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Community needs assessments are critical for targeting health care programs and public health policy. The relationship between socioeconomic status (SES), health behaviors and health outcomes are explored, demonstrating the use of community needs assessment data to establish a local high-risk profile. The City of Fort Worth 2003 Community Needs Assessment data was analyzed to test these hypotheses: There is a unique local relationship between SES indicators and health status; and, there is a similar relationship between health behaviors and health status.

Statistical analyses demonstrated a correlation between SES and health status; however, no correlation was shown between health behaviors and health status. Recommendations include development of more reliable measurement tools.

THE USE OF COMMUNITY NEEDS ASSESSMENT DATA TO ESTABLISH A
HIGH-RISK PROFILE FOR NEGATIVE HEALTH OUTCOMES IN THE CITY OF
FORT WORTH

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FORT WORTH

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CHAPTER 1

INTRODUCTION

“How are you?” This question may not only be a greeting or a show of cordiality, but, if answered honestly, may also be a reflection of the state of your community.

“Individual health is closely linked to community health... Likewise, community health is profoundly affected by the collective beliefs, attitudes, and behaviors of everyone who lives in the community.” (Healthy People 2010: Understanding and Improving Health, 2000, p. 3). This statement highlights the important link between individual and community health and the need for community assessments.

Previous research suggests that there may be a link between health behaviors and health-related quality of life (Woodruff and Conway, 1990). According to Weiss and Lonnquist (2006), health behaviors consist of several types of activities, including prevention, detection, promotion and protection. Actions that “minimize the risk of disease, injury, and disability”, (Weiss and Lonnquist, 2006, p. 111) are health-protective behaviors and often lead to positive health outcomes.

Research has shown that socioeconomic status is “one of the strongest and most consistent predictors of a person’s morbidity and mortality experience” (Winkleby, Jatulis, Frank and Fortmann, 1992, p. 816). This research utilizes accepted measures of socioeconomic status (education and home ownership) as well as subjective measures

like neighborhood happiness and neighborhood safety to demonstrate correlations with health status or health-related quality of life.

The City of Fort Worth has a diverse population. The U. S. Census Bureau 2000 census data indicates that Whites make up 59.7 % of the population, African Americans, 20.3% and Hispanics, 29.8% (Hispanics may be of any race, so they are also included in applicable race categories). The median age was 30.9 with 71.7% of the population being over the age of 18 and 9.6% of the population being over the age of 65. As diversity of the City of Fort Worth increases, understanding of the health issues of this diverse population will become increasingly important. Due to natural growth and development, all communities are in a perpetual state of change, making community health needs assessments essential for the sustainability of the community.

Establishment of high-risk profiles for the City of Fort Worth would enable local health authorities to “decide where to target resources to tackle health inequalities in their local area” (Association of Public Health Observatories, 2007, p. 1) According to McKenzie, Pinger and Kotecki (2008), “As the racial and ethnic minority groups currently experiencing poorer health status grow in proportion to the total U.S. population, the future health of all Americans will be influenced by the success in improving the health of these groups” (p. 272). The City of Fort Worth 2003 Community Needs Assessment provides the information necessary to gain an understanding of the quality of life issues for the residents of Fort Worth, including social issues, safety concerns as well as health problems.

Purpose of the Study

This study attempts to demonstrate that community need assessment data can be used to demonstrate the local relationship between socioeconomic status and health; and, establish a high-risk profile for poor health outcomes in the City of Fort Worth. This is done by proving a relationship between low socioeconomic status, poor health behavior and poor health status.

This research seeks to demonstrate that low socioeconomic status can be linked to poor health behaviors, which contribute to a poor health-related quality of life. This analysis determines what the greatest health problems are in the City of Fort Worth, who would be the most vulnerable to poor health outcomes and where in the city would they most likely live.

The City of Fort Worth 2003 Community Needs Assessment data measured variables (education, home ownership, neighborhood safety and neighborhood happiness) to demonstrate the relationship between socioeconomic status (SES) and health and develop a high-risk profile for poor health outcomes in the City of Fort Worth.

Establishing a high-risk profile for the City of Fort Worth can have many implications in public health, and especially in targeting health care and implementing public health programs to address the communities with potentially high numbers of residents who are “high-risk”.

Research Questions

At the conclusion of this research, these questions should be answered:

1. Are the chosen SES indicators (education, home ownership, neighborhood safety and neighborhood happiness) correlated with the health status of residents of the City of Fort Worth as evidenced by the 2003 City of Fort Worth Community Needs Assessment data?

Hypothesis 1: There is a positive relationship between the SES indicators and health status.

2. Is there a correlation between health behaviors (exercise, fruit and vegetable intake, alcohol consumption, cholesterol and smoking) and health status?

Hypothesis 2: There is a positive relationship between healthy behaviors and health status.

3. What were the greatest health problems in the City of Fort Worth in 2003?
4. Who were the most vulnerable to poor health outcomes and where did they live?

Delimitations

Study subjects were delimited to the following:

1. Residents of the City of Fort Worth, Texas in 2003;
2. Study is not limited by gender, race/ethnicity or age.

Limitations

1. This study is limited to residents of the City of Fort Worth, Texas. Findings may not be generalizable to other communities in the United States or other countries.
2. The study may be limited by the self-reporting protocol of the survey.

Assumptions

For purposes of this study, the following assumptions were made:

1. Respondents who report greater neighborhood happiness and neighborhood safety, likely live in communities where there is a higher socioeconomic status.
2. Educated citizens in the City of Fort Worth earn more annual income than those that are not educated and therefore have greater access to health care.
3. Home owners in the City of Fort Worth have greater access to health care.
4. Whites (non-Hispanic) have higher per capita (median) annual income than minorities (Hispanics, African-Americans) and therefore have greater access to health care.

Definition of Terms

Socioeconomic Status

“A demographic term which takes into consideration the combination of social and economic factors” (McKenzie et al., 2008, p.620). The economic factor encompasses employment income, home ownership, and other financial assets. The social factor incorporates education and employment.

For the purpose of this research, socioeconomic status will be based on employment, education and home ownership.

Health-Protective Behaviors

“Individual actions taken to protect, promote, or maintain health.” (Weiss and Lonnquist, 2006, p. 111).

Health-Related Quality of Life

“Refers to a person or group’s perceived physical and mental health over time” (Centers for Disease Control and Prevention-HRQOL, 2008). In this research, it is also interchangeable with health status.

Health Disparities

Are “preventable differences in the burden of disease, injury and violence, or opportunities to achieve optimal health experienced by socially disadvantaged racial, ethnic and other populations, groups and communities” (Centers for Disease Control and Prevention-Health Disparities, 2008).

High-Risk Profile

In the context of health, a high-risk profile is one that provides valuable information about population disease patterns, high-risk groups, and the concentration of health problems to facilitate improvement of health.

Health-Protective Behaviors

Are “Individual actions taken to protect, promote, or maintain health” (Weiss and Lonnquist, 2006).

Health Behavior

Conceptualized by medical sociologists as “Activities undertaken by an individual believing himself or herself to be healthy for the purpose of preventing health problems”; more recently, sociologists have recognized that health behavior consists of several types of activities,

including: prevention, detection, health promotion activities and health protection activities” (Weiss and Lonnquist, 2006, p.111).

Importance of Study

Community needs assessment data has many uses. In this research, the data was used for gathering information specific to the health and social well-being of Fort Worth residents. Data on the health status of Fort Worth residents can be used to establish high-risk profiles for poor health outcomes, making it easier to identify and address health issues within the local community.

Though needs assessments are commonly used, most question only a small fraction of residents and infer the results onto the broader population. The 2003 City of Fort Worth Needs Assessment, conducted every five years, interviewed adults in 3,361 randomly selected Fort Worth households and provided a sufficient sample size to retain reliability at the neighborhood level, making this survey a unique and invaluable tool for neighborhoods, geopolitical denominations (council districts), neighborhood police districts and other community-level sub-divisions of Fort Worth.

The community needs assessment data can therefore provide information that identifies issues within high risk populations that may otherwise remain invisible with a smaller undertaking. Data from the survey can also offer information about “the health of the community as it is today and about the community’s capacity to improve the lives of residents”, providing “the basis for discussion and action” (North Carolina Department of Health and Human Services, 2002, p. 1).

CHAPTER 2

REVIEW OF LITERATURE

Community Needs Assessment

The community needs assessment is a useful tool designed not only to chart neighborhood progress and gather information about the attitude and issues of residents, but also to take action and influence policy. The City of Fort Worth 2003 Community Needs Assessment was useful in reinforcing the presence of the public health department in the community through its door-to-door effort which established itself as “a resource for community health information, planning, and health promotion for all population groups” (Fort Worth Public Health Department Epidemiology and Assessment Division, 2003).

Petersen and Alexander (2001) state that results from needs assessments “can offer useful information for a wide range of reorganizational considerations, including organizational placement of programs within an agency... and service delivery approaches” (p.15). Though this demonstrates a broad application and diversity of use for community needs assessment data, community health assessments have particularly important implications in health and health care delivery, called a community health assessment. The New York State Department of Health states that the community health assessment should include information about the health needs of the community, including “statistics on health status, community health needs, and epidemiologic and

other studies of health problems” (New York State Health Department Glossary, n.d., p. 1).

Socioeconomic Status and Health

As well as being an important factor in social science theory and research, socioeconomic status (SES) has long been accepted as a principal predictive variable in epidemiologic studies (Deonandan, Campbell, Ostbye, Tummon and Robertson, 2000). Additionally, Deonandan, et al. (2000) state that, “people of lower socio-economic status have lower life expectancy and higher mortality rates from almost all causes of death, and a variety of morbidities are variably associated with SES” (p. 1). As an explanatory factor in health studies, SES has been used to develop health policy recommendations and to “infer public health implications of dietary needs in different social strata” (Deonandan, et al., 2000).

One relationship explored in this research is the correlation between SES and health behavior. Health behavior has “often been cited as the major determinant of premature and preventable morbidity and mortality”; however, the relationship to SES is less well understood (Lantz, House, Lepkowski, Williams, Mero and Chen, 1998, p. 1703).

U. S. studies have shown that people who have low SES are “significantly more likely to lead a sedentary lifestyle, to be overweight, and to smoke cigarettes”, leading to a prominent hypothesis that states that increased mortality risk associated with low income and low levels of education is due in large part to a higher prevalence of health risk behaviors among people who have low SES (Lantz, et al., 1998, p. 1703).

The relationship between SES and health status has been established as one with strong associations. It is the principal relationship being explored in this research study, with health behavior as an intermediate. According to Winkleby, et al. (1992), “The significant impact of SES on disease makes its definition and measurement of critical importance” (p. 816).

In this study, SES is defined as “A demographic term which takes into consideration the combination of social and economic factors” (McKenzie et al., 2008, p.620). The variables chosen for this study include: education, home ownership, neighborhood happiness and neighborhood safety. The two most common measurements of socioeconomic status are education and income (Braveman, Cubbin, Marchi, Egerter and Chavez, 2001, p. 449). Ross and Mirowsky (2008) assert that socioeconomic status has three core elements: “education, employment and work, and economic well-being” (p.165). Because income levels were not measured in the community needs assessment survey, a composite measure of SES was used including the variables, education, home ownership, neighborhood safety and neighborhood happiness.

According to Mulder and Smits (1999), “Home-ownership is also an important status good; home-ownership, like high income or a high level of consumption, is seen by many people as a symbol of achievement” (p.323). Additionally, home ownership can have the ability to change the financial situation of a family for years to come.

Though neighborhood happiness and neighborhood safety are subjective measures, they are none the less important goals of community residential satisfaction. Research by Lyubomirsky and Lepper (1999) indicated that the Subjective Happiness

Scale “has high internal consistency, which was found to be stable across samples” (p. 137). According to a British poll by MORI (Market and Opinion Research International), “The way an area looks, including levels of litter and rubbish, scruffiness of gardens and the prevalence of high rise flats or open space, is a better guide to local residents' satisfaction with their surroundings than levels of deprivation, according to research out today” (Ward, 2005, p.1). The polling company, MORI, highlights the importance of the visual quality of an area in determining quality of life.

Though important to overall health, physical activity may not be a common practice in some communities. In lower income or lower socioeconomic communities, neighborhood safety plays a key part in a resident’s willingness to take part in physical activity. According to Bennett, McNeill, Wolin, Duncan, Puleo and Emmons (2007), “Residing in a neighborhood that is perceived to be unsafe at night is a barrier to regular physical activity among individuals, especially women, living in urban low-income housing” (p. e306).

Health Behavior

Weiss and Lonnquist (2006), define health behavior as “Activity undertaken by an individual believing himself or herself to be healthy for the purpose of preventing health problems” (p. 111). The authors found that health belief consists of multiple dimensions: prevention, detection, promotion and protection (Weiss and Lonnquist, 2006). On an individual level, health-protective behaviors help to protect, promote, or maintain health through actions, such as a nutritious diet, adequate exercise and wearing a seatbelt in a

car (Weiss and Lonnquist, 2006). Health-protective behaviors are preventive measures that minimize the risk of disease and injury.

According to Weiss and Lonnquist (2006), participation in health-protective behaviors are linked to sociodemographic characteristics such as age, gender, race, education, and income (p.114). Additionally, the level of education, occupation and income also influence involvement in health-protective behaviors; for example, individuals who have a lower income “are more likely to smoke, less likely to exercise, and less likely to wear a seat belt” (Weiss and Lonnquist, 2006, p. 115).

How health behavior mediates the influence of SES on health status has important implications for health policy. Analysis of health behaviors may be applied to recommend changes in policy. A health behavior such as smoking can indicate problems within a community that is made evident through a community needs assessment. Results of the need analysis and policy action plans are communicated to advocacy groups, other agencies and the public in order to gain support for program and policy proposals (Petersen and Alexander, 2001, pp. 35-36).

Researchers have used many survey tools and scales to measure health behavior. Health Risk Appraisals and health risk behavior assessments like the Health Action Process Approach, the Berlin Risk Appraisal Motivation Study (Schwarzer and Renner, n.d.) and the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System identify risk factors and lifestyle behaviors that can provide evidence-based recommendations for health promotion.

This research used a Health Risk Assessment Behavior Scale, specifically designed for use with the City of Fort Worth 2003 Community Needs Assessment Data. This scale measured four variables that influence health status: physical activity, diet, smoking and alcohol consumption. The diet variable was dichotomized to include high cholesterol diet and fruit and vegetable intake.

Health Status

Health status, also referred to as health-related quality of life (HRQL), is “an amalgam outcome variable that represents a patient’s perception of the impact of disease management and complications on their health” (Elasz, Samuel-Hodge, DeVellis, Skelly, Ammerman and Keyserling, 2000, p. 325). It is also defined as “a loosely defined outcome employed by health care investigators in an attempt to assess a patient’s impact of disease management and complications on their health” (Elasz et al., 2000, p.327).

As defined by many investigators, health status is most often a measure of physical, mental and social well-being. Because there are so many dimensions of health, it has been difficult for researchers to distinguish the effects on health and mental health status that are actually caused by health conditions and those that are due to external or environmental influences; for example, stress due to financial difficulties and job loss (Elasz et al., 2000, p.327). According to Elasz et al. (2000), “The effort to measure health status has spawned a large number of instruments of varying quality” (p. 328).

In 1993, the Centers for Disease Control and Prevention included a 4-item set of Healthy Days core questions (HRQOL-4) in the state-based Behavioral Risk Factor Surveillance System (CDC HRQOL-14, 2008). This and other similar instruments could

be used to “measure the effects of chronic illness in their patients to better understand how an illness interferes with a person’s day-to-day life” (CDC HRQOL, 2008).

For the purposes of this study, “health status” was measured using a specific question from the community needs assessment that addressed health status. The question utilized a Likert scale form with five answer choices, ranging from ‘Very Poor’ to ‘Excellent’. Only those respondents identifying their health status as “fair” to “very poor” were included in the “health status” categorization.

Community Profiles

Why do we need a community profile? Community profile can “provide useful information on disease patterns, the overall importance of health problems, and, above all, the potential to complement efforts to improve health outside the health care system” (World Bank, 2008). Also, the population can be evaluated for risk of specific diseases that are unique to that population. The end result of this study was a community profile that the City of Fort Worth could use to target resources and address health inequities.

Summary

This Literature Review included sections on Community Needs Assessment, Socioeconomic Status and Health, Health Behavior, Health Status and Community Profiles. This chapter offered information regarding the use of these concepts, their importance to this research and how they can help build the theoretical base for the hypotheses.

CHAPTER 3

METHODOLOGY

Sampling

The study data was gathered from The City of Fort Worth Public Health Department Epidemiology and Assessment Division's 2003 Community Needs Assessment. The sampling frame was designed using census and land use data maintained by the Planning Department in the Fort Worth enterprise geographic information system. A stratified random sample of 3,361 citizens was interviewed by community health workers and other public health officials using a face-to-face, household protocol. A representative sample of the Fort Worth population was assured by the sampling design and the number of surveys completed (Fort Worth Public Health Department Epidemiology and Assessment Division- FWPHEAD, 2003).

Instrumentation

The survey instrument was a collaborative effort of community partners and city departments in order to be inclusive of community interests. The partners in the collaboration included hospitals, universities, and state and local health departments. The survey instrument was comprised of 81 questions that covered various topics on household, neighborhood, family, and health (FWPHEAD, 2003).

Data Collection

The primary data was collected in door-to-door surveys by community health workers and other public health professionals of the Fort Worth Public Health Department of Epidemiology and Assessment Division (FWPHEAD, 2003). Additionally, supplemental data from other sources, such as the U.S. Census Bureau and the North Central Texas Council of Governments was also utilized for demographic and detailed population information.

Data Analysis

Secondary data analysis was performed on existing data from the 2003 Community Needs Assessment. The data was broken down by neighborhood police district, council district and ZIP code. This was useful in exploring the geographic association between SES, health behaviors and health outcomes.

The goal in this paper is to demonstrate that community need assessment data can be used to demonstrate the relationship of socioeconomic status to health and establish high-risk profiles for poor health outcomes in the City of Fort Worth. This research also defines a correlation between socioeconomic status and health outcomes through health behavior.

In order to demonstrate the thesis, the City of Fort Worth 2003 Community Needs Assessment data was analyzed to compare disease frequency with race, sex, education, employment and zip code in order to establish a high-risk profile for the City of Fort Worth. The current health status of the respondents was also compared against these variables to help establish a profile.

The Statistical Package for the Social Sciences (SPSS) version 12.0 was used to perform all statistical analyses. Frequency and Descriptive statistics were generated for all variables. With such varied data, normal distribution was difficult to determine for some variables. Two types of analyses were performed:

1. Cross tabulation was used to analyze all of the variables, including indicators associated with SES (Education, home ownership, neighborhood happiness and neighborhood safety) and health behavior (high cholesterol diet, fruit and vegetable intake, alcohol consumption and smoking status). This analysis helped to compare the variables and determine possible associations for high-risk patterns.
2. Correlation was determined for all indicators associated with SES and health behavior to determine the presence and strength of relationship among the variables.

Summary

This chapter explained how the data was analyzed to test the hypotheses and examine the hypotheses. Methodology included data from the City of Fort Worth 2003 Community Needs Assessment, which was then cross-tabulated and tested for strength of correlation. These methods were used to determine relationships among other variables, including sex, age and race/ethnicity.

CHAPTER 4

RESULTS

This study examined community needs assessment data to demonstrate the relationship between socioeconomic status and health status; and, establish a high-risk profile for poor health outcomes in the City of Fort Worth. This was done by examining a relationship between low socioeconomic status, poor health behavior and poor health status. Cross tabulation between SES (education, home ownership, neighborhood happiness and neighborhood safety) and health behavior indicators (high cholesterol diet, fruit and vegetable intake, alcohol consumption and smoking status) and other variables (sex, age and race/ethnicity) was performed to test strength of associations. Correlations were obtained for each indicator to determine relationships and the significance of relationships.

Demographics of Survey Participants

The following frequencies were obtained for the 3,361 respondents in randomly selected Fort Worth households:

1. 1214 (38.6 %) of the respondents were male; 1933 (61.4%) were female; 80 were missing from the survey.
2. 1686 (52.2 %) of the respondents were White; 711 (22.0 %) were African-American; 753 (23.3 %) were Hispanic; 64 (2.0 %) were Asian.
3. Ages of the respondents: 18-34 =1020 (32.1 %); 35-54=1223 (38.5%); 55-74=684 (21.6 %); 75+=247 (7.8 %); 53 were missing from the survey.

4. Education of respondents: No High School Diploma/GED=740 (23.4%); High School Diploma/GED and/or some college=1730 (54.7 %); College Degree of Higher =694 (21.9 %); 63 were missing from the survey.
5. 42 zip codes were utilized in the survey.

Results for the Research Questions

Research Question 1: Are the chosen SES indicators (education, home ownership, neighborhood safety and neighborhood happiness) correlated with the health status for the City of Fort Worth 2003 Community Needs Assessment data?

Correlations were obtained for each SES indicator and health status, as well as with the composite SES (education, home ownership, neighborhood safety and neighborhood happiness) displaying the Pearson r value and the two-tailed probability with corresponding levels of significance. The SES composite ($r = 0.070$, $p = 0.000$) was shown to have a statistically significant relationship to the response for poor health status. The Pearson r value was less than 0.20, indicating a positive, but weak correlation (Table 1).

The education indicator was statistically significant ($r = 0.140$, $p = 0.000$) as well (Table 1). Home ownership ($r = -0.016$, $p = 0.364$) was also statistically significant in its association with health status, demonstrating a moderate correlation (Table 1).

Neighborhood Safety ($r = 0.129$, $p = 0.000$) was statistically significant, with a weak correlation (Table 1). Finally, the relationship between health status and those who were unhappy with their neighborhood ($r = 0.138$, $p = 0.000$) was again statistically significantly correlated with health status (Table 1).

Table 1

Correlation Between SES and Poor Health Status

Variables	N	Pearson Correlation (<i>r</i>)	Sig. (2-tailed) (p-value)
SES (Composite)	3361	0.070	0.000 **
Education (<12 years)	3361	0.140	0.000 **
Home Ownership (Does not own home)	3361	-0.016	0.364
Neighborhood Safety (Not Safe)	3361	0.129	0.000 **
Neighborhood Happiness (Not Happy)	3361	0.138	0.000 **

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

5. *Research Question 2: Is there a correlation between health behaviors (exercise, fruit and vegetable intake, alcohol consumption, cholesterol and smoking) and health status?*

Correlations were obtained for the health behavior composite, as well as each health behavior indicator and health status, displaying the Pearson *r* value and the two-tailed probability with corresponding levels of significance. The health behaviors composite (*r* = -0.013, *p* = 0.488) was shown not to have any statistical significance to the response for poor health status (Table 1).

Fruit and vegetable intake was statistically significant ($r = 0.044$, $p=0.012$), since the p -value was less than the 0.05 level of significance (Table 2). The r value indicated that the correlation was weak. Alcohol consumption was not statistically significant ($r = -0.015$, $p=0.370$) (Table 2). Cholesterol ($r = -0.047$, $p= 0.007$) was also statistically significant in its association with health status (Table 2). Statistically insignificant, smoking ($r = 0.029$, $p= 0.090$) was not correlated to health status (Table 2). Finally, exercise ($r = -0.048$, $p= 0.005$) was again, statistically significantly correlated to health status (Table 2). The correlation between exercise and health status was weak, but positive.

Table 2

Correlation Between Health Behaviors and Poor Health Status

Variables	N	Pearson Correlation (r)	Sig. (2-tailed) (p-value)
Health Behaviors (Composite)	2989	-0.013	0.488
Fruit and Veggie Intake (<5 servings/Day)	3361	0.044	0.012*
Alcohol Consumption (>3/ Day)	3361	-0.015	0.370
High Cholesterol Diet (>4 days/ week)	3361	-0.047	0.007**
Low Exercise (<4 days/ week)	3361	-0.048	0.005**
Smoking	3361	0.029	0.090

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Research Question 3: What were the greatest health problems in the City of Fort Worth in 2003?

And

Research Question 4: Who were the most vulnerable to poor health outcomes and where did they live?

Analysis by cross tabulations of the City of Fort Worth 2003 Community Assessment demographic variables (Education, Sex, Age, Race and Zip Code) enabled the establishment of a high-risk profile for the city.

Dichotomization and recoding of multi-response questions made analysis of a diverse set of nominal and ordinal variables more manageable. The education variable was originally coded as separate responses for each household member, but for research purposes, it was categorized into two groups: those with out a high school diploma or GED (<12 years) and those with at least a high school diploma (≥ 12 years). The Age variable was recoded as well, creating a categorized grouping from individual responses: 18-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75+.

The greatest health problem was determined by one question in the survey and corroborated with a second. The primary question asked, “What is the greatest health problem of anyone living in your home?” This open-ended question yielded several answers, with a trend emerging (Table 3 a). The most frequent response was “allergies”. The next question on the survey corroborated the results; it was a closed-ended question,

offering respondents a choice of 9 answers. Again, allergies were the most frequent response.

To determine the sex of those considered high-risk, a cross tabulation of Health Status and Sex was obtained. The question on health status was initially constructed in the form of a 5-point Likert scale: 1-very poor, 2-fair, 3-good, 4-very good and 5-excellent. The responses were recoded into two categories: good and poor, with good encompassing responses 3-5 and poor, 1-2. Among females, 22.9 % reported “poor” status, while 20.6 % of males did (Table 3 b).

Cross tabulation of Health Status with Race was similarly executed, finding that 30.3 % of African-Americans reported poor health status, compared to 17 % of Whites and 24 % of Hispanics (Table 3 b). The results from the cross tabulation of Health Status and Age revealed that 35.2% of those aged 55-74 reported having poor health, compare to 11.7 % of 18-34 year-olds and 32.3 % of 75+ (Table 3 b). Additionally, 33 % of those who reported not having a high school diploma or GED reported having poor health (Table 3 b), higher than those with a high school degree and some college (21.8 %) and those with a college degree or higher (11.6%).

For the most likely location of those who have poor health, a cross tabulation was performed with Health Status and Zip Code. The zip code 76105 had the highest number of people respondents reporting poor health status (43.9 %). Two zip codes (76102- 66.7% and 76117- 50 %) actually had higher percentages, but there were fewer than 5 respondents in each zip code (Table 3 b). For lack of representative sample, these numbers were not used.

Table 3 a

Greatest Reported Health Problems by Respondents

<u>Disease/Condition</u>	<u>Frequency</u>	<u>Valid Percent</u>
1. Allergies	256	9.4
2. High Blood Pressure	222	8.1
3. Asthma	195	7.1

Table 3 b

Health Status Responses by Sex, Race, Age, Education and Zip Code

Characteristic “Poor” Health Status Response

Sex:

Male	20.6 %
Female	22.9 %

Race:

White	17.0 %
African-American	30.3 %
Hispanic	24.6 %
Asian	18.8 %

Age:

18-34	11.7 %
35-54	21.4 %
55-74	35.2 %
75+	32.3 %

Education:

No HS Diploma/GED	33.0 %
HS and Some College	21.8 %
College Degree +	11.6 %

Zip Code:

76105	43.9%
76106	36.9%
76119	33.8%
76107	31.7%

Summary of Results

Statistical analysis revealed that SES indicators (home ownership, education, neighborhood safety and neighborhood happiness) were all statistically significant and had weak correlations. Only homeownership ($r = -0.016$) had a negative correlation to health status. Behavior indicators (fruit and vegetable intake, alcohol consumption, high cholesterol diets, smoking and exercise) were all statistically significant with weak correlations to health status, except alcohol consumption and smoking. Of the variables that were statistically significant, only fruit and vegetable intake had a positive correlation to health status.

Cross tabulations of demographic variables (Education, Sex, Race, and Zip Code) resulted in establishment of a high-risk profile for poor health in the City of Fort Worth. The person who would be most likely to have poor health in the City of Fort Worth would be: female, African-American, aged 55-74, no high school diploma or GED and would live in the zip code 76105. The greatest health problem reported was allergies.

CHAPTER 5

CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

This study attempted to demonstrate that community needs assessment data can be used to establish a high-risk profile for poor health outcomes for the local community.

This was done by demonstrating a relationship between low socioeconomic status, poor health behavior and poor health status.

The City of Fort Worth 2003 Needs Assessment surveyed 3,361 randomly selected households with respondents over the age of 18. The door-to-door survey included 81 questions on topics like dietary behaviors, neighborhood, risk factors for injuries and chronic illness and city or community services. A geographic information system was utilized for the data, allowing data responses to be broken down by Neighborhood Police Districts, council district, zip code, census tract and other geographic divisions.

Summary of Results

Hypothesis 1: There is a positive relationship between SES indicators and health status.

The results of the study support this hypothesis. The composite SES variable showed a positive correlation to health status. Additionally, all indicators for SES (education, neighborhood safety and neighborhood happiness), excluding home ownership, had statistically significant positive correlations to health status. Because of the weak correlations between these indicators and health status, predictive value is not offered.

Hypothesis 2: There is a positive relationship between health behaviors and health status.

Results from the analysis do not support the hypothesis. The composite variable for health behaviors did not show a correlation with the reported poor health status of the respondents. All indicators of health behavior (exercise, fruit and vegetable intake and

high cholesterol diets), except alcohol consumption and smoking, were statistically significant. Low fruit and vegetable intake had a positive correlation with reported poor health outcomes. The health behavior indicators do not have much predictive value due to weak correlations between these indicators and health status.

Research Question 3: What were the greatest health problems in the City of Fort Worth in 2003?

Research Question 4: Who were the most vulnerable to poor health outcomes and where did they live?

The greatest health problem reported in the City of Fort Worth was allergies. From survey results, the most likely respondent to have health problems would be: Female, African-American, and Aged 55-74, with no high school diploma or GED, residing in the zip code 76105.

Discussion

The results of this study were consistent with what was found in previous research by Winkleby, Jatulis, Frank and Fortmann (1992) regarding the link between socioeconomic status and health status. All SES indicators, except home ownership were statistically significant; however, they also had weak correlations to health status. The results themselves were not as surprising as the application to geographic residential (zip code level) demography. Perhaps, the sheer size of the study allowed for more confidence and reliability in results.

The statistically insignificant relationship between health behavior and health status was also unexpected in reference to the City of Fort Worth citizens. With over

3,300 survey participants, the City of Fort Worth 2003 Community Needs Assessment was much larger than some national surveys. Aschengrau and Seage (2003) state that sufficient sample size is needed to make the proper inferences about the parent population and reduce random error due to sampling variability (p. 327). Additionally, in order to analyze subgroups, a larger sample is needed (Neuman, 2004, p. 157). Because there was a large sample size, the statistically insignificant relationship between negative health behaviors and health status was not believed to be due to sample size, but perhaps due to variable selection.

Additional valuable sociodemographic information was also collected from the survey and was used to create a high-risk profile for the City of Fort Worth. Some surprising information was gathered from the survey: 55% of residents 75 years or older reported having exercised at least 4 days a week and 79.4% of males reported having good health, compared to 77.1% of women.

Summary

There is a positive relationship between SES indicators and health status. The results of the study provide some support for this hypothesis. Though all indicators for SES (education, neighborhood safety and neighborhood happiness), except home ownership, were statistically significant, they were also weak correlations. This indicated a relationship between these variables and health status.

Results revealed a positive relationship between individual health behaviors and health status, but not the composite variable. Three indicators of health behavior (exercise, fruit and vegetable intake and high cholesterol diets) were statistically

significant; alcohol consumption and smoking were not. In general, because the composite did not have a statistically significant relationship to health status and only one variable had a positive correlation to health status, it is concluded that the hypothesis for health behavior was not supported.

Recommendations

The findings of this study can be applied in analyses of other community needs assessments by utilization of positively correlated SES (education, neighborhood safety and neighborhood happiness) and health behavior indicator (fruit and vegetable intake) to make inferences about the relationship of SES to health status in the City of Fort Worth when income levels are not available. Additionally, these findings demonstrate how community needs assessment data can be used to create a high-risk profile for poor health outcomes.

Analysis of the City of Fort Worth 2003 Community Needs Assessment Data can help target health interventions with the use of high-risk profile data. Specific information compiled about the high-risk population, i.e. race, sex, age, etc. can be used to establish community health programs to specifically target these groups. As well, local community centers can offer programs or health fairs to address problems that are specific to their communities, based on data from the community needs assessment.

To advance future research on the topic, more reliable indicators for socioeconomic status and health behaviors should be developed. Socioeconomic status has traditionally accepted indicators (i.e., income and employment) that may not be either accessible or effective in analysis of some data.

Although needs assessments are commonly used, most question only a small fraction of people and provide data on a much broader level. More surveys like the City of Fort Worth Needs Assessment, which include a larger respondent pool, should be administered. As stated by Aschengrau and Seage (2003), sufficient sample size is needed to make the proper inferences about the parent population, also reducing random error due to sampling variability (p. 327).

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APPENDIX

2003 Fort Worth Community Needs Assessment

Zip code: _____ NPD _____
Date: _____ Time: _____ Interviewer's Initials _____
Full Street Address: _____
Lives in: **check one** _____ House, _____ Apartment, _____ Other—Specify _____

Hello, my name is _____ and this is _____. We work for the City of Fort Worth Public Health Department. We are doing a survey to find out what is important to the people in your neighborhood. The information that we get from these surveys will be used to make decisions about city services. You will not be identified in the survey. The survey should only take approximately 20 minutes.

We would like to begin by asking a few general questions about you and your household.

Q 1. Sex:

circle one

1- Male 2- Female

Q 2. Do you have a working telephone in your home?

circle one

1- Yes 2- No

Q 3. How long have you lived in this neighborhood? _____

Q 4. Do you own the home where you live?

circle one

1- Yes (Skip to Q 5) 2- No

If NO, why you have not bought a house?

circle all that apply

- 1 - I have not found a house I want to buy
- 2 - I don't have enough money for down payment and closing costs
- 3 - I cannot afford monthly payments
- 4 - I have a poor credit rating
- 5 - Buying a house is difficult and confusing
- 6 - I have been turned down by the bank
- 7 - I prefer to rent
- 8 - Other (Specify) _____

Q 5. What is the overall condition of your residence?

circle one

- 1 - Good condition 2 - Needs minor repairs 3 - Needs substantial repairs
- 4 - Needs to be torn down and a new one built 5- Other (Spec) _____

Q 6. What is your date of birth / how old are you? ***MUST BE AT LEAST 18 YEARS***

Month/Date/Year ____/____/____ **OR** Age _____

Q 7. Are you:

circle one

- 1- Married
- 2- Single
- 3- In a Partnership
- 4- Separated
- 5- Divorced
- 6- Widowed

Q 8. How many people are living in your home at this time? _____

Q 9. How many people in your home have a job? _____
(If zero skip to Q 11)

Q 10. What are their jobs? _____

Q 11. How many people in your home are retired? _____

Q 12. What is the language spoken **most** in your home?

circle one

1- English

2- Spanish

3- Other: _____

4- Multiple languages (List) _____

Q 13. On a scale of 1 to 5, with 1 being no problem at all, and 5 being very much a problem, is writing English a problem for you?

circle one no problem at all small problem a problem large problem very much a problem
1 2 3 4 5
6- Didn't Know 7- Refused

Q 14. On a scale of 1 to 5, with 1 being no problem at all, and 5 being very much a problem, is speaking English a problem for you?

circle one no problem at all small problem a problem large problem very much a problem
1 2 3 4 5
6- Didn't Know 7- Refused

Q 15. What is the last grade of school completed by each member of the household?

Examples: Completed high school = 12, 2 years of college = 14, 4 year college degree = 16, masters degree = 18, doctorate or professional degree = 20.

Relationship	Grade	Relationship	Grade
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Q 16. What would you say best represents your race or ethnic group?

circle one

1- White

2- Black or African-American

3- Hispanic

4- Asian

5- American Indian, Alaskan Native

6- Other _____

7- Refused

Now we would like to ask you a few questions about you and your neighborhood.

Q 17. On a scale of 1 to 5, with 1 being not happy at all, and 5 being extremely happy, how happy are you with your neighborhood?

circle one not happy at all not very happy happy very happy extremely happy
1 2 3 4 5
6- Didn't Know 7- Refused

	not safe at all	somewhat not safe	safe	very safe	completely safe
circle one	1	2	3	4	5
		6- Didn't Know	7- Refused		

	not happy at all	not very happy	happy	very happy	extremely happy
circle one	1	2	3	4	5
	6- Didn't Know		7- Refused		8- Not Applicable

circle one
1- Yes 2- No 6- Didn't Know 8- Not Applicable

.....

What would be next: _____

	poor	fair	good	very good	excell.	didn't know	refused	N/A
a) Availability of public transportation	1	2	3	4	5	6	7	8
b) Trash removal	1	2	3	4	5	6	7	8
c) Recycling	1	2	3	4	5	6	7	8
d) Animal care & control	1	2	3	4	5	6	7	8
e) Street cleaning	1	2	3	4	5	6	7	8
f) Code enforcement (building, tall grass, abandoned vehicle)	1	2	3	4	5	6	7	8
g) Vital statistics (birth & death records)	1	2	3	4	5	6	7	8
h) Recreation programs	1	2	3	4	5	6	7	8
i) Police protection	1	2	3	4	5	6	7	8
j) School services	1	2	3	4	5	6	7	8
k) Street repair	1	2	3	4	5	6	7	8

l) Fire protection	1	2	3	4	5	6	7	8
m) Public library	1	2	3	4	5	6	7	8
n) Parking	1	2	3	4	5	6	7	8

Q 24. How would you describe your neighborhood in terms of stray animals?

circle one

- 1- Too many stray animals
- 2- A few stray animals
- 3- Only a stray animal on rare occasions
- 4- Everyone either has their pet on a leash or in a fenced yard
- 6- Don't know
- 8- Refused

Q 25. Where do you get local news information about city services and events?

Circle all that apply. Do not read choices. Let the respondent answer.

- 1- TV
- 2- Radio
- 3- Newspaper
- 4- Water bill inserts
- 5- Website
- 6- Other: _____
- 7- None

Q 26. What transportation do you most often use?

circle one

- 1- Your Car
- 2- Public Bus
- 3- Taxi
- 4- Walk
- 5- Car Pool
- 6- A friend, neighbor, or family member drives you.
- 7- Other, Specify _____

Q 27. Do you always use seat belts when traveling by automobile?

circle one

- 1- Yes
- 2- No
- 7- Refused
- 8- Not Applicable

Q 28. Have you ever been the victim of a crime in Fort Worth?

circle one

- 1- Yes
- 2- No (Skip to Q34)
- 7- Refused (Skip to Q34)

Q 28a. If YES, was it in this neighborhood?

circle one

- 1- Yes
- 2- No

Q 29. Did you report this crime to the police department?

circle one

- 1- Yes
- 2- No
- 6- Didn't know
- 7- Refused

Q 30. Was the crime violent in nature?

circle one

1- Yes 2- No 6- Didn't know 7- Refused

Q 31. Was medical treatment received?

circle one

1- Yes 2- No 5- Not Necessary 6- Didn't know 7- Refused

Q 32. Did the crime involve a firearm? (handgun, rifle, shotgun, etc.)

circle one

1- Yes 2- No 6- Didn't know 7- Refused

Q 33. Did you receive financial assistance from the state?

circle one

1- Yes 2- No 5- Not eligible 6- Didn't know 7- Refused

Q 34. Do you have a working smoke detector in your home?

circle one

1- Yes 2- No 6- Didn't Know 7- Refused

Q 35. On a scale of 1 to 5, with 1 being poor and 5 being excellent, how would you rate the quality of air in Fort Worth?

circle one

poor	fair	good	very good	excellent
1	2	3	4	5
6- Didn't Know 7- Refused				

We would now like to get some information regarding your family.

Q 36. Keeping up with rent or house payments and other monthly bills can make it hard for some people to buy enough groceries. In your household, over the past 12 months has buying enough groceries been?

circle one

1- no problem at all 2- a minor problem 3- a major problem

Q 37. In the last year has your family faced a financial crisis, such as a large medical bill or loss of job?

circle one

1- Yes 2- No 6- Didn't Know 7- Refused

If there is no spouse or partner skip to Q 40.

Q 38. During the past year, when you and your partner disagreed over something was it settled?

circle one

1- Never
2- Rarely
3- Sometimes
4- Often

Q 39. When you and your partner disagreed over something were you or your partner pushed, grabbed, or shoved?

circle one

1- Never
2- Rarely
3- Sometimes
4- Often

The next part of our interviews addresses issues regarding your health and the health of members of your household.

Q 40. On a scale of 1 to 5, with 1 being very poor, and 5 being excellent, what is your current health status?

circle one very poor fair good very good excellent
1 2 3 4 5
6- Didn't Know 7- Refused

Q 41. What is the **greatest** health problem of anyone living in your home?

Q 42a. Do you or anyone in your home have any of the following illnesses at this time?

circle all that apply

- 1- Cancer
- 2- Arthritis
- 3- Diabetes
- 4- High blood pressure
- 5- Heart problems
- 6- Asthma
- 7- Allergies
- 8- Mental Illness
- 9- Are there any other: _____

Q 42b. Do you or anyone in your home have any of the following health problems at this time?

circle all that apply

- 1- Alcoholism
- 2- Overweight
- 3- Depression
- 4- Anxiety
- 5- Drug Abuse
- 6- Developmental Disability
- 7- Are there any other: _____

Q 43. Where do you go when you get sick? **Allow the respondent to answer.**

circle one

- 1- Doctor's office
- 2- An emergency room
- 3- A clinic
- 4- Alternative medicine practitioner, specify _____
- 5- Nowhere
- 6- Other: _____

Q 44. On a scale of 1 to 5, with 1 being not satisfied at all, and 5 being extremely satisfied, how satisfied are you with your health care provider?

circle one not satisfied at all not very satisfied satisfied very satisfied extremely satisfied
1 2 3 4 5
6- Didn't Know 7- Refused 8- Not applicable

Q 45. Do you have any kind of health insurance coverage, including Medicaid and Medicare?

circle one

- 1- Yes 2- No 6- Didn't Know 7- Refused

Q 46. Approximately how long do you have to travel to obtain health care? The answer should be in time (minutes, hours, or fraction of hours. Example: 10 minutes, 1 hour, do not write 1-2 hours, or 30 minutes to 1 hour)

Q 47. How do you usually get to your health care provider?

Q 48. What is the best time for you to go to your health care provider (doctor, clinic, etc)?

circle one

1- Morning 2- Afternoon 3- Evening 4- Saturday 5- Sunday

Q 49a. Within the past four months, did anyone in your family feel ill or get injured?

circle one

1- Yes 2- No (Skip to Q 50a)

Q 49b. Did the person receive care for the illness or injury?

circle one

1- Yes 2- No (Skip to Q 49d)

Q 49c. Where?

circle all that are applicable. Let the respondent answer.

1- Doctor

2- Clinic

3- Hospital emergency room

4- Pharmacy

5- Alternative medicine practitioner

6- Other (specify) _____

(After answering Q 49c skip to Q 50a)

Q 49d. Why did she/he not receive care for the illness or injury?

circle one

1- For this kind of problem, I do not seek care.

2- I could not get an appointment with the doctor or clinic.

3- I do not have insurance.

4- I did not have the money to pay for the visit.

5- The health provider does not provide anyone that speaks my language.

6- Other (specify) _____

Q 50a. Does anyone in your household have a mental health problem at the present time?

circle one

1 - Yes 2 - No (Skip to Q 52a) 6 - Didn't know 7 - Refused

Q 50b. If yes, is this person(s) a:

check all that apply

1- Child(ren)

2- Adult(s)

7 - Refused

Q50c. Are these mental health problems being addressed at the present time?

circle one

1-Yes (Skip to Q 52a) 2- No 3 - Child(ren) only 4 - Adult(s) only

6- Didn't Know

7- Refused

Q 51. Why did she/he not receive services for the problem?

circle one

1- For this kind of problem, I do not seek care.

2- I could not get an appointment with the doctor or clinic.

3- I do not have insurance.

4- I did not have the money to pay for the visit.

5- The health provider does not provide anyone that speaks my language.

6- Took care of it ourselves

7- Other (specify) _____

Q 52a. Has anyone in your household ever used free or reduced cost community services for mental health problems?

circle one

1- Yes 2- No (Skip to Q 53) 6- Didn't Know 7- Refused

Q 52b. Were the services helpful?

circle one

1- Yes 2- No 6- Didn't Know 7- Refused

Now a few questions about your children.

If the household does not have children living at home skip to Q 60

Q 53. How many of the people in your home are under the age of 17? _____
(If zero, skip to Q 60)

Of these, how many are under the age of 5? _____
(If zero, skip to Q 57a)

Q 54. Are all children covered by health insurance, including Medicaid and/or CHIP?

circle one

1- Yes 2- No 6- Didn't know 7- Refused

Q 55. Do all children between 4 years of age and 5 years of age have the required shots for school?

circle one

1- Yes 2- No 6- Didn't know 7- Refused 8- Not applicable

Q 56. Are all children younger than 4 years of age up-to-date with their shots?

circle one

1- Yes 2- No 6- Didn't know 7- Refused 8- Not applicable

Q 57a. During the past 12 months, was there any time when one of your children needed medical care but did not get it?

circle one

1- Yes 2- No (Skip to Q 58) 6- Didn't know 7- Refused

Q57b. If YES, why?:

circle one

- 1- For this kind of problem, I do not seek care.
- 2- I could not get an appointment with the doctor or clinic.
- 3- I do not have insurance.
- 4- I did not have the money to pay for the visit.
- 5- The health provider does not provide anyone that speaks my language.
- 6- Other (specify) _____

Q 58. Have any of the children in your home been diagnosed with a learning disability?

circle one

1- Yes 2- No 6- Didn't know 7- Refused

Q 59a. Would you say that during the last year any argument or difficulties you have had with your children have been?

circle one

1- Not a problem 2- A minor problem 3- A major problem

Q 59b. Have you been able to resolve those problems?

circle one

1- Yes 2- No 6- Didn't know 7- Refused

Q 60. Has anyone in your household visited a dentist for a routine check-up within the last 12 months?

circle one

1- Yes 2- No 6- Didn't Know 7- Refused

Q 61. Where do you get your health care information?

Circle all that are applicable. Do not read choices. Let the respondent answer.

- | | |
|---------------------------------|-------------------|
| 1- Doctor | 8- Family/friends |
| 2- Nurse | 9- Mail |
| 3- Clinic/Hospital | 10- Internet |
| 4- Health Insurance Company/HMO | 11- Books |
| 5- TV | 12- Other: _____ |
| 6- Newspaper | 13- Nowhere |
| 7- Magazines | 14- Refused |

Q 62. What health topics are you interested in?

Circle all that are applicable. Do not read choices. Let the respondent answer.

- | | |
|------------------------|-----------------------|
| 1- Cancer | 10- Weight control |
| 2- Diabetes | 11- Children's health |
| 3- Wellness | 12- Women's health |
| 4- Natural health | 13- Men's health |
| 5- Nutrition | 14- Arthritis |
| 6- Heart disease | 15- None |
| 7- High blood pressure | 16- Other: _____ |
| 8- Asthma | 17- Refused |
| 9- Exercise | |

Q 63. What is the best way for you to receive health information?

Circle all that are applicable. Do not read choices. Let the respondent answer.

- 1- Doctor/health provider
- 2- Mail
- 3- Printed materials (books, pamphlets, magazines)
- 4- TV/radio
- 5- Work/employer
- 6- Insurance/HMO
- 7- Nurse
- 8- Hospital/Clinic
- 9- Telephone info. hotline (example: Ask-A-Nurse)
- 10- Internet
- 11- Family/friends
- 12- Other: _____
- 13- Refused

Q 64a. Have you attended a health fair in the last 12 months?

circle one

1- Yes 2- No (Skip to Q 65) 6- Didn't know 7- Refused

Q 64b. Did you find it helpful?

circle one

1- Yes 2- No 6- Didn't know 7- Refused

Q 65. Does anyone in your home know CPR (CPR is a combination of chest compression and rescue breathing when a heart has stopped) ?

circle one

1- Yes 2- No 6- Didn't know 7- Refused

Q 66. Do you exercise?

circle one

1- Yes 2- No (Skip to Q 68)

Q 67. How many days per week do you exercise?

Q 68. How many days per week do you eat foods high in cholesterol or fat, such as fried foods, fatty meats (bacon or sausage), or regular cheese?

Q 69. On a typical day, how many separate servings of fruit and vegetables do you eat?

Q 70. Do you now smoke cigarettes?

circle one

1- Yes (Skip to Q 72) 2- No

Q 71. Have you ever smoked cigarettes on a regular basis?

circle one

1- Yes 2- No

Q 72. Does anyone else in your home smoke cigarettes?

circle one

1- Yes 2- No

Q 73. Do you or anyone in your home use snuff or chewing tobacco, or any other type of smokeless tobacco?

circle one

1- Yes 2- No

Q 74. A drink of alcohol is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. During the past 30 days, how many days per week or per month did you or anyone in your household have at least 1 drink of any alcoholic beverage?

_____ Days per week OR _____ Days in past 30

88- No drinks in past 30 days (Skip to Q 77) 77- Don't know/not sure

99- Refused (Skip to Q 77)

Q 75. On the days when you/they drank, about how many drinks did you/they drink on the average?

_____ Number of drinks 77- Don't know/Not sure 99- Refused

Q 76. Considering all types of alcoholic beverages, how many times during the past 30 days did you/they have 5 or more drinks on an occasion?

_____ Number of times 88- None 77- Don't know/Not sure 99- Refused

Q 77. On a scale of 1 to 5 with 1 being not worried at all and 5 being extremely worried, how worried are you that a terrorist attack will occur in Fort Worth?

	not worried at all	not very worried	worried	very worried	extremely worried
circle one	1	2	3	4	5
	6- Didn't Know	7- Refused	8- Not applicable		

Q 78. Do you feel that your household has been provided adequate information to prepare and respond to any type of emergency, including a terrorist event?

circle one
1-Yes 2- No 6- Didn't Know 7- Refused

Q 79. Do you or the members of your household know where to obtain information about how to prepare and respond to an emergency, including a terrorist event?

circle one
1-Yes 2- No 6- Didn't Know 7- Refused

Q 80. Has anyone in your household prepared an emergency kit to respond to a possible emergency including flood, tornado, or terrorist event?

circle one
1-Yes 2- No 6- Didn't Know 7- Refused

Q 81. What city or community services would help you and your family meet your needs?

This concludes our interview.
Thank you very much for your participation.

