THE ASSOCIATION BETWEEN ETHNIC CULTURES

AND HEALTH RISK BEHAVIORS AMONG

OKLAHOMA STATE UNIVERSITY

COLLEGE STUDENTS

By

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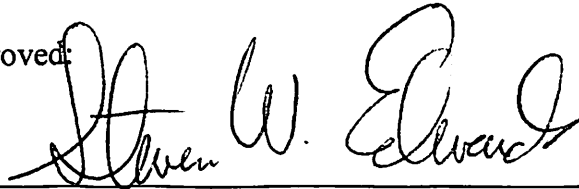
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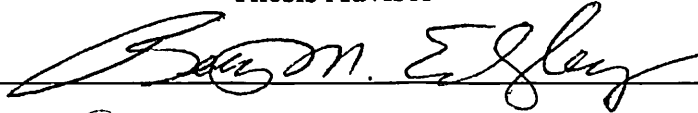the Degree of
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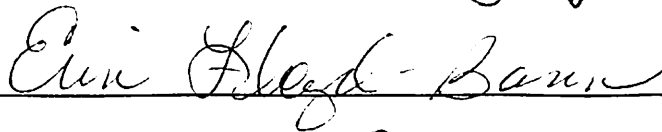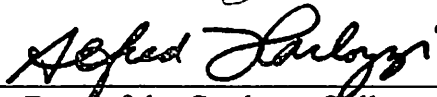# OKLAHOMA STATE UNIVERSITY

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CHAPTER I

INTRODUCTION

Health Risks and College Students

The concern of the American population regarding good health, wellness, and health behavior has reached new heights in recent years. It is now known that better control of behavioral risk factors alone, such as lack of exercise, poor diet, use of tobacco and drugs, and alcohol abuse, could prevent between 40 and 70 percent of all premature deaths. These risk factors are also responsible for 33 percent of all acute disabilities, and 66 percent of chronic disabilities (U.S. Department Of Health and Human Services, 1990).

Behaviors (e.g., physical inactivity, excessive alcohol consumption, and cigarette smoking) can contribute to chronic disease and injury-related morbidity and mortality in the United States. Preventative health practices (e.g., cholesterol screening, mammography, the blood stool test, and sigmoidoscopy) can help identify early stages of chronic disease such as heart disease, breast cancer, and colorectal cancer. These preventative practices can also reduce the morbidity and mortality rates from these leading causes of death among the U.S. adult population (Bolen, J., Rhodes, L., Powell-Griner, E., Bland, S., & Holtzman, D., 2000).

To monitor the priority health-risk behaviors among young persons, the CDC developed the 1995 National College Health Risk Behavior Survey (NCHRBS). The

purpose of the NCHRBS is to monitor a broad range of priority health risk behaviors among college students. These health risk behaviors include actions that contribute to unintentional and intentional injury, tobacco use, alcohol and other drug use, sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including human immunodeficiency virus (HIV) infection, unhealthy dietary behaviors, and physical inactivity. Data from the 1995 survey indicated that many college students throughout the United States engage in behaviors that place them at risk for serious health problems. Almost one third (29 percent) of college students were current cigarette smokers. One third (34 percent) of college students reported episodic heavy drinking during the 30 days preceding the survey, 27.4 percent reported drinking alcohol and driving during the 30 days preceding the survey, and 30.5 percent of students who had gone boating or swimming during the 12 months preceding the survey had drank alcohol while boating or swimming. One in five (20.4 percent) female college students had been forced to have sexual intercourse during her lifetime. Only 29.6 percent of students who had had sexual intercourse during the three months preceding the survey had used a condom during their last sexual intercourse, and only 34.5 percent had used birth control pills. Approximately one in five (20.5 percent) college students was overweight. Survey results indicated that almost three fourths (73.7 percent) of students had failed to eat five or more servings of fruits and vegetables on the day preceding the survey, 21.8 percent had eaten three or more high-fat foods on the day preceding the survey, and few students had engaged in vigorous (37.6 percent) or moderate (19.5 percent) physical activity at recommended levels (National College Health Risk Behavior Survey, 1995).

The continuing patterns of alcohol-related deaths, fatal accidents, serious injuries, and suicides among college students remind us of the dark lining in the promising silver cloud of campus life (Keeling, R. 2001). The elevated risk of meningococcal disease in students who live in close quarters in residence halls, the secondary effects of binge drinking, and the development of new smokers in college all demonstrate the possibility that college can be a hazardous environment. Keeling (2001) also stated that individuals want the changes that college life offers, but, can hardly tolerate the fear that it may return the individuals worse off, physically or psychologically, than they were when they began college. Some health problems, such as binge drinking and its consequences are clearly associated with the unique features of college culture. Students may learn certain truths and fictions about sexual activity, drinking, smoking, risk-taking, and testing their own limits. Much of this learning will have health consequences either now or later, and while some of those consequences will be personal, some will affect others. Keeling, (2001) raises a very important question. Are college students ordinary people whom, under the influence of college, (e.g. culture, living conditions, crowding, frequent contact, residence, sexual activity, athletics, and access to parties), acquire detrimental health characteristics?

Adlaf, E., Gliksman, L., Demers, A., Newton-Taylor, B., (2001) conducted a study on Canadian college undergraduates to determine the prevalence of elevated levels of psychological distress, which they carefully, repeatedly, and appropriately distinguished from mental illness. Among these undergraduates, nearly one third of the more than 7,500 respondents had significantly elevated levels of psychological distress compared to the students' same-age peers who were not enrolled in college. Adlaf et al,

(2001) also noted that those with elevated psychological stress levels consisted of more women than men, and lower classmen more than upper classmen.

Healthy behaviors are instrumental to a healthy life and the success for college students across the world. To ensure a healthy future, college students must begin to practice healthy lifestyle behaviors.

Statement of the Problem

The problem of this study was to determine the differences in college student's health risk behaviors among varying ethnic groups. By targeting specific subgroups and addressing their different health behaviors, health education programs can target and focus on specific health risks among ethnic college students. Therefore, it is important to explore and document how health risk behaviors vary among different cultures. Also, by investigating the differences in beliefs, fears, and patterns that deal with health risk behaviors of college students and among the different cultures, college health educators could find a more efficient way of educating college students about health risks.

Most colleges have students that represent many different ethnicities. Students surveyed included Asian, Black-African American, Native American, Hispanic, and White-Caucasian, all with very different backgrounds and cultures. With different cultures come different health behaviors, beliefs, and lifestyles. Various health education methods have been utilized but with varying rates of success among the dissimilar ethnicities on college campuses. College health educators need to target specific ethnic groups in order to determine and document their different health behaviors. By doing this, college health educators can take this information and develop a more efficient way

of educating college students about the health risks they are facing and begin to guide them to prevention.

Need for the study

When assessing the achievement of college based health education programs, there are many issues to be considered. Is there a difference in the learning strategies between male and female students? Does the age of the student make a difference? Does the ethnic background and culture of the student play a role in their receptiveness to health education? All of these factors play an imperative part in deciding what methods of health education should be utilized in the university environment. Also, do students of differing backgrounds understand why it is consequently vital to have knowledge of health care risks? A fundamental assumption underlying efforts to communicate accurate risk information to the public is that individuals will be more capable of making important decisions about precautionary and risk behaviors if they are more knowledgeable about the consequences of those behaviors (Gerrard, M., Gibbons, F., Bergan, M., 1999).

College based health education programs, including wellness programs, peer education programs, and freshman orientation program deliveries, have attempted to teach students of all ethnicities the basics of risk reduction, disease prevention, healthy living behaviors, and general safety. Due to higher rates of sexual activity, binge drinking, drug abuse, stress, violent crimes, accidental deaths, obesity, and depression within the college-age population, there has been an increasing interest in targeting this age group. A basic premise for this occurrence is to give college students some sense of

empowerment when dealing with disease prevention and their own individual health, and perhaps to instill some outline of responsibility and accountability for their personal lifestyles. However, it is no longer enough just to reach them with generic health information. It is becoming increasingly vital for health education to reach a personal area within this population in order for the enlightening process to be most effective. In order for this to happen, college health educators must first find out what beliefs lie within those important personal areas. These are all reasons why it is so vital to determine those underlying differences in health risk behaviors.

Health educators know there is a valid importance in educating college students about health risk behaviors and health prevention. Furthermore, by dissecting the different health perceptions and behaviors among varying ethnicities, health educators can better serve these varying student backgrounds by using tailored health education programs.

Though some theory-specific studies have been previously performed, there is a significant gap in research regarding the basic foundations of health risk beliefs in different cultures. One culture may see binge drinking as a major health risk while another culture may place a greater magnitude upon disease prevention. Why health risks hold differing levels of importance among different individuals remains unknown. However, by determining which health risk behaviors are most important to differing ethnic groups, health education can become better targeted, as well as more effective, for these groups.

Delimitations

The study was delimited to the following:

1. Male and female college students attending Oklahoma State University.

2. The participants identified under specific ethnicity criteria.

3. The Fall 2003 academic semester.

4. Those returning the Modified National College Health Risk Behavior Survey.

Limitations

Limitations that may have influenced this study are as follows:

1. Participants' exposure to previous health education material.

2. Participants' willingness to answer instruments honestly and accurately.

3. Participants' comprehension of English language and composition.

Assumptions

This study was based on the following underlying assumptions.

1. The participants carefully read and properly followed the directions on the Modified National College Health Risk Behavior Survey.

2. The participants will respond truthfully to the Modified National College Health Risk Behavior Survey.

3. The participants returned the Modified National College Health Risk Behavior Survey after it was completed.

Research Question

In a population of college students, what differences in scores on the Modified National College Health Risk Behavior Survey might be found between male and female students?

Hypothesis

Null Hypothesis One

There will be no significant differences in scores among the five ethnic groups on the Modified National College Health Risk Behavior Survey.

Definition of Terms

Culture-The customary beliefs, social forms, and material traits of a racial, religious, or social group (Webster, 2002).

Ethnicity-Relating to large groups of people or classed according to common racial, national, tribal, religious, linguistic. Being a member of an ethnic group (Webster, 2002).

Health Education-Any combination of learning experience designed to facilitate voluntary adaptations of behavior conducive to health (Green, Kreuter, Deeds, & Partridge, 1980).

Health Promotion-Strategies designed to increase the physical, social, and emotional health and well-being of individuals, families, and communities (Stanhope and Lancaster, 1996).

Risk Appraisal-A quantitative approach comparing data from epidemiological studies and vital statistics with information supplied by individuals about their (1) health-related practices, (2) health habits, (3) demographic characteristics, and (4) personal and family medical history (Stanhope and Lancaster, 1996).

Risk Factor-Disease precursor, the presence of which is associated with higher than average mortality. Disease precursors include demographic variables, certain everyday health practices, family history of disease, and some physiological changes (Stanhope and Lancaster, 1996).

Tailoring- The making or adapting of something to suit a particular purpose (Webster, 2002).

CHAPTER II

REVIEW OF LITERATURE

The Importance of Health Promotion and Health Risk Education

According to Healthy People 2010, there is a tremendous concentration on health promotion and risk reduction to reduce mortality and morbidity (U.S. Department of Health and Human Services, 1990). This concentration on health promotion is a result of literature reports that an estimated 40 percent of deaths in the United States in 1990 were attributed to health risk behaviors that could be changed by making appropriate lifestyle-related choices (McGinnis, J. & Foege, W., 1993). In 1996, the U.S. Preventative Services Task Force recommended that health care providers routinely assess health risk factors and encourage the modification of behaviors related to diet and exercise. Follow-up behavior changes that did or did not occur based on simple health promotion strategies in the institutions was not documented (Sheahan, S. 2000). Sheahan (2000), also stated that healthy people are more likely to be energized, financially sound, progressive and more productive than their counterparts in a community of people afflicted with chronic diseases. Therefore, health promotion is closely linked to health status and the work force and economic productivity. Increased efforts in health promotion are important in order to provide the opportunity for lifestyle and behavior changes.

Health promotion is also associated with health maintenance, health protection, wellness promotion, and health education (Brubaker, B., 1983). Brubaker reports the emergence of two themes in this area: the call for goals beyond the status quo that produce a positive state of health, and the need for health and changes in lifestyle.

Brubaker also raised issues about health promotion and the process that encourages changes in habits. Another view of health promotion was defined by Pender (1986), when he stated that "health promotion is directed toward increasing the level of well-being and self actualization; desire for growth, quality of life, and expression of human potential as the motivating factors for health promoting behaviors." He supports the idea that health-promoting behaviors are continuing activities that should be integrated into an individual's lifestyle. Pender's Health Promotion Model is categorically structured according to the type of influence on behavior. Cognitive-perceptual factors serve as primary motivational mechanisms for the initiation and maintenance of health promoting actions. Those directly affecting health behaviors include the importance of health, perceived control of health, perceived self-efficacy, perceived health status, perceived benefits, barriers of health promoting behaviors, and definition of health. The modifying factors for this model include the demographic factors, biological characteristics, interpersonal influences, situational factors and behavioral factors which indirectly influence the patterns of health behavior (Pender, N., 1986).

Richard Keeling (2000) analyzed how researchers think regarding health priority. Health educators tend to wrap risk reduction, disease prevention, health promotion, and well being together. Risk factors, risk behaviors, illness, and injury are negatives that undermined health and well being. Keeling, (2000) also states that, as health educators, discovering a pattern of behavior among college students that leads to some actual or potential harm properly raises our concern. Risk reduction and disease prevention are core values in college health. More broadly, we attempt not only to help students avoid illness and injury but also to promote better health in its most global and inclusive sense.

Keeling (2000) then stated that "Our professional emphasis on health is legitimate and authentic; we must give college health high priority." Students have an incredible opportunity to make the most of their health by starting prevention methods early. The ideas of personal empowerment, disease prevention, and health promotion, when allowed to simmer together generate some subtle but important assumptions that hold people responsible and accountable for their health in ways that are not always reasonable or humane. It is too easy to focus on particular health behaviors, risks, or challenges in isolation. Therefore, it is easy to miss the bigger picture during our concern about a specific "problem" (Keeling, 2000).

Next, Bolen et al (2000) discussed the fact that most of the risk behaviors associated with chronic disease and injury are modifiable. Obesity, high blood pressure, high blood cholesterol, lack of leisure-time physical activity, binge drinking, cigarette smoking, not always wearing a safety belt, and screening for cancer could be improved through more effective state and local public health programs. In addition, health-care delivery systems could offer patients more counseling on preventative measures (e.g., losing weight, stopping smoking, wearing safety belts, or getting a timely mammogram) and facilitate patients' access to clinical preventative services. Racial and ethnic-specific data can provide a sound basis for developing and evaluating public health programs to reduce racial and ethnic disparities in health risks. The Centers for Disease Control and Prevention had these factors in mind when it developed the 1995 National College Health Risk Behavior Survey.

The National College Health Risk Behavior Survey was conducted in 1995 through the mail and used multiple mail and telephone follow-ups to help ensure a good

response rate. Responses to the National College Health Risk Behavior Survey questionnaire were both voluntary and confidential. This survey used a two-stage cluster sample design to produce a nationally representative sample of undergraduate primary sampling units, consisting of students enrolled in public and private, 2-and 4-year colleges and universities. The overall survey response rate was 60 percent and the results were generalizable to undergraduate college student's nationwide aged 18 years or older (NCHRBS, 1995).

Data was edited for inconsistency, and a weighting factor was applied to each student record to adjust for the school sampling weight, the school nonresponse adjustment factor, the student sampling weight, and the student nonresponse adjustment factor. Information on the total number of students by race/ethnicity, sex, and institution type, was used to poststratify the sample. For each adjustment class (e.g., a particular race/ethnicity, sex, and institution type), the poststratification adjustment factor was the ratio of the known national value to the sample estimate of that value. The final overall weights were scaled so that the weighted count of students was equal to the number of cases for that year. The scaling factor was the ratio of the number of respondent cases to the sum of the weights for those students (NCHRBS, 1995).

The assessment analyzed subject's self-reported answers in the following health areas: nutrition, diet & exercise, tobacco use, sexual health, drugs & alcohol, and general health and safety. The data collected from the National College Health Risk Behavior Survey was then used to determine the prevalence of health risk behaviors among college students, allow researchers to examine the co-occurrence of health risk behaviors among college students, and monitor progress toward achieving Healthy People 2010 objectives.

This data was also used to determine what health information students receive from their colleges or universities and to assess whether health risk behaviors increase, decrease, or remain the same over time (NCHRBS, 1995).

Implications of Health Risk Communication

Gerrard et al (1999) examined the evidence that providing risk information is an effective way to change risk perceptions, as well as the more limited evidence that altering risk perceptions influences risk behavior. This research found that most cross-sectional studies of the relationship between perceived vulnerability and precautionary behavior have been based on the assumption that feelings of vulnerability motivate individuals to engage in precautionary behavior. Specifically, many people tend to react to risk information in a defensive manner. This defensiveness is especially true if the message suggests or implies that their current or past behavior has been unwise or unhealthy. People often think that they are less vulnerable to future negative events than others, including others whose level of risk is comparable. This optimistic perspective has been termed an "illusion of invulnerability," or simply an optimistic bias (Gerrard et al, 1999). For example, adult smokers are aware that their risks of smoking-related disease are greater than are those of nonsmokers, and college students' risk perceptions have been shown to correlate with their actual probability of experiencing a variety of health hazards. Gerrard et al (1999) also revealed that people tend to respond to threatening health information with a predictable set of defensive "adjustments" in their thinking. When learning that they are at risk, people often engage in an active process of distorting and discounting the risk information. Thus, people are not passive, unbiased

recipients of information about their health. Although most people do not engage in delusional thinking or completely deny the potential consequences of their behavior, they do possess an impressive array of self-protective strategies that can act as buffers against the unwanted implications posed by risk information. Furthermore, people with high self-esteem find the implication that they are engaging in inappropriate or unwise behavior to be more aversive than do those with low self-esteem. Thus, they are more likely to become defensive in response to risk messages that make their shortcomings salient. In contrast, people with low self-esteem are not as surprised to learn that their health behavior is less than optimal and respond to such information with less defensiveness. Gerrard et al (1999) concluded there is a need for further research to understand the defensive reactions to risk communications. There is also a need for research on interventions that reduce this defensiveness and minimize the psychologic reactance that often occurs when a risk communication reminds individuals, especially those individuals with high self-esteem, low monitoring, and high blunting, that their recent behavior has been potentially unhealthy or risky. Finally, they suggested that research on tailoring feedback to individual risk characteristics should be expanded to include tailoring on additional individual difference variables.

The Importance of Ethnic Differentiation

Examining the relationships between ethnicities in college students' health risk behaviors is deemed appropriate because of the increasing ethnic diversification on college campuses and the paucity of information related to this topic. Suminski, R. & Petosa, R. (2002), studied the five stages of change model and the relationship in

distribution differences between ethnic groups. They found that reasons for the uneven ethnic distributions among the different ethnicities reflect the influence of group-specific cultural or socioeconomic profiles. For example, regular exercise participation may not be a priority for members of a particular minority group because of established group norms. These norms may reflect the socioeconomic status of the group, often low among US minorities, and subsequent consequences, such as unsafe neighborhoods, poor maintenance of physical structures, and lack of resources.

In the United States, disparities in risks for chronic diseases, such as diabetes, cardiovascular disease, and cancer, as well as injury exist among racial and ethnic groups. Bolen et al (2000) have utilized the Behavioral Risk Factor Surveillance System (BRFSS) to examine racial and ethnic differences in health behaviors. This specific system shows the distribution of access to health care, health-status indicators, health-risk behaviors, and use of clinical preventative services across five racial and ethnic groups. These five groups included whites, blacks, Hispanics, American Indians, and Asians. Variations in risk for chronic disease and injury among racial and ethnic groups exist both within states and across states. Blacks, Hispanics, and American Indians were more likely than whites and Asians to report fair or poor health status, obesity, diabetes, and no leisure-time physical activity. Blacks were substantially more likely than other races or ethnic groups to report high blood pressure. Among all groups, American Indians were the most likely to report cigarette smoking. Except for Asians, the median percentage of adults who reported not always wearing a safety belt while driving or riding in a car was 30 percent or more. The Papanicolaou test was the most commonly reported screening measure. More than 81 percent of white, black, and Hispanic women with an intact uterine cervix

reported having had the test in the past three years. Among white, black, and Hispanic women 50 years or older, 63 percent or more reported having had a mammogram in the past two years. Approximately two thirds of white, black, and Hispanic women 50 years and older reported having had both a mammogram and a clinical breast examination in the past two years. This behavior was least common in Hispanics and most common among blacks. Here is a closer examination at the prevailing different health risks associated with ethnicity.

Caucasians

Whites were most likely to report high blood cholesterol. Although their percentages of health risk behaviors were in general lower than other racial and ethnic groups, many whites reported current smoking, no leisure-time physical activity, and not wearing safety belts when driving or riding in a car (CDC, 2000).

Another common health problem for Caucasians is the fact that eating disorders have long been thought to occur predominantly, if not exclusively, in whites. Research in the last 15 years, however, has documented significant numbers of cases in ethnic minorities, so it is no longer a question of whether eating disorders do or do not actually occur in minority groups. Nonetheless, the prevalence of these disorders is usually lower among ethnic minorities because the Caucasian ideals of thinness, self-control, discipline, and competitiveness may not reflect those same views of the ethnic minority groups to the same extent it does in whites (Arriaza, C., Cecilia, A., Mann, T., 2001).

African Americans

African-American adults were generally more likely to report having high blood pressure than other racial and ethnic groups. African Americans ranked second behind American Indians and Alaska Natives for not using safety belts when driving or riding in a car. African American women led women in other racial and ethnic groups in reporting having a Pap test within the recommended time frame and were as likely as white women to report having had either a mammogram or clinical breast exam within the recommended time frame. Forty-one percent of African Americans reported themselves as being "about the right weight" but when asked which of the following they were trying to do between lose, gain, or maintain weight, 42 percent said they were trying to lose weight (CDC, 2000).

Native Americans

Poverty, poor education, high unemployment, unhealthy lifestyles, and voluntary and forced culture change are among the reasons for the premature mortality of Native Americans. Although decades have passed since initial European contact, the consequences of colonization that followed this contact have forever altered tribal lifestyles and, in particular, the traditional role once held by young native men. Following European contact, Native Americans experienced waves of contagious diseases, such as smallpox, that rapidly depopulated most of the Americas. The biological consequences of subsequent tuberculosis epidemics continued for Native Americans well into the first half of the 20th century and is today once again on the increase among Native Americans. Not until the latter half of the last century did the morbidity and

mortality picture for Native Americans shift from infectious diseases to domination by chronic diseases and other health behaviors associated with unhealthy lifestyles (Joe, J., 2001). Currently, heart disease is the leading cause of death for American Indians and they are more likely than other racial and ethnic groups to report current cigarette smoking and lack of seat belt use. Also, since the early 1960s, diabetes has disproportionately affected American Indians compared with other populations. Diabetes is a major cause of morbidity, including blindness, kidney failure, lower-extremity amputation, and cardiovascular disease and premature mortality in this population. Most cases of diabetes among Native Americans are type two, the most common form of the disease, and are associated with modifiable risk factors such as obesity and inactivity. Thus, prevention has become an increasingly important goal for American Indian communities (CDC, 2000).

Asians

Asians and Pacific Islanders were least likely of all racial and ethnic groups to report fair or poor health status, obesity, having high blood pressure, current cigarette smoking, and not using a safety belt when driving or riding in a car. Also, the prevalence of being overweight among women was lowest for Asians (CDC, 2000). In the United States today, Asians are an ethnic minority whose rates of HIV infection are lower than those of Blacks or Hispanics. This lower incidence may reflect a variety of factors, including behavioral differences in intravenous drug use and sexual behavior and underreporting of HIV infection in Asian Americans. Yet there is cause to be concerned about the future incidence of HIV infection in the Asian American communities.

Available information suggests that AIDS cases among Asian Americans are increasing rapidly and that the incidence of AIDS is increasing at a higher rate among Asians than among whites. Between 1992 and 1993, newly reported AIDS cases among Asians increased by 129 percent. The reason for this occurrence is due to Asian American culture regarding open discussion of sexual topics. Asian college students are reporting lower rates of sexual activity and are not seeking adequate sexual healthcare relative to other racial and ethnic groups because their culture is not open about this topic. However, once they become sexually active, their risk-taking behavior patterns are similarly adventuresome as those of young adults in the other ethnic groups (Yi, J., 1998).

Hispanics

The median percentage of Hispanics who are obese is reported relatively low at 18.2 percent and diabetes is reported as prevalent in only 5.5 percent of the Hispanic population. However, Hispanics reported the highest median prevalence of three of the four factors associated with limited access to health care (e.g. less than a high school education, cost as a barrier to obtaining health care, and no routine physical examination). Hispanics also reported the second-highest prevalence of no health-care coverage (Bolen et al, 2000). Of the five racial and ethnic groups, Hispanics were most likely to report not having a routine physical examination and Hispanic women were least likely of the racial and ethnic groups to use preventive services such as Pap test, mammography, and clinical breast exam (CDC, 2000).

What does this mean? Bolen et al (2000) say that differences in median percentages between racial and ethnic groups, as well as between states within each racial

and ethnic group, are likely mediated by various factors. In 1970, people in racial and ethnic minority groups accounted for 16 percent of the population. By 1998, this percentage had increased to 27 percent and this percentage is expected to continue to increase to nearly 50 percent by 2050. Although persons in racial and ethnic minority groups are accounting for increasingly larger proportion of the U.S. population, information about the health behaviors of people in minority groups is insufficient, especially at the state and local levels (Bolen et al, 2000).

Gender Differentiation of Health Risks

After looking at the varying health risks between different ethnicities, it is also important to notice the differences of heath risks between male and female college students. Though eating disorders and self-image preoccupation have commonly been categorized as a female health problem, they are also becoming more prevalent among college men. Studies have analyzed eating disorder patterns among college women and men and the following results were found.

Eating Disorders and Body Image

Schwitzer, A., Rodriguez, L., Thomas, C., and Salimi, L., (2001) noted that college students typically express concerns about body image, body shape, body size, and weight control, and that the incidence of eating-related problems among college women has been well documented. In their study, these searchers found that disordered eating behaviors and attitudes were prevalent among female undergraduates in general, as well as among specialized populations, including female athletes, sorority women, and

counseling clients. Schwitzer et al (2001) also reported that six percent of undergraduate women were concerned about bulimia and anorexia, 25 percent to 40 percent of female undergraduates indicated moderate problems such as extreme worry about body image, weight management, or concern that their eating was out of control. These women were also likely to be knowledgeable about calories, fat levels, and nutrition, were highly scale oriented, and were frequent weighers. In addition, they engaged in excessive exercise or rumination about exercising. They also experienced moderate depression or dysthymia and fragile or low self-esteem. Furthermore, these women appeared to experience the same sorts of internal conflicts (e.g. compliance versus defiance, dependency versus autonomy, and perfectionism versus envy) regarding academic achievement as they do in dealing with body image and in other aspects of college life. According to Schwitzer et al (2001) women with eating disorders also tend to present several young adult development themes including perfectionism regarding body image, romantic and other interpersonal relationships and grades, a fragile sense of self, feelings of inadequacy, and a need to be bolstered by others. They also observed self-doubt expressed as sexual intimacy questions, ambivalence about whether one is thin enough to attract a romantic partner, whether one should want to please a partner at all, and a sense of powerlessness in intimate relationships and the world in general. Eating problems such as anorexia nervosa, bulimia nervosa, eating disorders not otherwise specified, and disordered eating, have been studied extensively among adolescent girls, young women, and college women. The few existing studies of eating problems in young men suggest that eating disorders are less prevalent among men than among women (O'Dea, J., and Abraham, S., 2002).

O'Dea et al (2002) also found that one fifth of the men also worried about their weight and shape, followed rules about eating, and limited their food intake. Between nine percent and 12 percent were unhappy with their body shape, felt fat, and seriously wanted to lose weight. Exercise was important for the self-esteem of 48 percent of the students. Thirty-four percent were distressed when they could not exercise as much as they wanted, 27 percent followed rules about exercising, and 14 percent worried about the amount of exercise they were doing. Out of the respondents studied by O'Dea et al (2002) three percent met clinical diagnoses for objective binge eating, two percent met clinical diagnoses for bulimia nervosa, three percent reported self-induced vomiting, and eight percent were diagnosed with exercise disorders. Although nine percent reported disordered eating, none had sought treatment. This study also found that men were more likely than women to have a later onset of eating disorders. Males were reported to have an average onset at 20.6 years of age while females had an average onset age of 17.2 years. Furthermore, the data showed that men constituted an increasing percentage of eating disorder admissions between 1984 and 1997, suggesting that eating problems may be increasing among young men (O'Dea et al 2002).

Among the findings of greatest concern in this study were the reports from some of the young men that although they believed they had a problem with disordered eating, weight control, and binge eating, not one had ever sought any treatment for his problems (O'Dea et al 2002). A likely explanation is young men's hesitancy to seek treatment for any illness, particularly weight and shape concerns that have been stigmatized as a problem that only affects women. The disordered eating, poor body image, weight and shape concerns, and exercise disorders that were identified among some of the young

men in the current study suggest that health professionals, including college physicians and counselors, should be aware of such problems among young male patients as well females.

Coronary Heart Disease

Coronary heart disease is another affliction with risk factors differing between males and females. Weidner, G. (2000) gathered international data confirming coronary heart disease mortality is lower in women than in men. In this study, it was found that men generally develop coronary heart disease at an earlier age than women, they smoke more, are more likely to be hypertensive, and have lower levels of protective HDL cholesterol than women. Weidner (2000) also found that men report less social support, are less socially integrated than women, and appear to have fewer sources of social support, thus increasing their social dependency on a single source. Sources of social support among middle-aged men and women were then analyzed, including support from spouses, relatives, friends, and co-workers. Men named their spouses or partners as their primary provider of social support during distress and depression 65.5 percent of the time while women named their spouses or partners as their primary provider of social support during distress and depression only 24.2 percent of the time. Furthermore, 24.2 percent of men, and only 6.1 percent of women said spouses or partners were their only source of support when faced with distress and depression. In most studies, women tend to report more depression than men (Weidner, 2000). However, Weidner (2000) quickly points out that although men tend to report less depression than women, they may be coping with depression less effectively than women. Men are more likely to use avoidant coping

strategies, such as denial, distraction, and increased alcohol consumption, whereas women are more likely to employ vigilant strategies for accepting depression as a disorder and to be treated. Thus, when faced with stress, men seem to further engage in health behaviors consistent with the stereotypical concept of masculinity. These behaviors, in turn, may contribute to their greater susceptibility to coronary heart disease. In contrast, women's coping with severe stress (e.g. asking for help), reflects a more stereotypical feminine style and may be more cardio-protective. Research on gender differences in responding to stress suggests that men's coping styles may be less adaptive physiologically, behaviorally, and emotionally, contributing to their increased risk for coronary heart disease (Weidner, 2000).

Reproductive and Sexual Health

The onset of sexual activity typically occurs before or during the college years. According to Forrest, K. (2001) by age 19, more than 80 percent of never-married adolescent males have had sexual intercourse with a woman. Also, approximately 12 million new cases of sexually transmitted diseases are diagnosed each year in the United States, with 86 percent of the cases occurring in people 15 to 29 years old (Hasenyager, C., 1999). Some diseases are gender specific while others affect both the male and female college population. According to the study conducted by Hasenyager (1999), approximately 15,700 new cases of invasive cervical cancer are diagnosed and 4,900 United States women die of this disease each year. Recent declines in cervical cancer mortality have been attributed to earlier detection and treatment of precursor lesions, but this trend cannot be expected to continue if women do not undergo regular Papanicolaou

(Pap) smear screening or cytological assessment for cancerous or precancerous changes of the cervix. This fact is unfortunate because, according to this study, fewer than 50 percent of the women in the United States have had a Pap test in the previous year. Possible explanations for the relatively low percentage of women receiving annual screening include limited access to healthcare, lack of funds or insurance coverage, failure on the part of healthcare providers to encourage use of the test, and a lack of patient knowledge about risk factors for cervical disease and the role and importance of cytological screening. Hasenyager (1999) then discussed how several factors have been shown to confer an increased risk for premalignant and malignant changes of the cervical epithelium. Infection with the human papilloma virus (HPV) is the major risk factor. HPV DNA is present in 93 percent of the diagnosed cases of cervical cancer and its precursor lesions and is also sexually transmitted, with a peak prevalence of infection in women in the 22 to 25 year old age group. Young age at first intercourse, increasing number of sexual partners, and infection with other sexually transmitted diseases (STDs), have also been shown to increase the likelihood of cervical disease and may confer this risk by coexistent HPV exposure and infection. Hasenyager (1999) went on to say that the most worrisome finding in this study was the lack of knowledge regarding risk factors for cervical disease. Clearly, many women seen in college health centers carry a number of risk factors. HPV viral infection has been shown to present the greatest risk of women attending university health centers for gynecologic examinations.

Forrest, K. (2001) then went on to note that compared to college women, a greater proportion of college men have had multiple partners in the recent past. Other indicators of greater sexual risk among men than among women are earlier age at first intercourse, a

smaller proportion being monogamous, and greater likelihood of using alcohol or other drugs before intercourse. The incidence and diagnosis of sexually transmitted infections have complex relationships with gender, age, socioeconomic status, and ethnicity. In general, however, sexually transmitted infections are recognized significantly less often in males than in females. The lower reported incidence of gonorrhea, syphilis, and chlamydia among adolescent males, compared with females, has been attributed largely to existing differences in patterns of health service use, with males having less frequent contact with physicians for reproductive health care and being less likely to be targeted for screening programs, chlamydia in particular (Forrest, 2001). Although their sexually transmitted infections may be unrecognized, men are at greater risk for them than women are, based on a variety of sexual risk behaviors, such as having multiple sexual partners and alcohol and drug use. Forrest (2001) then addressed the particular importance and attention that needs to be paid to young men's unfamiliarity with and discomfort in seeking health services. There are gender role dynamics between providers, between the health provider and the patient; and in the physical environment of the health facility. The hegemonic, traditional, male gender role, which is still operational to a considerable extent despite the social changes of the past few decades, demands that men be independent and self-reliant, powerful, superior, in control, and sexually knowledgeable and experienced. As a result, men tend to conceal their vulnerability, are reluctant to ask for help or information, are less knowledgeable about sexual health, and do not adopt health-promoting behaviors (Forrest, 2001).

Osteoporosis

Osteoporosis is a disease that is prevalent, but not limited, to women. According to Leslie, M., and St. Pierre, R., (1999), a greater emphasis than ever before is being placed on the need for education and preventive interventions among women of all ages, particularly young women. The college environment provides an ideal setting for such educational and preventive interventions and should address the national health promotion and disease prevention objectives that are targeted to adolescents and young adults, with specific implications for the development of osteoporosis later in life. Leslie et al (1999), characterize osteoporosis by low bone quality and micro-architectural deterioration of bone tissue, leading to increased bone fragility and increased susceptibility to fractures. These physiological changes are influenced by lifestyle and behavioral factors established during young adulthood. Estimates indicate osteoporosis affects 13 percent to 18 percent of women over the age of 50 years, but only three percent to six percent of men in the United States. One of the most important concepts pertaining to prevention of osteoporosis is peak bone mass, the maximum amount of bone that an individual will attain in life. The level of bone mass acquired at the time of skeletal maturity is clearly linked to the risk of osteoporosis during later life. In both men and women, peak bone mass is achieved between the ages of 25 and 35 years of age. A period of bone loss equivalent to .3 percent to .5 percent per year in both men and women begins as they reach the age of about 40 years old. Beginning at menopause, women may then experience an additional loss of skeletal bone at a rate of three percent to five percent per year as a result of the decline in ovarian estrogen production. This loss continues for approximately five to seven years and is the primary factor leading to

postmenopausal osteoporosis. Leslie et al (1999) then pointed out that the higher the

peak bone mass, however, the longer it will take for age and menopause related bone

losses to increase the risks of a fracture. Occurrences of osteoporosis are lower in men,

African Americans, and in groups with higher peak bone mass. The factors that influence

peak bone mass continue to be defined, but evidence strongly suggests that calcium is an

important modulating factor. Several risk factors for osteoporosis have been identified as

being specifically relevant to the college health setting and amenable to intervention.

They include inadequate calcium and vitamin D intake, use of tobacco, alcohol, and

steroids, high-protein diets, physical inactivity, and excessive exercise. A large

proportion of young adult women between the ages of 20 and 29 years consume

substantially less calcium than the recommended dietary reference intakes established by

the Food and Nutrition Board (Leslie et al, 1999). Cigarette smoking and alcohol

consumption affect bones in uncertain ways while smoking may have secondary effects

on ovarian function, causing early menopause or directly affecting bone remodeling.

Alcohol abuse is a strong risk factor for bone loss and fractures and prolonged use of

alcohol may affect bone metabolism by reducing bone formation. Alcohol is also

associated with decreased calcium and vitamin D intakes and with excessive urinary loss

of calcium. In addition, Leslie et al (1999) note that poor nutrition associated with

chronic alcohol abuse may aggravate bone loss. Young women, in particular, need to be

informed about how proper nutrition and regular exercise can help them achieve optimal

peak bone mass. They need to be aware that a diet low in calcium and vitamin D as well

as smoking, alcohol abuse, steroid use, high-protein diets, and both physical inactivity

and excessive exercise may have a negative impact on the lifetime health of their bone

structure and may predispose them to a higher risk of osteoporosis in later years. These young women need to understand that after the college years, opportunities for true osteoporosis prevention are limited and the focus often changes to treatment of the disease (Leslie et al, 1999).

College Age Gender Differences

Studies dealing with the different patterns of risk behavior exist between males and females of the college age population. The Centers for Disease Control and Prevention conducted the National College Health Risk Behavior Survey and several differences were found between male and female college students in the following areas. Male students were significantly more likely than female students to have rarely or never used a safety belt and drank alcohol while driving a car, boating, or swimming. Males were also considered more likely to be involved in intentional injury by being more likely to carry a weapon or gun and to have been in a physical fight. Women were significantly more likely than male students to have been forced to have sexual intercourse (Douglas, K., Collins, J., 1997).

On the issue of tobacco use, cigarette smoking did not vary by gender but smokeless tobacco use was significantly greater in males than females. Male students were significantly more likely than female students to be current frequent users of alcohol as well as current episodic heavy drinkers. Current marijuana use occurred significantly more often among male students than female students while cocaine use did not vary between the sexes (Douglas et al, 1997).

Regarding sexual behaviors, female students were significantly more likely than male students to have ever had sexual intercourse, whereas male students were significantly more likely than female students to have had six or more sexual partners during their lives. Male students were significantly more likely to report condom use during their last sexual intercourse and also reported more consistent use than did females (Douglas et al, 1997).

When studying dietary behaviors, female students were found to be significantly more likely than males to diet, exercise, vomit or take laxatives and diet pills. Fruit and vegetable consumption did not vary by gender; however, female students were significantly more likely than male students to have eaten two or fewer servings of food typically higher in fat content. Participation in vigorous physical activity was significantly higher among male students than among female students (Douglas et al, 1997). This study is just one example of how male and female students vary regarding health risk behaviors during their college years.

Socioeconomic Effects on Physical & Mental Health

Regarding socioeconomic status and health, Adler, N. & Newman, K. (2002) found that socioeconomic status underlies three major determinants of health: health care, environmental exposure, and health behavior. In addition, chronic stress associated with lower socioeconomic status may also increase morbidity and mortality. Reducing socioeconomic disparities in health will require policy initiatives addressing the components of socioeconomic status. These include income, education, and occupation, as well as the pathways by which these affect health. Education was found to be perhaps

the most fundamental socioeconomic status component since it shapes future occupational opportunities and earning potential. It also provides knowledge and life skills that allow better-educated people to gain more ready access to information and resources to promote health. They also noted that limited education may mean less exposure to information about risk, but the same people may be locked into neighborhoods with poor recreational facilities, fewer stores selling fresh produce, and more advertising for tobacco and alcohol.

The mental health of college students from various ethnic and racial groups has also been specifically identified as a priority concern by the US Public Health Service's recommendations in Healthy People 2010 (Rosenthal, B., Schreiner, A., 2000). Their study showed reasonably compelling conceptual arguments that older, female, and racial and ethnic minority students can be expected to have higher levels of psychological symptoms. They also found a scarcity of material regarding nontraditional college students' mental health and only 11 empirical studies of ethnic differences in levels of psychological symptoms among college students has been published in the last decade and a half. Having such a deficiency in comparable research studies makes it increasingly difficult to compare results to non-ethnic studies.

According to published literature, socioeconomic factors (e.g., age distribution, educational attainment, employment status, and poverty), lifestyle behaviors (e.g., lack of physical activity, alcohol intake, and cigarette smoking), aspects of the social environment (e.g., educational and economic opportunities, neighborhood and work conditions, and state and local laws enacted to discourage high-risk behaviors), are factors affecting the health-care system (e.g., access to health care, and cost and

availability of screening for diseases and health-risk factors) may be associated with these differences (Rosenthal et al, 2000). They then said that behaviors like physical inactivity, excessive alcohol consumption, and cigarette smoking could contribute to chronic disease and injury-related morbidity and mortality in the United States. Preventative health practices such as cholesterol screening, mammography, the blood stool test, and sigmoidoscopy can help identify early stages of chronic disease like heart disease, breast cancer, and colorectal cancer, thereby reducing the morbidity and mortality rates from these leading causes of death among the U.S. adult population.

Summary

In summary, more research is needed to determine the reasons for the differences in racial and ethnic health risk behaviors. A better understanding of these differences could help develop effective, culturally sensitive public health prevention programs designed to decrease the prevalence of high-risk behaviors and increase the use of preventative services. Sheahan (2000) stated that healthy people are more likely to be productive and energized than others that are afflicted with chronic diseases. Brubaker (1983) stated that he believes health promotion holds an association to health maintenance, health protection, wellness promotion, and health education and also raised issues about health promotion and the process that encourages a change in habits.

Keeling (2000) stated that when dealing with college health, risk reduction and disease prevention are core values for students. Also, Gerrard et al (1999) noted that when individuals learn they are at risk, they tend to defend their actions by making adjustments in their thinking. Finally, Adler et al (2002) addressed chronic stress

associated with lower socioeconomic status and found that it affects three major

determinants of health: health care, environmental exposure, and health behavior. The

previously mentioned literature exemplifies a strong rationale for college health educators

to determine reasons for and gain a better understanding of the differences in racial and

ethnic health risk behaviors.

CHAPTER III

METHODOLOGY

The problem of this study was to determine the differences in college student's health risk behaviors among varying ethnic groups. By targeting specific subgroups and addressing their different health behaviors, health education programs can target and focus on specific health risks among ethnic college students. Therefore, it is important to explore and document how health risk behaviors vary among different cultures. Also, by investigating the differences in beliefs, fears, and patterns that deal with health risk behaviors of college students and among the different cultures, college health educators could find a more efficient way of educating college students about health risks. For this study, the procedures have been divided into (1) preliminary procedures and (2) operational procedures. The preliminary procedures describe the (a) instruments and the (b) research sample. The operational procedures include (a) collection of data and (b) research design and statistical analysis. Prior to the study being conducted, approval was sought and obtained from the Oklahoma State University Institutional Review Board (Appendix 4).

Preliminary Procedures

Instruments

There was one instrument utilized in this study entitled the Modified National College Health Risk Behavior Survey (Appendix 1). The National College Health Risk Behavior Survey was a 96-item health behavior summary, which was developed by the

Centers for Disease Control and Prevention in 1995, in collaboration with representatives from universities, relevant national organizations, and federal agencies.

For the purpose of this study, 50 of the more essential questions were selected from the original 96-item National College Health Risk Behavior Survey. The 50 questions addressed the specific topics of nutrition, diet and exercise, tobacco use, sexual health, drugs and alcohol, and general health and safety. The survey also included seven demographic questions. These demographic questions were primarily used for classification of age, ethnicity, sex, class standing, and marital status.

Research Sample

The sample for this study (162) was chosen from a simple random sample of male and female students enrolled in the fall semester of 2003 at Oklahoma State University. The participants were selected through a random selection done by Institutional Research Services student information system. Students of various ethnic backgrounds, which include Caucasian (56), African American (12), Native American (26), Hispanic (35), and Asian (30) and whose ages also ranged from 18-25 years old were randomly chosen. Surveys were mailed to 750 sample students with an expectation of a 20 percent response rate. Survey procedures were designed to protect the student's privacy by providing anonymity and allowed for voluntary participation.

Operational Procedures

Collection of Data

Permission to conduct this study was approved by the Human Subjects Research, Oklahoma State University Institutional Review Board (Appendix 4). The students were then randomly selected from a university database and mailings were sent out to those selected students. Each packet contained a participant letter (Appendix 2), the Modified National College Health Risk Behavior Survey (Appendix 1), and a pre-addressed and stamped return envelope. The participant letter explained that participation was voluntary, confidentiality was guaranteed, and also notified subjects of the return date deadline. Students choosing to participate in research filled out the survey and returned it in the pre-addressed and stamped envelope that was provided. No follow-up mailings were disbursed and all returned (162) student surveys were then held in a locked office on the Oklahoma State University campus for data entry and statistical analysis.

Research Design and Statistical Analysis

The research design and statistical analysis incorporated a comparative survey with a one-way ANOVA, or chi-square tests for independence or t-tests as appropriate, and all analyses were tested at the 0.05 level of statistical significance. This was done to compare the scores of the five different ethnicities and differing sexes of the current sample with those scores from the Centers for Disease Control and Prevention's National College Health Risk Behavior Survey from 1995.

CHAPTER IV

RESULTS AND DISCUSSION

The problem of this study was to determine the differences in college student's

health risk behaviors among varying ethnic groups. By targeting specific subgroups and

addressing their different health behaviors, health education programs can target and

focus on specific health risks among ethnic college students. Therefore, it is important to

explore and document how health risk behaviors vary among different cultures. Also, by

investigating the differences in beliefs, fears, and patterns that deal with health risk

behaviors of college students and among the different cultures, college health educators

could find a more efficient way of educating college students about health risks. This

chapter was divided into the three following sections: (1) Analysis of demographic data,

(2) analysis of hypothesis data and research question, and (3) discussion of the results.

Analysis of Demographic Data

Table I (Appendix 3) provides the demographic data for the total group of

participants (162) including: age, sex, class, ethnicity, marital status, and whether the

individual is a full-time or a part-time student. The table provides the frequency and

percent for demographic data for the total group.

Analysis of Data

A null hypothesis and a research question were evaluated in this investigation and each was examined to determine if a significant difference of $p < .05$ occurred between the groups.

Hypothesis One

It was hypothesized that there would be no significant difference in scores among the five ethnic groups on the Modified National College Health Risk Behavior Survey. A one-way ANOVA, or chi-square test of independence as appropriate, was performed to analyze these differing ethnic groups. Results are indicated in Tables 2 through 44.

There was no significant difference among ethnic groups when addressing any of the various health behaviors assessed on the survey. Therefore, the null hypothesis was accepted.

Research Question

Earlier in this study, the research question was asked: In a population of college students, what differences in scores on the Modified National College Health Risk Behavior Survey might be found between male and female students? Independent sample t-tests, or chi-square t-tests of independence, were performed to analyze the differing sexes and there were some significant differences found between the two sexes. Since this variable showed there were some statistically significant differences relating to the various health behaviors, this indicates that the two groups were not always similar. These results are found in tables 45-86.

The results to the research question yielded significant differences between male and female students on the following questions. Regarding the number of times individuals ate green salad, males had a mean of .25 while females had a mean of .51. Concerning the number of times individuals ate hamburger, hot dogs, or sausage, males had a mean of .82 while females had a mean of .44. With reference to the way the individuals described their weight, males had a mean of 2.98 while females had a mean of 3.28. On the topic of how many times the students engaged in strength exercises, males had a mean of 2.22 while females had a mean of 1.48. When asked if the individual had been driving after drinking, males had a mean of 1.00 while females had a mean of .46. In regards to physical fighting, males had a mean of .20 while females had a mean of only .04. When the individuals were asked if they were dieting to lose or keep from gaining weight, only 12 percent of the males and 42 percent of the females that participated in the study were currently doing so, while 43 percent of the males and 62 percent of the females were exercising to lose or keep from gaining weight. When individuals were asked if they, or their partner, used a condom at last intercourse, 69 percent of the males and 40 percent of the females responded with a yes answer. These results show there is a significant difference between males and females on specific health behaviors including nutrition, body image, exercising, personal safety, violence, and sexual health.

Discussion of the Results

The problem of this study was to determine the differences in college student's health risk behaviors among varying ethnic groups. By targeting specific subgroups and

addressing their different health behaviors, health education programs can target and focus on specific health risks among ethnic college students. Therefore, it was important to explore and document how health risk behaviors varied among different cultures. Also, by investigating the differences in beliefs, fears, and patterns that deal with health risk behaviors of college students and among the different cultures, college health educators could find a more efficient way of educating college students about health risks. A survey style study that was designed by the Centers for Disease Control and Prevention was used for this study to measure any differences in health behaviors among the ethnic groups and between the sexes. It was then hypothesized that there would be no significant differences in health behaviors among the ethnic groups. This hypothesis was accepted. The reasoning for this lack of differences between the ethnic groups is unknown and merits further research studies to address its possibilities. One possibility for this result could be socioeconomic status of college students. Financial and educational resources of individuals on a college campus are most often different than those of individuals living in an urban setting. One should also use caution when interpreting this data due to the sample size of specific ethnicities. For this study, the sample sizes were as follows: Caucasian-56, African American-12, Hispanic-35, Asian-30, and Native American-26. It should also be noted that not all individuals answered every question on the Modified National College Health Risk Behavior Survey so the sample size varies with each question.

It was also questioned whether there would be any significant differences in survey scores between males and females. When addressing the topics of nutrition, body weight, physical activity, tobacco, drugs, sexual behaviors, drinking, and personal safety,

there were some areas of significant difference determined between the male and female subjects. However, it was surprising that there was not a greater amount of differences between the two groups on some of the various topics. It has been a popular belief that certain health risk behaviors tend to be sex related. An example of this would be the increasing concerns about body image in males. This was once a more female prominent issue but is now carrying a similar level of concern in both males and females. These findings lead a researcher to believe that health risk social norms that were once sex related may now be leaning towards a more neutral state of concern. This discovery would also benefit from more in depth research.

This study also merits inquisition as to how the students at this specific institution measured against those students on the national level. A summary of topics taken from the survey at this institution was compared to the same survey answers that were given by students nationally. When analyzing the summary of the health risk behaviors addressed by the Centers for Disease Control and Prevention's survey, it is noted that students from Oklahoma State University are very comparable to those students at a national level. One can conclude that students from this Oklahoma State University are slightly more likely to wear their seatbelts, participate in episodic heavy drinking, drive after drinking alcohol, use condoms during intercourse, and be slightly overweight. However, they are also more likely to exercise and participate in vigorous physical activity and strengthening exercise as well. Optimistically, these Oklahoma State University students also proved to be less likely to carry a weapon, participate in a physical fight, consider attempting suicide, and they also ranked at a significantly lower percentage for cigarette and cocaine use than those students at the national level.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS, & RECOMMENDATIONS

Summary of Findings

The problem of this study was to determine the differences in college student's health risk behaviors among varying ethnic groups. By targeting specific subgroups and addressing their different health behaviors, health education programs can target and focus on specific health risks among ethnic college students. It was important to explore and document how health risk behaviors varied among the different cultures and investigate the differences in beliefs, fears, and patterns that deal with health risk behaviors of college students. By doing this, college health educators hoped to find a more efficient way of educating college students about health risks. The sample for this study was chosen from a simple random sample of students enrolled in the fall semester of 2003 at Oklahoma State University. The participants were selected through a random selection done by Institutional Research Services student information system. Students of various ethnic backgrounds, which included Caucasian, African American, Native American, Hispanic, and Asian and whose ages also ranged from 18-25 years old were randomly chosen. Their data was then collected and analyzed at the .05 level of significance. The hypothesis and the research question were then examined to see if differences occurred between the different ethnic groups and between the different sexes. The findings of this study were based on the following hypothesis and research question:

- *Hypothesis One-There will be no significant differences in scores among the five ethnic groups on the Modified National College Health Risk Behavior Survey. Hypothesis One: Accepted*

- *Research Question- In a population of college students, what differences in scores on the Modified National College Health Risk Behavior Survey might be found between male and female students?*

The results of this study found that: 1) The different ethnic groups showed no significant differences in health behaviors and 2) The two sexes showed significant differences in the following behaviors: the number of times they ate green salad, hamburger, hot dogs, or sausage, the way they described their weight, the number of times they engaged in strength exercises, driving after drinking, physical fighting, dieting and exercising to lose or keep from gaining weight, and condom use.

Based on the literature review, it is known that more work is needed to determine the reasons for the differences in racial and ethnic health risk behaviors. A better understanding of these differences could help develop more effective public health prevention programs. The literature review also pointed out how racial and ethnic-specific data could provide a platform for monitoring the prevalence of access to health care, health-status indicators, health-risk behaviors, and use of clinical preventative services among various racial and ethnic groups. Consequently, this study looked at all of the above-mentioned aspects as well as the sex related health behaviors.

Conclusions

The results of this study indicated there were no health behaviors that revealed a statistically significant difference among the five ethnic groups at Oklahoma State University. This demonstrates that the ethnic groups at this particular institution have similar thoughts, beliefs, and fears related to health risk behaviors. Conclusions drawn from this hypothesis have verified some common beliefs about health risk behaviors and ethnic groups as well as intrigued some new possibilities for ethnic and gender related health risk behaviors. These results suggest that further research studies are needed to explore these findings.

However, the results to the research question did yield some significant differences between male and female students on specific topics. The results showed there is a significant difference between males and females on specific health behaviors including nutrition, body image, exercising, personal safety, violence, and sexual health.

It is worthwhile to further explore the relationship between students of ethnic backgrounds and gender related health risk behaviors patterns when planning, developing, and implementing new health education programs tailored to specific ethnic students. It is also justifiable to make note of the comparisons between these Oklahoma State University students and those students throughout the country and research possible correlations between those students and their ethnic backgrounds.

The Emerging Significance of Health Education Tailoring

Recent immigration and lack of fluency in English can affect the prevalence of risks for chronic disease and injury among certain racial and ethnic groups. In 1997, 61

percent of the Asian portion and 38 percent of the Hispanic portion of the U.S. population were foreign born; in contrast, only 8 percent of the white portion, 6 percent of the black portion, and 6 percent of the American Indian portion were foreign born. Although some immigrants are highly educated and have high incomes, lack of familiarity with the U.S. public and private health systems, different cultural attitudes about the use of traditional and U.S. conventional medicine, and lack of fluency in English may pose barriers to obtaining appropriate health care (Bolen et al, 2000). They also noted that conditions associated with very poor urban areas (e.g., high rates of circulatory diseases, accidents, homicide, crime, infection with the human immunodeficiency virus, and exposure to environmental hazards) could negatively affect health. Conversely, living outside metropolitan areas can also be a risk factor for poor health, because fewer opportunities may exist for health-care and clinical preventive services. Racial and ethnic groups tend to distribute themselves differently in urban and rural settings. For example, American Indians are the most likely group to live outside metropolitan areas. More than one half of Hispanics and blacks and nearly one half of Asians, but only one fourth of whites, live in central cities.

Ongoing state-specific information is important in identifying or monitoring the prevalence of access to health care, health-status indicators, health-risk behaviors, and use of clinical preventative services among various racial and ethnic groups. These data can be used to identify disparities among racial and ethnic groups and to plan, implement, and evaluate culturally appropriate prevention programs at the state and local levels.

Recommendations

<u>Recommendations for Health Educators</u>

The literature review points out the necessity for college health education throughout this country. With the growing knowledge of risk factors and prevention measures, it is crucial to communicate this information to individuals. More importantly, it is apparent that as college health educators, we must take advantage of every opportunity given to promote healthy lifestyles and safety throughout the younger populations. College health educators have taken an active role in the efforts to minimize health care costs through the promotion of health education programs, changes in health care delivery systems, and by addressing issues that are related to nutrition, physical activity, sexual behavior, tobacco, alcohol, drugs, and safety. Pro-active health promotion can decrease the amount of dollar expenditures and increase the quality of life (Okeson, D. 2001).

A variety of health education methods have been utilized on college campuses to improve health behavior awareness. Some methods include videos, guest speakers, information pamphlets, classroom instruction, peer education, topic awareness dates, and student/faculty panels. Though many find these strategies helpful and some even successful, many others have doubts about their effectiveness. Some health educators believe that methods that work effectively for some students may not work as effectively for other students. The findings of this study indicate several responsibilities for health educators and the following are recommendations for those individuals to help promote healthy lifestyle behaviors.

1. It is important to have educational materials and references readily available to students of all ethnic backgrounds. This would entail materials that are culturally sensitive and in appropriate languages.

2. It is important to invest time and financial efforts in order to receive detailed feedback from the varying ethnic groups. By doing this, it would enable health educators to better understand which methods are and are not working and the reasons for their successes and failures.

3. It is important to have educational materials and references that are gender specific readily available to all students. This would entail materials that are accessible in a discrete and confidential manner.

4. It is important to invest time and financial efforts in order to receive detailed feedback from students of both sexes. By doing this, it would enable health educators to better understand which methods are and are not working and the reasons for their successes and failures.

5. It is important for the health educator to make the student feel they can be an active contributor to their future health. Giving student's crucial information and knowledge about their lifestyles, regardless of ethnic backgrounds or sex, can accomplish this task.

6. It is crucial for health educators to make themselves readily available in the event a student desires their assistance for a reference point or a follow-up.

<u>Recommendations for Further Study</u>

It is worthwhile to further explore the relationship between students of ethnic backgrounds and gender related health risk behaviors patterns when planning, developing, and implementing new health education programs tailored to specific ethnic students. It is also justifiable to make note of the comparisons between these Oklahoma State University students and those students throughout the country and research possible correlations between those students and their ethnic backgrounds. Due to the findings of this study and the growing importance of healthy lifestyle behaviors, the following recommendations are made for future research studies:

1. A qualitative study to find what factors motivate, drives, and discourage individuals with different ethnic backgrounds to seek healthier lifestyle behaviors.

2. A qualitative study to find what factors motivate, drives, and discourage individuals of opposite sexes to seek healthier lifestyle behaviors.

As mentioned previously by Keeling (2000) "Our professional emphasis on health is legitimate and authentic; we must give college health high priority." Students have an incredible opportunity to make the most of their health by starting prevention methods early. As college health educators, we can utilize our knowledge and health promotion abilities to broaden healthier lifestyles one student at a time.

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APPENDIX 1

MODIFIED NATIONAL COLLEGE HEALTH RISK BEHAVIOR SURVEY

Health Behavior Survey

1. How old are you? (circle one)   18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
      37 38 other

2. What is your gender? (circle one) Female   Male

3. What is your class standing? (circle one) Freshman   Sophomore   Junior   Senior   Graduate Student

4. Are you a full-time student? (circle one) Yes   No

5. How do you describe yourself?   (checkmark one)   _____ White - non-Hispanic
                                                     _____ Black - non-Hispanic
                                                     _____ Hispanic or Latino
                                                     _____ Asian or Pacific Islander
                                                     _____ American Indian or Alaskan Native
                                                     _____ Other

6. What is your marital status? (circle one) Never been married   Married   Separated   Divorced   Widowed

The following 7 questions are about food you ate or drank yesterday. Think about all of the food and snacks you had from the time you got up until you went to bed. (circle your response)

7. How many times did you eat fruit?	0 times	1 time	2 times	3 or more times
8. How many times did you drink fruit juice?	0 times	1 time	2 times	3 or more times
9. How many times did you eat green salad?	0 times	1 time	2 times	3 or more times
10. How many times did you eat cooked vegetables?	0 times	1 time	2 times	3 or more times
11. How many times did you eat hamburger, hot dogs, or sausage?	0 times	1 time	2 times	3 or more times
12. How many times did you eat french fries or potato chips?	0 times	1 time	2 times	3 or more times
13. How many times did you eat cookies, doughnuts, pie, or cake?	0 times	1 time	2 times	3 or more times

The next 7 questions ask you about body weight and physical activity. (circle your response)

14. How do you describe your weight?
     Very underweight   Slightly underweight   About the right weight   Slightly overweight   Very overweight

15. During the past 30 days, did you diet to lose weight or to keep from gaining weight?   Yes   No

16. During the past 30 days, did you exercise to lose weight or to keep from gaining weight?   Yes   No

17. During the past 30 days, did you vomit or take laxatives to lose weight or keep from gaining weight? Yes   No

18. During the past 30 days, did you take any diet pills to lose weight or to keep from gaining weight?   Yes   No

19. On how many of the past 7 days did you exercise or participate in physical activity for at least 20 minutes that made you sweat and breathe hard, such as basketball, running, swimming laps, fast bicycling, fast dancing, or similar aerobic activities?

        0 days   1 day   2 days   3 days   4 days   5 days   6 days   7 days

20. On how many of the past 7 days did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weight lifting?

        0 days   1 day   2 days   3 days   4 days   5 days   6 days   7 days

The following 7 questions ask about tobacco use. (circle your response)

21. Have you ever tried cigarette smoking, even one or two puffs?   Yes   No

22. How old were you when you smoked a whole cigarette for the first time?

    never   8   9   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   25   other

23. During the past 30 days, on how many days did you smoke cigarettes?

    0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

24. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?

    didn't smoke 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 other

25. Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?   Yes   No

26. Have you ever tried to quit smoking cigarettes?   Yes   No

27. During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?

    0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

The next 7 questions are about sexual behavior. (circle your response)

28. During the past 30 days, how many times did you have sexual intercourse?

    0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

29. How old were you when you had sexual intercourse for the first time?

    never had sexual intercourse   12   13   14   15   16   17   18   19   20   21   22   23   24   25 other

30. How many times have you been pregnant or gotten someone pregnant?   0 1 2 3 4 5 6 7 8 9 10 11 12 not sure

31. Have you ever had your blood tested for the AIDS virus/HIV infection?   Yes   No   Not sure

32. Did you drink alcohol or use drugs before you had sexual intercourse the last time?

    never had sexual intercourse   Yes   No

33. The last time you had sexual intercourse, did you or your partner use a condom?

    never had sexual intercourse   Yes   No

34. The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy?

No method was used   Birth control pills   Condoms   Withdrawal   Some other method   Not sure

The following 7 questions ask about social drug use and drinking alcohol. (circle your response)

35. During the past 30 days, on how many days did you have at least one drink of alcohol?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

36. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, (within a couple of hours)?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

37. During your life, how many times have you used marijuana?

0 times   1 or 2 times   3 to 9 times   10 to 19 times   20 to 39 times   40 to 99 times   100 or more times

38. During your life, how many times have you used any form of cocaine, including powder, crack, or freebase?

0 times   1 or 2 times   3 to 9 times   10 to 19 times   20 to 39 times   40 to 99 times   100 or more times

39. During your life, how many times have you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?

0 times   1 or 2 times   3 to 9 times   10 to 19 times   20 to 39 times   40 to 99 times   100 or more times

40. During your life, how many times have you taken steroid pills or shots without a doctor's prescription?

0 times   1 or 2 times   3 to 9 times   10 to 19 times   20 to 39 times   40 to 99 times   100 or more times

41. During your life, how many times have you used any other type of illegal drug, such as LSD, PCP, ecstasy, mushrooms, speed, ice, or heroin?

0 times   1 or 2 times   3 to 9 times   10 to 19 times   20 to 39 times   40 to 99 times   100 or more times

The following questions ask about personal safety. (circle your response)

42. How often do you wear a seat belt when riding in a car driven by someone else?

Never   Rarely   Sometimes   Most of the time   Always

43. How often do you wear a seat belt when driving a car?

I do not drive a car   Never   Rarely   Sometimes   Most of the time   Always

44. During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?

    0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

45. During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?

    0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

46. During the past 30 days, on how many days did you carry a gun (not counting if it is part of your job)?

    0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

47. During the past 12 months, how many times were you in a physical fight?

    0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

48. During the past 12 months, did you ever seriously consider attempting suicide?   Yes   No

49. During the past 12 months, did you make a plan about how you would attempt suicide?   Yes   No

Did you answer all of the questions?

Thank you for your assistance. Please return the survey in the enclosed envelope.

APPENDIX 2

PARTICIPANT LETTER

Dear OSU Student:

You are being asked to participate in a research study, which examines health behaviors among OSU students. The research is designed to help us understand more about the factors, which might influence health-related behaviors in college students.

This research is being conducted as a part of my Master's studies and I'm asking for your voluntary participation. It will only take you about 30 minutes to complete and return the enclosed questionnaire. Some of the questions ask for disclosure of very personal information concerning nutrition, diet, exercise, tobacco use, sexual health, drugs and alcohol, and general health and safety. There are no known risks associated with this type of research. You may withdraw your participation at any time without penalty. We will not ask for your name or any other identifying information so it will not be possible to identify your responses by name. Data will be reported only in aggregate form and no individual data will be revealed. The data are stored in coded form and only the researcher has access to the information. None of the information that you provide will be revealed to anyone else, therefore, complete confidentiality will be maintained.

This project has been reviewed by the Institutional Review Board (IRB) for the Protection of Human Subjects at Oklahoma State University. If you have questions about your participation, you may contact the researchers at the addresses below or you may contact Ms. Sharon Bacher (405-744-5700) at the IRB at Oklahoma State University.

Your participation in this study is greatly appreciated. By providing this information, you are agreeing to participate in this research.

Sincerely yours,

Ms. Kari Eckhardt
432 Willard Hall
CAMPUS
405-744-7476

Steven W. Edwards, Ph.D., FACSM
Professor, Oklahoma State University
432 Willard Hall
CAMPUS
405-744-7476

APPENDIX 3

DATA TABLES

TABLE I

DEMOGRAPHIC DATA

Variable		Freq	Percent
Group Total		162	100.0
Age	18	24	14.8
	19	30	18.5
	20	22	13.6
	21	27	16.7
	22	24	14.8
	23	17	10.5
	24	18	11.1
Gender	Male	52	32.1
	Female	110	67.9
Class	Freshman	29	17.9
	Sophomore	35	21.6
	Junior	35	21.6
	Senior	47	29.0
	Graduate	16	9.9
Full-Time	Yes	154	95.1
Student	No	7	4.3
	No Answer	1	.6
Race	White	56	34.6
	Black	12	7.4
	Hispanic	35	21.6
	Asian	30	18.5
	Indian	26	16.0
	Other	3	1.9
Marital Status	Not Married	152	93.9
	Married	8	4.9
	Divorced	1	.6
	No Answer	1	.6

TABLE 2
How many times did you eat fruit?

Times	White	Black	Hispanic	Asian	Indian	Total Group
0	26 (46%)	4 (33%)	17 (49%)	14 (47%)	12 (46%)	75 (46%)
1	19 (34%)	6 (50%)	10 (28%)	9 (30%)	12 (46%)	56 (35%)
2	5 (9%)	2 (17%)	7 (20%)	5 (17%)	1 (4%)	21 (13%)
3	6 (11%)	0 (0%)	1 (3%)	2 (6%)	1 (4%)	10 (6%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 3
How many times did you drink fruit juice?

Times	White	Black	Hispanic	Asian	Indian	Total Group
0	26 (46%)	3 (25%)	19 (54%)	14 (47%)	10 (39%)	72 (44%)
1	15 (27%)	4 (33%)	10 (29%)	7 (23%)	8 (31%)	46 (28%)
2	10 (18%)	3 (25%)	5 (14%)	4 (13%)	4 (15%)	27 (17%)
3	5 (9%)	2 (17%)	1 (3%)	5 (17%)	4 (15%)	17 (11%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 4
How many times did you eat green salad?

Times	White	Black	Hispanic	Asian	Indian	Total Group
0	34 (60%)	6 (50%)	24 (67%)	18 (60%)	18 (69%)	103 (64%)
1	19 (34%)	6 (50%)	10 (29%)	12 (40%)	5 (19%)	52 (32%)
2	2 (4%)	0 (0%)	1 (4%)	0 (0%)	2 (8%)	5 (3%)
3	1 (2%)	0 (0%)	0 (0%)	0 (0%)	1 (4%)	2 (1%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 5
How many times did you eat cooked vegetables?

Times	White	Black	Hispanic	Asian	Indian	Total Group
0	27 (48%)	5 (42%)	22 (63%)	12 (40%)	13 (50%)	81 (50%)
1	18 (32%)	3 (25%)	9 (26%)	12 (40%)	9 (35%)	52 (32%)
2	9 (16%)	3 (25%)	4 (11%)	4 (13%)	4 (15%)	24 (15%)
3	2 (4%)	1 (8%)	0 (0%)	2 (7%)	0 (0%)	5 (3%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 6
How many times did you eat hamburger, hot dogs, or sausage?

Times	White	Black	Hispanic	Asian	Indian	Total Group
0	35 (63%)	9 (75%)	18 (51%)	13 (43%)	13 (50%)	91 (56%)
1	14 (25%)	3 (25%)	16 (46%)	11 (37%)	13 (50%)	57 (35%)
2	5 (8%)	0 (0%)	1 (3%)	4 (13%)	0 (0%)	10 (6%)
3	2 (4%)	0 (0%)	0 (0%)	2 (7%)	0 (0%)	4 (3%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 7
How many times did you eat french fries or potato chips?

Times	White	Black	Hispanic	Asian	Indian	Total Group
0	32 (57%)	7 (58%)	22 (63%)	10 (33%)	11 (42%)	82 (51%)
1	20 (35%)	4 (34%)	11 (31%)	16 (53%)	12 (46%)	66 (41%)
2	2 (4%)	1 (8%)	2 (6%)	4 (14%)	2 (8%)	11 (6%)
3	2 (4%)	0 (0%)	0 (0%)	0 (0%)	1 (4%)	3 (2%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 8
How many times did you eat cookies, doughnuts, pie, or cake?

Times	White	Black	Hispanic	Asian	Indian	Total Group
0	29 (52%)	7 (58%)	18 (53%)	13 (43%)	11 (42%)	79 (50%)
1	20 (36%)	2 (17%)	12 (35%)	12 (40%)	8 (31%)	55 (34%)
2	3 (5%)	3 (25%)	3 (9%)	5 (17%)	5 (19%)	20 (12%)
3	4 (7%)	0 (0%)	1 (3%)	0 (0%)	2 (8%)	7 (4%)
Total	56(100%)	12(100%)	34(100%)	30(100%)	26(100%)	161(100%)

TABLE 9
Describe your weight

Weight	White	Black	Hispanic	Asian	Indian	Total Group
Very Underweight	1 (2%)	0 (0%)	2 (6%)	0 (0%)	0 (0%)	3 (2%)
Slightly Underweight	9 (16%)	1 (8%)	3 (9%)	8 (27%)	2 (8%)	24 (15%)
About Right Weight	29 (52%)	7 (58%)	17 (49%)	12 (40%)	16 (62%)	82 (50%)
Slightly Overweight	15 (26%)	4 (34%)	11 (30%)	8 (27%)	8 (30%)	47 (29%)
Very Overweight	2 (4%)	0 (0%)	2 (6%)	2 (6%)	0 (0%)	6 (4%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162 (100%)

TABLE 10
Did you diet to lose weight or keep from gaining weight?

Diet	White	Black	Hispanic	Asian	Indian	Total Group
Yes	14 (25%)	5 (42%)	16 (46%)	7 (23%)	9 (35%)	51 (32%)
No	42 (75%)	7 (58%)	19 (54%)	23 (77%)	17 (65%)	111 (68%)
Total	56 (100%)	12 (100%)	35 (100%)	30 (100%)	26 (100%)	162(100%)

TABLE 11
Did you exercise to lose weight or keep from gaining weight?

Diet	White	Black	Hispanic	Asian	Indian	Total Group
Yes	33 (59%)	4 (33%)	21 (60%)	17 (57%)	14 (54%)	91 (56%)
No	23 (41%)	8 (67%)	14 (40%)	13 (43%)	12 (46%)	71 (44%)
Total	56(100%)	12 (100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 12
Did you vomit or take laxatives to lose weight?

Diet	White	Black	Hispanic	Asian	Indian	Total Group
Yes	1 (2%)	0 (0%)	1 (3%)	0 (0%)	1 (4%)	3 (2%)
No	55 (98%)	12 (100%)	34 (97%)	30 (100%)	25 (96%)	159 (98%)
Total	56 (100%)	12 (100%)	35(100%)	30 (100%)	26(100%)	162(100%)

TABLE 13
Did you take any diet pills to lose weight or keep from gaining weight?

Diet	White	Black	Hispanic	Asian	Indian	Total Group
Yes	1 (2%)	0 (0%)	8 (23%)	0 (0%)	2 (8%)	11 (7%)
No	55 (98%)	11 (100%)	27 (77%)	30 (100%)	24 (92%)	150 (93%)
Total	56(100%)	11 (100%)	35 (100%)	30 (100%)	26 (100%)	161(100%)

TABLE 14

In the last week, how many days were you engaged in aerobic activities?

Days	White	Black	Hispanic	Asian	Indian	Total Group
0	9 (16%)	3 (25%)	10 (29%)	10 (34%)	9 (35%)	43 (26%)
1	8 (14%)	3 (25%)	7 (20%)	4 (12%)	4 (15%)	26 (16%)
2	5 (9%)	1 (8%)	4 (11%)	2 (7%)	5 (19%)	17 (11%)
3	13 (23%)	2 (18%)	7 (20%)	2 (7%)	5 (19%)	29 (18%)
4	9 (16%)	1 (8%)	1 (3%)	6 (20%)	2 (8%)	20 (12%)
5	2 (4%)	0 (0%)	1 (3%)	3 (10%)	1 (4%)	7 (4%)
6	6 (11%)	1 (8%)	1 (3%)	1 (3%)	0 (0%)	9 (6%)
7	4 (7%)	1 (8%)	4 (11%)	2 (7%)	0 (0%)	11 (7%)
Total	56 (100%)	12 (100%)	35 (100%)	30 (100%)	26 (100%)	162 (100%)

TABLE 15

In the last week, how many days were you engaged in strength exercises?

Days	White	Black	Hispanic	Asian	Indian	Total Group
0	19 (34%)	6 (50%)	16 (46%)	14 (47%)	15 (58%)	73 (44%)
1	9 (16%)	2 (18%)	3 (9%)	3 (10%)	3 (12%)	20 (12%)
2	3 (5%)	1 (8%)	8 (22%)	3 (10%)	1 (4%)	16 (10%)
3	12 (22%)	1 (8%)	5 (14%)	4 (13%)	4 (14%)	26 (16%)
4	3 (5%)	1 (8%)	0 (0%)	2 (7%)	2 (8%)	8 (5%)
5	5 (9%)	1 (8%)	0 (0%)	2 (7%)	1 (4%)	9 (6%)
6	3 (5%)	0 (0%)	0 (0%)	1 (3%)	0 (0%)	4 (3%)
7	2 (4%)	0 (0%)	3 (9%)	1 (3%)	0 (0%)	6 (4%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 16

Ever tried smoking?

Smoked	White	Black	Hispanic	Asian	Indian	Total Group
Yes	33 (59%)	5 (42%)	26 (74%)	15 (50%)	19 (73%)	101 (62%)
No	23 (41%)	7 (58%)	9 (26%)	15 (50%)	7 (27%)	61 (38%)
Total	56 (100%)	12 (100%)	35 (100%)	30 (100%)	26 (100%)	162 (100%)

TABLE 17
What was your age when you smoked a whole cigarette?

Age	White		Black		Hispanic		Asian		Indian		Total Group	
6	0	(0%)	0	(0%)	1	(5%)	0	(0%)	0	(0%)	1	(1%)
10	1	(4%)	0	(0%)	0	(0%)	0	(0%)	1	(6%)	2	(3%)
11	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(6%)	1	(1%)
12	0	(0%)	0	(0%)	3	(15%)	0	(0%)	0	(0%)	4	(5%)
13	4	(15%)	0	(0%)	1	(5%)	1	(8%)	2	(13%)	8	(10%)
14	4	(15%)	0	(0%)	1	(5%)	0	(0%)	1	(6%)	6	(7%)
15	2	(7%)	0	(0%)	2	(10%)	2	(14%)	0	(0%)	7	(10%)
16	5	(19%)	1	(50%)	4	(20%)	1	(8%)	10	(63%)	21	(26%)
17	3	(11%)	1	(50%)	4	(20%)	1	(8%)	0	(0%)	9	(11%)
18	2	(7%)	0	(0%)	3	(15%)	3	(23%)	1	(6%)	10	(12%)
19	2	(7%)	0	(0%)	1	(5%)	1	(8%)	0	(0%)	4	(5%)
20	0	(0%)	0	(0%)	0	(0%)	1	(8%)	0	(0%)	1	(1%)
21	2	(7%)	0	(0%)	0	(0%)	3	(23%)	0	(0%)	5	(6%)
22	1	(4%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
23	0	(0%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)
24	1	(4%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
Total	27	(100%)	2	(100%)	20	(100%)	13	(100%)	16	(100%)	81	(100%)

TABLE 18
In the last month, how many days have you smoked cigarettes?

Days	White		Black		Hispanic		Asian		Indian		Total Group	
0	46	(83%)	11	(92%)	29	(82%)	24	(80%)	18	(68%)	131	(80%)
1	2	(3%)	0	(0%)	2	(6%)	1	(3%)	2	(8%)	7	(4%)
2	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
3	0	(0%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	1	(1%)
4	0	(0%)	0	(0%)	0	(0%)	1	(3%)	1	(4%)	2	(1%)
5	1	(2%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	2	(1%)
8	1	(2%)	0	(0%)	0	(0%)	2	(7%)	0	(0%)	3	(2%)
9	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
15	0	(0%)	0	(0%)	0	(0%)	0	(0%)	3	(12%)	3	(2%)
16	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
19	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
20	1	(2%)	0	(0%)	2	(6%)	0	(0%)	1	(4%)	4	(2%)
25	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	1	(1%)
30	0	(0%)	1	(8%)	0	(0%)	2	(7%)	0	(0%)	3	(2%)
Total	55	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	161	(100%)

TABLE 19
Number of cigarettes smoked per day?

Cigarettes	White		Black		Hispanic		Asian		Indian		Total Group	
2	3	(42%)	0	(0%)	3	(50%)	3	(49%)	1	(17%)	10	(38%)
4	2	(29%)	0	(0%)	2	(33%)	0	(0%)	5	(83%)	9	(34%)
6	2	(29%)	0	(0%)	0	(0%)	1	(17%)	0	(0%)	3	(12%)
8	0	(0%)	0	(0%)	0	(0%)	1	(17%)	0	(0%)	1	(4%)
18	0	(0%)	1	(100%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)
20	0	(0%)	0	(0%)	1	(17%)	1	(17%)	0	(0%)	2	(8%)
Total	7	(100%)	1	(100%)	6	(100%)	6	(100%)	6	(100%)	26	(100%)

TABLE 20
Do you smoke cigarettes daily?

Smoke Daily	White		Black		Hispanic		Asian		Indian		Total Group	
Yes	5	(9%)	1	(8%)	5	(15%)	3	(10%)	5	(19%)	19	(12%)
No	49	(91%)	11	(92%)	29	(85%)	27	(90%)	21	(81%)	140	(88%)
Total	54	(100%)	12	(100%)	34	(100%)	30	(100%)	26	(100%)	159	(100%)

TABLE 21
Have you ever tried to quit smoking cigarettes?

Tried to Quit	White		Black		Hispanic		Asian		Indian		Total Group	
Yes	6	(11%)	1	(9%)	6	(19%)	4	(14%)	3	(13%)	20	(13%)
No	47	(89%)	10	(91%)	25	(81%)	24	(86%)	20	(87%)	129	(87%)
Total	53	(100%)	11	(100%)	31	(100%)	28	(100%)	23	(100%)	149	(100%)

TABLE 22
During the last month, how many days have you used smokeless tobacco?

Days	White		Black		Hispanic		Asian		Indian		Total Group	
0	49	(88%)	12	(100%)	34	(97%)	30	(100%)	25	(96%)	153	(94%)
1	3	(6%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	3	(2%)
2	0	(0%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	1	(1%)
15	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
28	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
30	1	(2%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	2	(1%)
Total	55	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	161	(100%)

TABLE 23
During the last month, how many times have you had sexual intercourse?

Times	White		Black		Hispanic		Asian		Indian		Total Group	
0	29	(51%)	4	(34%)	15	(43%)	21	(72%)	7	(26%)	78	(47%)
1	7	(12%)	1	(8%)	2	(6%)	1	(3%)	2	(8%)	13	(7%)
2	2	(4%)	1	(8%)	2	(6%)	0	(0%)	1	(4%)	6	(4%)
3	3	(5%)	0	(0%)	2	(6%)	1	(3%)	2	(8%)	8	(5%)
4	3	(5%)	1	(8%)	1	(3%)	0	(0%)	1	(4%)	6	(4%)
5	1	(2%)	2	(18%)	1	(3%)	1	(3%)	2	(8%)	7	(4%)
6	2	(4%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	3	(2%)
7	1	(2%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	3	(2%)
8	1	(2%)	0	(0%)	0	(0%)	2	(7%)	0	(0%)	3	(2%)
9	0	(0%)	1	(8%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
10	4	(7%)	0	(0%)	2	(6%)	1	(3%)	3	(11%)	10	(6%)
11	1	(2%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	2	(1%)
12	1	(2%)	1	(8%)	1	(3%)	1	(3%)	1	(4%)	5	(3%)
15	0	(0%)	1	(8%)	1	(3%)	0	(0%)	1	(4%)	3	(2%)
20	0	(0%)	0	(0%)	2	(6%)	1	(3%)	3	(11%)	6	(4%)
21	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
22	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	1	(1%)
28	0	(0%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	1	(1%)
30	0	(0%)	0	(0%)	2	(6%)	0	(0%)	2	(8%)	4	(3%)
Total	56	(100%)	12	(100%)	34	(100%)	30	(100%)	26	(100%)	161	(100%)

TABLE 24
What was your age when you first had sexual intercourse?

Age	White		Black		Hispanic		Asian		Indian		Total Group	
12	0	(0%)	0	(0%)	1	(4%)	0	(0%)	0	(0%)	1	(1%)
13	0	(0%)	1	(12%)	0	(0%)	0	(0%)	1	(5%)	2	(2%)
14	3	(9%)	0	(0%)	1	(4%)	0	(0%)	0	(0%)	4	(4%)
15	3	(9%)	1	(12%)	3	(12%)	0	(0%)	3	(14%)	10	(9%)
16	7	(19%)	1	(12%)	6	(22%)	2	(18%)	7	(31%)	23	(21%)
17	8	(14%)	1	(12%)	3	(12%)	1	(9%)	3	(14%)	17	(16%)
18	13	(33%)	1	(13%)	4	(15%)	4	(37%)	5	(22%)	27	(25%)
19	4	(10%)	1	(13%)	4	(15%)	2	(18%)	0	(0%)	11	(10%)
20	1	(3%)	1	(13%)	2	(8%)	2	(18%)	3	(14%)	9	(8%)
21	0	(0%)	1	(13%)	2	(8%)	0	(0%)	0	(0%)	3	(3%)
22	1	(3%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
Total	40	(100%)	8	(100%)	26	(100%)	11	(100%)	22	(100%)	108	(100%)

TABLE 25
How many times have you been pregnant or gotten someone pregnant?

Times	White	Black	Hispanic	Asian	Indian	Total Group
0	49 (89%)	8 (67%)	27 (86%)	29 (100%)	23 (88%)	138 (88%)
1	5 (9%)	3 (25%)	2 (7%)	0 (0%)	3 (12%)	13 (8%)
2	1 (2%)	0 (0%)	2 (7%)	0 (0%)	0 (0%)	4 (3%)
3	0 (0%)	1 (8%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
Total	55 (100%)	12 (100%)	31 (100%)	29 (100%)	26 (100%)	156 (100%)

TABLE 26
Have you ever been tested for AIDS/HIV?

Tested	White	Black	Hispanic	Asian	Indian	Total Group
Yes	19 (34%)	8 (67%)	11 (31%)	5 (16%)	8 (31%)	52 (32%)
No	34 (61%)	4 (33%)	24 (69%)	23 (77%)	17 (65%)	103 (64%)
Not Sure	3 (5%)	0 (0%)	0 (0%)	2 (7%)	1 (4%)	7 (4%)
Total	56 (100%)	12 (100%)	35 (100%)	30 (100%)	26 (100%)	162 (100%)

TABLE 27
Do you drink alcohol before sexual intercourse?

Drank Alcohol	White	Black	Hispanic	Asian	Indian	Total Group
Yes	10 (18%)	0 (0%)	7 (21%)	3 (10%)	3 (12%)	23 (15%)
No	30 (55%)	8 (67%)	20 (61%)	8 (27%)	19 (73%)	86 (54%)
Never had sex	15 (27%)	4 (33%)	6 (18%)	19 (63%)	4 (15%)	50 (31%)
Total	55 (100%)	12 (100%)	33 (100%)	30 (100%)	26 (100%)	159 (100%)

TABLE 28
At last sexual intercourse, did you or your partner use condoms?

Condoms	White	Black	Hispanic	Asian	Indian	Total Group
Yes	19 (35%)	7 (59%)	11 (34%)	6 (20%)	9 (35%)	53 (33%)
No	21 (38%)	1 (8%)	15 (47%)	5 (17%)	13 (50%)	55 (35%)
Never had sex	15 (27%)	4 (33%)	6 (19%)	19 (63%)	4 (15%)	50 (32%)
Total	55 (100%)	12 (100%)	32 (100%)	30 (100%)	26 (100%)	158 (100%)

TABLE 29

At last sexual intercourse, what method of birth control did you or your partner use?

Method	White	Black	Hispanic	Asian	Indian	Total Group
No Method	13 (25%)	4 (33%)	5 (17%)	11 (50%)	3 (14%)	38(27%)
Pills	13 (25%)	0 (0%)	9 (30%)	6 (27%)	8 (36%)	36(26%)
Condoms	12 (24%)	3 (26%)	8 (27%)	4 (18%)	3 (14%)	30(21%)
Withdrawal	3 (6%)	1 (8%)	3 (10%)	0 (0%)	3 (14%)	10(7%)
Some Other Method	1 (2%)	0 (0%)	1 (3%)	0 (0%)	1 (5%)	3(2%)
Not Sure	1 (2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1(1%)
Pills & Withdrawal	1 (2%)	0 (0%)	2 (7%)	0 (0%)	0 (0%)	3(2%)
Pills & Condoms	6 (12%)	4 (33%)	1 (3%)	1 (5%)	4 (17%)	16(11%)
Pills, Condoms, & Withdrawal	1 (2%)	0 (0%)	1 (3%)	0 (0%)	0 (0%)	2(2%)
Withdrawal & Some Other Method	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1(1%)
Total	51(100%)	12(100%)	30(100%)	22(100%)	22(100%)	140(100%)

TABLE 30

During the last month, what number of days did you consume alcohol?

Days	White		Black		Hispanic		Asian		Indian		Total Group	
0	12	(20%)	5	(42%)	7	(20%)	13	(44%)	8	(30%)	45	(27%)
1	7	(10%)	1	(8%)	3	(9%)	4	(14%)	3	(12%)	18	(11%)
2	4	(7%)	2	(17%)	4	(12%)	2	(7%)	5	(18%)	17	(11%)
3	3	(6%)	1	(8%)	6	(17%)	0	(0%)	2	(8%)	13	(8%)
4	3	(6%)	1	(8%)	3	(9%)	0	(0%)	0	(0%)	7	(4%)
5	5	(9%)	0	(0%)	5	(15%)	2	(7%)	0	(0%)	12	(8%)
6	2	(4%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	3	(2%)
7	3	(6%)	2	(17%)	2	(6%)	0	(0%)	2	(8%)	9	(6%)
8	2	(4%)	0	(0%)	2	(6%)	1	(3%)	0	(0%)	5	(3%)
9	1	(2%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	3	(2%)
10	3	(6%)	0	(0%)	0	(0%)	4	(13%)	2	(8%)	9	(6%)
12	2	(4%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	2	(1%)
13	1	(2%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	2	(1%)
14	2	(4%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	3	(2%)
15	2	(4%)	0	(0%)	1	(3%)	1	(3%)	1	(4%)	5	(3%)
16	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	1	(1%)
18	1	(2%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	2	(1%)
20	1	(2%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	2	(1%)
25	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
29	0	(0%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	1	(1%)
Total	55	(100%)	12	(100%)	34	(100%)	30	(100%)	26	(100%)	160	(100%)

TABLE 31
During the last month, how many days did you consume 5+ drinks of alcohol in a row?

Days	White	Black	Hispanic	Asian	Indian	Total Group
0	29 (50%)	5 (42%)	18 (52%)	20 (68%)	14 (53%)	88 (53%)
1	5 (9%)	4 (33%)	4 (12%)	2 (7%)	4 (15%)	19 (11%)
2	5 (9%)	3 (25%)	2 (6%)	0 (0%)	3 (12%)	13 (8%)
3	2 (4%)	0 (0%)	2 (6%)	3 (10%)	1 (4%)	8 (5%)
4	3 (5%)	0 (0%)	3 (9%)	1 (3%)	0 (0%)	8 (5%)
5	0 (0%)	0 (0%)	3 (9%)	0 (0%)	0 (0%)	3 (2%)
6	2 (4%)	0 (0%)	1 (3%)	0 (0%)	1 (4%)	4 (3%)
7	1 (2%)	0 (0%)	1 (3%)	0 (0%)	0 (0%)	2 (1%)
8	1 (2%)	0 (0%)	0 (0%)	1 (3%)	0 (0%)	2 (1%)
9	1 (2%)	0 (0%)	0 (0%)	1 (3%)	0 (0%)	2 (1%)
10	2 (4%)	0 (0%)	0 (0%)	0 (0%)	2 (8%)	4 (3%)
12	1 (2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
13	3 (5%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (2%)
14	0 (0%)	0 (0%)	0 (0%)	1 (3%)	0 (0%)	1 (1%)
15	0 (0%)	0 (0%)	0 (0%)	1 (3%)	0 (0%)	1 (1%)
16	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (4%)	1 (1%)
17	1 (2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
Total	56 (100%)	12 (100%)	34 (100%)	30 (100%)	26 (100%)	161(100%)

TABLE 32
During your life, how many times smoked marijuana?

Times	White	Black	Hispanic	Asian	Indian	Total Group
Never	35(62%)	6 (50%)	15 (43%)	20 (67%)	15 (57%)	92 (58%)
1 or 2	5 (9%)	3 (25%)	7 (21%)	3 (10%)	1 (4%)	20 (12%)
3 to 9	4 (7%)	2 (17%)	3 (9%)	1 (3%)	0 (0%)	10 (6%)
10 to 19	5 (9%)	1 (8%)	3 (9%)	2 (7%)	6 (23%)	17 (11%)
20 to 39	4 (7%)	0 (0%)	1 (3%)	1 (3%)	2 (8%)	8 (5%)
40 to 99	1 (2%)	0 (0%)	1 (3%)	3 (10%)	1 (4%)	7 (4%)
100 / more	2 (4%)	0 (0%)	4 (12%)	0 (0%)	1 (4%)	7 (4%)
Total	56 (100)	12 (100%)	34 (100%)	30 (100%)	26 (100%)	161(100%)

TABLE 33
During your life, how many times have you used cocaine?

Times	White		Black		Hispanic		Asian		Indian		Total Group	
0	53	(94%)	12	(100%)	32	(91%)	28	(94%)	24	(92%)	152	(93%)
1	0	(0%)	0	(0%)	2	(6%)	1	(3%)	1	(4%)	4	(3%)
2	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
3	1	(2%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	2	(1%)
20	0	(0%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	1	(1%)
100	1	(2%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	2	(1%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	162	(100%)

TABLE 34
During your life, how many times have you sniffed glue, aerosol, paints, and sprays?

Times	White		Black		Hispanic		Asian		Indian		Total Group	
0	54	(96%)	12	(100%)	35	(100%)	30	(100%)	25	(96%)	159	(98%)
1	1	(2%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	2	(1%)
3	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	162	(100%)

TABLE 35
During your life, how many times have you used steroid pills or shots?

Days	White		Black		Hispanic		Asian		Indian		Total Group	
0	55	(98%)	12	(100%)	33	(97%)	29	(97%)	26	(100%)	158	(97%)
1	0	(0%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	1	(1%)
3	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
10	0	(0%)	0	(0%)	1	(3%)	0	(0%)	0	(0%)	1	(1%)
Total	56	(100%)	12	(100%)	34	(100%)	30	(100%)	26	(100%)	161	(100%)

TABLE 36
During your life, how many times have you used illegal psychoactive drugs?

Days	White		Black		Hispanic		Asian		Indian		Total Group	
0	48	(86%)	12	(100%)	28	(80%)	28	(94%)	25	(96%)	143	(88%)
1	4	(6%)	0	(0%)	2	(6%)	0	(0%)	1	(4%)	8	(5%)
3	2	(4%)	0	(0%)	2	(6%)	1	(3%)	0	(0%)	5	(3%)
10	0	(0%)	0	(0%)	2	(6%)	1	(3%)	0	(0%)	3	(2%)
40	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
100	1	(2%)	0	(0%)	1	(2%)	0	(0%)	0	(0%)	2	(1%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	162	(100%)

TABLE 37
How often do you use a seat belt when you are a passenger?

How Often	White		Black		Hispanic		Asian		Indian		Total Group	
Never	2	(4%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	2	(1%)
Rarely	4	(7%)	0	(0%)	2	(5%)	0	(0%)	1	(4%)	8	(5%)
Sometimes	4	(7%)	0	(0%)	3	(9%)	1	(4%)	4	(15%)	12	(7%)
Most of the time	14	(25%)	4	(33%)	3	(9%)	8	(26%)	5	(19%)	34	(21%)
Always	32	(57%)	8	(67%)	27	(77%)	21	(70%)	16	(62%)	106	(66%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	162	(100%)

TABLE 38
How often do you use a seat belt when you driving?

How Often	White		Black		Hispanic		Asian		Indian		Total Group	
Do Not Drive	1	(2%)	1	(8%)	0	(0%)	4	(13%)	0	(0%)	6	(4%)
Never	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
Rarely	4	(7%)	0	(0%)	1	(3%)	0	(0%)	2	(8%)	8	(5%)
Sometimes	4	(7%)	0	(0%)	1	(3%)	0	(0%)	2	(8%)	7	(4%)
Most of the time	8	(14%)	2	(17%)	4	(11%)	2	(7%)	6	(22%)	23	(14%)
Always	38	(68%)	9	(75%)	29	(83%)	24	(80%)	16	(62%)	117	(72%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	162	(100%)

TABLE 39
How many times have you ridden with someone who had been drinking?

Times	White		Black		Hispanic		Asian		Indian		Total Group	
0	33	(58%)	9	(76%)	19	(54%)	20	(68%)	16	(61%)	99	(60%)
1	5	(9%)	1	(8%)	5	(14%)	1	(3%)	4	(15%)	16	(10%)
2	4	(7%)	1	(8%)	4	(11%)	3	(10%)	2	(8%)	14	(9%)
3	7	(13%)	0	(0%)	2	(6%)	1	(3%)	1	(4%)	12	(7%)
4	1	(2%)	0	(0%)	3	(9%)	2	(7%)	0	(0%)	6	(4%)
5	1	(2%)	0	(0%)	2	(6%)	1	(3%)	2	(8%)	6	(4%)
6	3	(5%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	4	(3%)
8	0	(0%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	1	(1%)
10	2	(4%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	2	(1%)
12	0	(0%)	1	(8%)	0	(0%)	0	(0%)	1	(4%)	2	(1%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	162	(100%)

TABLE 40

How many times have you driven when you had been drinking?

Times	White		Black		Hispanic		Asian		Indian		Total Group	
0	37	(66%)	11	(92%)	22	(63%)	20	(67%)	20	(76%)	112	(69%)
1	9	(16%)	0	(0%)	8	(23%)	7	(23%)	1	(4%)	25	(15%)
2	5	(9%)	0	(0%)	4	(11%)	1	(3%)	3	(12%)	13	(8%)
3	4	(7%)	0	(0%)	1	(3%)	2	(7%)	0	(0%)	7	(4%)
4	0	(0%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
5	0	(0%)	1	(8%)	0	(0%)	0	(0%)	2	(8%)	3	(2%)
14	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	162	(100%)

TABLE 41

How many times have you carried a gun?

Times	White		Black		Hispanic		Asian		Indian		Total Group	
0	56	(100%)	12	(100%)	35	(100%)	29	(97%)	24	(92%)	159	(97%)
1	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	1	(1%)
2	0	(0%)	0	(0%)	0	(0%)	1	(3%)	0	(0%)	1	(1%)
30	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	1	(1%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	162	(100%)

TABLE 42

How many times have you been in a physical fight?

Times	White		Black		Hispanic		Asian		Indian		Total Group	
0	50	(89%)	11	(92%)	35	(100%)	28	(97%)	24	(92%)	151	(93%)
1	5	(9%)	1	(8%)	0	(0%)	1	(3%)	1	(4%)	8	(5%)
2	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(4%)	1	(1%)
4	1	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	1	(1%)
Total	56	(100%)	12	(100%)	35	(100%)	29	(100%)	26	(100%)	161	(100%)

TABLE 43

Have you ever considered suicide?

Considered	White	Black	Hispanic	Asian	Indian	Total Group
Yes	1 (2%)	2 (17%)	3 (9%)	1 (3%)	3 (12%)	10 (7%)
No	55 (98%)	10 (83%)	32 (91%)	29 (97%)	23 (88%)	152 (93%)
Total	56(100%)	12(100%)	35(100%)	30(100%)	26(100%)	162(100%)

TABLE 44

Have you ever planned on how to commit suicide?

Planned	White		Black		Hispanic		Asian		Indian		Total Group	
Yes	0	(0%)	2	(17%)	2	(6%)	0	(0%)	0	(0%)	4	(3%)
No	56	(100%)	10	(83%)	33	(94%)	30	(100%)	26	(100%)	155	(97%)
Total	56	(100%)	12	(100%)	35	(100%)	30	(100%)	26	(100%)	159	(100%)

TABLE 45

How many times did you eat fruit?

Gender	Number	Mean	Stand. Dev.	t
Males	51	.73	.750	-.648
Females	108	.82	.955	

TABLE 46

How many times did you drink fruit juice?

Gender	Number	Mean	Stand. Dev.	t
Males	51	1.02	1.029	.805
Females	108	.88	1.021	

TABLE 47

How many times did you eat green salad?

Gender	Number	Mean	Stand. Dev.	t
Males	51	.25	.440	*-2.449
Females	108	.51	.677	

*Significant at .05 level

TABLE 48

How many times did you eat cooked vegetables?

Gender	Number	Mean	Stand. Dev.	t
Males	51	.63	.692	-.928
Females	108	.76	.895	

TABLE 49

How many times did you eat hamburger, hot dogs, or sausage?

Gender	Number	Mean	Stand. Dev.	t
Males	51	.82	.817	*3.244
Females	108	.44	.645	

*Significant at .05 level

TABLE 50

How many times did you eat french fries or potato chips?

Gender	Number	Mean	Stand. Dev.	t
Males	51	.65	.716	.686
Females	108	.56	.701	

TABLE 51
How many times did you eat cookies, doughnuts, pie, or cake?

Gender	Number	Mean	Stand. Dev.	t
Males	51	.75	.845	.306
Females	107	.70	.849	

TABLE 52
Describe your weight.

Gender	Number	Mean	Stand. Dev.	t
Males	51	2.98	.787	*-2.231
Females	108	3.28	.783	

*Significant at .05 level

TABLE 53
How many times did you engage in aerobic activities?

Gender	Number	Mean	Stand. Dev.	t
Males	51	2.90	2.119	1.830
Females	108	2.23	2.173	

TABLE 54
How many times did you engage in strength exercises?

Gender	Number	Mean	Stand. Dev.	t
Males	51	2.22	2.212	*2.172
Females	108	1.48	1.877	

*Significant at .05 level

TABLE 55
What was your age when smoked a whole cigarette?

Gender	Number	Mean	Stand. Dev.	t
Males	27	16.11	3.786	.213
Females	51	15.96	2.433	

TABLE 56
How many days did you smoke cigarettes?

Gender	Number	Mean	Stand. Dev.	t
Males	51	2.63	6.600	.692
Females	107	1.91	5.887	

TABLE 57
How many cigarettes did you smoke per day?

Gender	Number	Mean	Stand. Dev.	t
Males	11	4.18	2.089	-.973
Females	15	6.27	6.840	

TABLE 58
How many times have you had sexual intercourse?

Gender	Number	Mean	Stand. Dev.	t
Males	51	3.27	5.040	-1.495
Females	107	5.08	7.904	

TABLE 59
What was your age when you first had sexual intercourse?

Gender	Number	Mean	Stand. Dev.	t
Males	33	17.33	1.671	.365
Females	74	17.19	1.977	

TABLE 60
How many times have you been pregnant or gotten someone pregnant?

Gender	Number	Mean	Stand. Dev.	t
Males	50	.08	.274	-1.223
Females	103	.17	.513	

TABLE 61
In the last month, how many days did you consume alcohol?

Gender	Number	Mean	Stand. Dev.	t
Males	51	5.69	6.032	1.821
Females	106	3.98	5.221	

TABLE 62
In the last month, how many days did you consume 5+ drinks of alcohol in a row?

Gender	Number	Mean	Stand. Dev.	t
Males	51	2.80	4.441	1.577
Females	107	1.81	3.280	

TABLE 63
During your life, how many times have you smoked marijuana?

Gender	Number	Mean	Stand. Dev.	t
Males	51	1.20	1.685	-.153
Females	107	1.24	1.847	

TABLE 64
During your life, how many times have you used cocaine?

Gender	Number	Mean	Stand. Dev.	t
Males	51	2.02	13.998	.430
Females	108	1.19	9.796	

TABLE 65
During your life, how many times have you sniffed glue, aerosol paints, or sprays?

Gender	Number	Mean	Stand. Dev.	t
Males	51	.06	.420	.905
Females	108	.02	.135	

TABLE 66
During your life, how many times have you used steroid pills or shots?

Gender	Number	Mean	Stand. Dev.	t
Males	51	.08	.440	-.106
Females	107	.09	.967	

TABLE 67
During your life, how many times have you used illegal psychoactive drugs?

Gender	Number	Mean	Stand. Dev.	t
Males	51	1.22	5.753	-.461
Females	108	2.13	13.580	

TABLE 68
How often do you wear your seatbelt when you are a passenger?

Gender	Number	Mean	Stand. Dev.	t
Males	51	4.35	.955	-.956
Females	108	4.50	.881	

TABLE 69
How often do you wear your seatbelt when you are driving?

Gender	Number	Mean	Stand. Dev.	t
Males	51	5.22	1.419	-1.539
Females	108	5.53	1.072	

TABLE 70
How many times have you ridden with someone who'd been drinking?

Gender	Number	Mean	Stand. Dev.	t
Males	51	1.69	2.832	1.447
Females	108	1.12	2.008	

TABLE 71
How many times have you driven when you'd been drinking?

Gender	Number	Mean	Stand. Dev.	t
Males	51	1.00	2.218	*2.158
Females	108	.46	.921	

*Significant at .05 level

TABLE 78
Have you ever tried smoking?

Response	Males	Females	Chi-Square
Yes	35 (69%)	63 (58%)	1.552
No	16 (31%)	45 (42%)	
Total	51(100%)	108(100%)	

TABLE 79
Do you smoke cigarettes daily?

Response	Males	Females	Chi-Square
Yes	6 (12%)	13 (12%)	.002
No	44 (88%)	93 (88%)	
Total	50(100%)	106(100%)	

TABLE 80
Have you ever tried to quit smoking cigarettes?

Response	Males	Females	Chi-Square
Yes	9 (18%)	11 (11%)	1.360
No	40 (82%)	86 (89%)	
Total	49(100%)	97(100%)	

TABLE 81
Have you ever been tested for AIDS/HIV?

Response	Males	Females	Chi-Square
Yes	13 (26%)	38 (35%)	1.504
No	36 (71%)	66 (61%)	
Not Sure	2 (3%)	4 (4%)	
Total	51(100%)	108(100%)	

TABLE 82
Do you ever drink alcohol before sexual intercourse?

Response	Males	Females	Chi-Square
Yes	10 (20%)	13 (12%)	2.601
No	23 (46%)	62 (59%)	
Never had Intercourse	17 (34%)	31 (29%)	
Total	50(100%)	106(100%)	

TABLE 83
At last sexual intercourse, did you or partner use condoms?

Response	Males	Females	Chi-Square
Yes	22 (69%)	30 (40%)	*7.422
No	10 (31%)	45 (60%)	
Total	32(100%)	75(100%)	

*Significant at .05 level

TABLE 84
During your life, how many times have you smoked marijuana?

Response	Males	Females	Chi-Square
Never	28 (55%)	63 (59%)	2.071
1 or 2 times	7 (14%)	12 (11%)	
3 to 9 times	4 (8%)	6 (6%)	
10 to 19 times	7 (14%)	10 (8%)	
20 to 39 times	2 (4%)	6 (6%)	
40 to 99 times	1 (1%)	5 (5%)	
100 or more times	2 (4%)	5 (5%)	
Total	51(100%)	107(100%)	

TABLE 85
Have you ever considered suicide?

Response	Males	Females	Chi-Square
Yes	1 (2%)	9 (8%)	2.387
No	50 (98%)	99 (92%)	
Total	51(100%)	108(100%)	

TABLE 86
Have you ever planned on how to commit suicide?

Response	Males	Females	Chi-Square
Yes	2 (4%)	2 (2%)	.605
No	49 (96%)	106 (98%)	
Total	51(100%)	108(100%)	

APPENDIX 4

IRB APPROVAL LETTER

Oklahoma State University
Institutional Review Board

Protocol Expires: 4/22/2004

Date: Wednesday, April 30, 2003   IRB Application No   ED03117

Proposal Title: THE ASSOCIATION BETWEEN ETHNIC CULTURES AND HEALTH RISK BEHAVIORS AMONG COLLEGE STUDENTS

Principal
Investigator(s):

Kari Eckhardt   Steven Edwards
319S. West #3   432 Willard
Stillwater, OK 74078   Stillwater, OK 74078

Reviewed and
Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

_____

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 415 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

Carol Olson, Chair
Institutional Review Board

VITA

Kari Leanne Eckhardt

Candidate for the Degree of

Master of Science

Thesis: THE ASSOCIATION BETWEEN ETHNIC CULTURES AND HEALTH RISK

BEHAVIORS AMONG OKLAHOMA STATE UNIVERSITY COLLEGE

STUDENTS

Major Field: Health and Human Performance

Biographical:

Education: Graduated from Waukomis High School, Waukomis, Oklahoma in

May1997; received a Bachelor of Science degree in Health and Human

Performance from Oklahoma State University, Stillwater, Oklahoma in

May 2001. Completed the requirements for the Master of Science degree

with a major in Health and Human Performance at Oklahoma State

University in May 2004.

Experience: Area Health Education Center Health Careers Recruiter, 2003-

present. Health & Wellness intern, Conoco Corporate Health Center,

2001. Wellness State team leader, 2000-2001. Share the W.E.A.L.T.H.

peer educator and team leader, Oklahoma State University, 1999-2000.

Awards & Honors: President's Honor Roll, 2003. Professional Development

Committee Chair, Oklahoma State University Health Promotion Club,

2001.