,\ min.=14,\ max.=54\)

   G2b. Have you had a hysterectomy, that is, surgery to remove you uterus or
        womb? (n=38)
        _____ No (n=26) – 51%
        _____ Yes (n=12) – 24%
        Missing (n=13) – 26%

   G2c. [If yes] How old were you when you had the hysterectomy? (n=9)
        \(\bar{x}=42.78,\ SD=7.97,\ min.=30,\ max.=53\)

   G2d. Have you ovaries been removed? (n=34)
        _____ No (n=26) – 51%
        _____ Don’t Know (n=2) – 4%
        _____ Yes (n=6) – 12%
        Missing (n=17) – 33%

   G2e. [If yes] How old were you when you had your ovaries removed? (n=5)
        \(\bar{x}=42.80,\ SD=8.87,\ min.=30,\ max.=50\)
Women, have you taken any of the following medication for at least one month during the past year?

G3. Birth control pills, oral contraceptives, or birth control medicine? (n=45)

- No (n=44) – 86%
- Yes (n=1) – 2%
- Missing (n=6) – 12%

G3a. How many times per week did you take birth control medicine? (n=1) [1-one]

G3b. Have you taken birth control medicine in the past 2 weeks? (n=1)

- No (n=1) – 2%
- Missing (n=50) – 98%

G3c. What is the name(s) of the birth control medicine? (n=1) [1-had dia inserted]

G4. Estrogen or Progesterone medicine or Hormone Replacement Therapy (HRT, ERT)? (n=44)

- No (n=34) – 67%
- Yes (n=10) – 20%
- Missing (n=7) – 14%

G4a. How many times per week did you take female hormone medicine? (n=8) [6-seven, 1-five, 1-one]

G4b. Have you taken female hormone medicine in the past 2 weeks? (n=10)

- No (n=2) – 4%
- Yes (n=7) – 14%
- Don’t Know (n=1) – 2%
- Missing (n=41) – 80%

G4c. What is the name(s) of the female hormone medicine(s)? (n=7) [5-estrogen, 1-progesterone, 1-primine]
Tobacco Use

H1. Have you ever smoked cigarettes, cigars, or a pipe, or chewed tobacco on a daily or regular basis? (n=97)

- No (n=42) - 41%
- Yes (n=55) - 53%
- Missing (n=6) - 6%

Using the following table, please indicate what form(s) of tobacco you used, how old you were when you started using it, the age you quite using if you quit, and how many times you used tobacco on average.

<table>
<thead>
<tr>
<th>Forms of Tobacco</th>
<th>Age that you began using</th>
<th>Age that you quit using, if you have quit</th>
<th>Times used per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarettes (n=61) - 59%</td>
<td>(n=55) $\bar{x}$=17.94, SD=8.03, min.=9, max.=54</td>
<td>(n=22) $\bar{x}$=35.05, SD=14.20, min.=15, max.=61</td>
<td>(n=43) $\bar{x}$=5.12, SD=5.23, min.=1, max.=30</td>
</tr>
<tr>
<td>Cigars (n=0) - 0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe (n=0) - 0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chew (n=3) - 3%</td>
<td>(n=1) $\bar{x}$=15, SD=0, min.=15, max.=15</td>
<td>(n=1) $\bar{x}$=19, SD=0, min.=19, max.=19</td>
<td>(n=0)</td>
</tr>
</tbody>
</table>

H6. Have you tried to quit using tobacco on more than one occasion? (n=57)

- No (n=16) - 16%
- Yes (n=41) - 40%
- Missing (n=46) - 45%

Alcohol Use

H7. Have you ever drunk beer, wine or liquor? (n=98)

- No (n=22) - 21%
- Yes (n=76) - 74%
- Missing (n=5) - 5%

H7a. At what age did you begin to drink alcoholic beverages? (n=67) $\bar{x}$=19.01, SD=6.75, min.=9, max.=42

H8. Do you drink alcoholic beverages on various occasions now? (n=78)

- Yes (n=26) - 25%
- No (n=52) - 51%
- Missing (n=25) - 24%

H8a. What is your usual number of drinks per week? (n=21) $\bar{x}$=7.43, SD=8.44, min.=1, max.=32

H9. If you no longer drink alcoholic beverages, how old were you when you quit?

(n=40) $\bar{x}$=37.13, SD=12.02, min.=1, max.=57
Water Intake

H10. What is the source of your drinking water? (n=100)
   ______ Municipal Water Supply (n=84) – 82%
   ______ Private or Public Well (n=8) – 8%
   ______ Spring or Bottled Water (n=6) – 6%
   ______ Don’t Know (n=2) – 2%
   Missing (n=3) – 3%

H11. Does you home have a softening or conditioning system? (n=101)
   ______ No (n=98) – 95%
   ______ Yes (n=2) – 2%
   ______ Don’t Know (n=1) – 1%
   Missing (n=1) – 1%

H12. How much plain water (not including coffee, tea, Kool-Aid, etc.) do you drink each day (24 hour period)? (n=99) $x=5.19$, SD=2.36, min.=1, max.=16