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Evaluation of the health practices of health professionals

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**EVALUATION OF THE HEALTH PRACTICES OF HEALTH
PROFESSIONALS**

A Thesis

Presented to

The Faculty of the Department of Health Professions

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Public Health

by

Alma L. Burrell

December, 1998

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ABSTRACT

EVALUATION OF THE HEALTH PRACTICES OF HEALTH PROFESSIONALS

by Alma Burrell

The goals of this thesis were (1) to evaluate the self-reported health behaviors of a diverse group of health professionals, and (2) to investigate the differences and similarities among three major professional disciplines. Specifically, the study attempted to learn whether or not health professionals are practicing the positive health habits they are called upon to encourage in their clients by the Surgeon General's landmark publication "Healthy People 2000."

Data were collected with written self-report questionnaires. Participants included physicians and school nurses from the mailing list of the American Lung Association of Santa Clara-San Benito Counties, and the membership roster of the Northern California Society for Public Health Education. The final sample included 41 physicians, 43 school nurses, and 33 health educators, for a total of 117 participants.

Overall findings revealed that the participating health professionals have positive health behaviors. However, there were some important areas that do warrant improvement.

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Chapter 1

INTRODUCTION

Purpose

Studies show that the value of education lies more in the example the teacher sets, than the information he/she disseminates (Glover, 1978; Haughey, Kuhn, Dittmar & Wu, 1992). It has also been demonstrated that the health behaviors of health professionals tend to influence their inclinations to counsel patients in the same manner (Haughey et al., 1992).

The goals of this research were (1) to evaluate the self-reported health behaviors of a diverse group of health professionals, and (2) to investigate the differences and similarities in health behaviors among the various levels and disciplines of the participating health professionals. Specifically, the study attempted to learn whether or not health professionals are practicing the positive health habits they are called upon to encourage in their clients.

Problem Statement

Since the beginning of this century, the United States government has become increasingly concerned about the health of the population. Significant energy, time, and money have been contributed by talented and concerned people to eliminate diseases which led to premature death earlier in this century (United States Department of Health and Human Services, 1995). Our ability to predict, diagnose, and intervene in disease processes has improved to the point that the majority of people no longer die of acute

diseases such as pneumonia or influenza as they did just 70 years ago. Instead, chronic diseases, such as cancer and diabetes, now threaten our longevity and the quality of our lives (USDHHS, 1995).

During the 1960s and 1970s, epidemiological and clinical studies began to identify the predisposing conditions that lead to chronic diseases. Cigarette smoking, high blood pressure, obesity, and high blood cholesterol were determined to be prominent contributors to the occurrence of certain chronic diseases. As a result, some chronic diseases once thought to be the inevitable result of aging were reclassified as avoidable (USDHHS, 1995). Indeed, these studies suggested that 90% of the leading health problems in the United States could be prevented, delayed, or controlled through present treatment techniques and personal lifestyle choices (Roseen, 1994).

The realization that disease prevention and health promotion could improve the quality and length of life has prompted national interest, resulting in the United States committing a large percentage of its gross national product to health promotion activities (Lamarche, 1995). Unfortunately, even this degree of commitment has not resulted in the best outcomes for the people of this country.

For example, arteriosclerosis, a disease caused by high blood cholesterol (which can be controlled by diet and exercise), continues to contribute to more deaths than all other diseases and accidents combined (Roseen, 1994). Cigarette smoking continues to kill over 400,000 people per year with lung-

related and other diseases (Pierce et al., 1993). The prevalence of obesity, which can contribute to increased risk of chronic diseases such as diabetes and colon, uterine, prostate, and breast cancers, is still significantly high (USDHHS, 1995). Also, relatively simple choices, like choosing to use a seat belt and attending to regular medical exams, would greatly reduce mortality and morbidity rates (USDHHS, 1995).

The landmark report of the Surgeon General (USDHHS, 1995) reports that Americans can improve the quality of their lives through a lifelong practice of regular physical activity of moderate or vigorous intensity. According to the report, regular vigorous exercise (20 minutes of vigorously intensive activity at least three times a week) significantly decreases the risk of dying from the nation's leading chronic diseases. However, the report further states that more than 60 percent of all adults do not achieve the recommended amount of regular physical activity and 25 percent of all adults are not active at all.

The desire for individuals to live longer, more productive lives has prompted the government to urge health professionals of every level and discipline to assist in meeting specific, measurable goals for a healthier nation by the year 2000 (USDHHS, 1995). Health professionals have an important and unique role as promoters of a healthy nation.

Health professionals can promote a lifestyle which seeks to achieve optimal individual potential in people. In addition to their direct influence

(via counseling, questioning, etc.), health professionals are also in a position to influence their clients indirectly. Glover (1978) states, "Because much of what students learn is through observation, it is essential for health educators to serve as effective models for their students. Not all of our communication is verbal" (p 175). Recently, the Surgeon General encouraged health professionals to be role models for healthy behaviors and to encourage their patients to do the same (USDHHS, 1995). Modeling positive health behaviors is an important way for health professionals to serve their clients more effectively.

Research Questions

This research was designed to address the following research questions:

1. What are the self-reported health behaviors of health professionals?
2. How consistent are the personal health practices of health professionals with the positive health behaviors they are called upon to teach?
3. What are the health behavior differences and similarities among groups of health professionals?

Objectives

This research was designed to meet the following objectives:

1. To assess the self-reported health behaviors of a diverse group of health professionals.

2. To investigate the differences and similarities in health behaviors among various groups of participating health professionals.

3. To generate data which can be used by professional health organizations to develop discipline-specific recommendations that will enhance members' effectiveness as health models.

4. To stimulate awareness of the value of role modeling in effective health care and health promotion.

Methodology

This study used a non-experimental, cross-sectional research design for collecting, analyzing, and reporting quantitative data. A total of 122 self-administered questionnaires were mailed to randomly selected health professionals from the mailing list of the American Lung Association of Santa Clara-San Benito Counties (ALA/SCSBC), and 113 questionnaires were mailed from the membership roster of the Northern California Society for Public Health Education (NCSOPHE). Individuals invited to participate in the study were health educators, directors and administrators of health programs, physicians, and school nurses.

The questionnaire was adapted from an earlier study by Haughey, et al. (1992) that evaluated the health care practices of critical care nurses (see Appendix A). The earlier study described the health behaviors of 499 critical care nurses. Questions selected from the Haughey instrument were adapted to reflect the objectives of "Healthy People 2000" (see Appendix B).

The adapted survey contained 27 questions (see Appendix C). One part of the questionnaire asked about respondents' personal characteristics, including their age, gender, profession, and education. The remaining questions assessed their lifestyle practices (i.e. smoking, exercise, and preventive check-ups).

Questionnaires were mailed to potential participants with a cover letter explaining the study and inviting participation (see Appendix D). The cover letter explained participant rights, consent, and confidentiality. Participants were asked to return their completed questionnaires in an enclosed stamped envelope. All of the surveys were precoded with record numbers in order to identify who had not yet returned their questionnaires in case further mailings were necessary.

Results were entered into a microcomputer database and analyzed using Epi-info software. Basic descriptive statistics were calculated to describe the sample and to identify patterns and differences among preventative behaviors and between professional disciplines. These data were then compared to the recommendations of the "Healthy People 2000" objectives (USDHHS, 1995).

A report describing findings, conclusions, and recommendations was made available to the Board of Directors and Executive Director of the ALA/SCSBC. A similar report was prepared and sent to all sample participants who had expressed interest in the results.

Research Definitions

The following definitions were used in this study.

Health promotion.

Conceptual - Health promotion is defined by Green, Kreuter, Deeds and Partidge (1980) as the combination of educational and environmental supports for actions and conditions of living conducive to health.

Modeling.

Conceptual - Modeling “refers to behavior. It is one person behaving like another” (Glover, 1978 p. 175). Modeling results in the tendency of students to emulate the idealized standards and behaviors of educators.

Health professional.

Operational - Health professionals for this study were individuals employed in the health industry as educators, physicians, school nurses, registered nurses, clinicians and administrators on the mailing list of the American Lung Association of Santa Clara-San Benito Counties, and the membership roster of the Northern California Society for Public Health Education.

Body Mass Index

Operational - Body Mass Index (BMI) according to Williams, (1992) is a weight:height ratio using the metric system to determine body composition. BMI is calculated by dividing weight in kilograms by the square of height in meters. A BMI range of 20-25 is considered desirable, but a suggested range for

females is 21.3-22.1 and for males 21.9-22.4. BMI values above 27.3 for women and 27.8 for men are indicators of excessive weight, and a BMI of 30 or above is classified as obese.

Healthful lifestyle.

Conceptual - A healthful lifestyle is one in which individuals routinely practice habits that are conducive to encouraging longevity and disease prevention (USDHHS, 1995).

Operational - For the purposes of this study, healthful lifestyle was measured by the participants' responses to questions about behaviors (i.e. nutrition, exercise and risk related behaviors) that contribute to positive health based on the health objectives of "Healthy People 2000" (see Appendix B).

Personal health practices.

Conceptual - Personal health practices include active participation in activities that will reduce the likelihood of disease or minimize its implications as indicated in "Healthy People 2000."

Operational - For the purposes of this study, personal health practices were measured by questions 1 through 12 and 16 through 24 of the questionnaire.

Limitations

There were several limitations to this study due to the research design, scope of the questionnaire, and potential sampling bias. These limitations

were acknowledged before data collection, and efforts were made to minimize their impact on the quality of the study's results.

The research required respondents to self-report personal health habits, which leaves room for under- or over-exaggerated responses. Additionally, respondents whose lifestyles were very unhealthy may have declined involvement in the research, causing under-representation of this group in the sample.

Mailed self-administered surveys are inherently less personal than one-on-one interviews. Therefore, the design lacked the benefit of obtaining in-depth information from respondents concerning their personal health habits. There may have been additional problems inherent in the self-administered questionnaire. For example, discrepancies may exist between the researcher's and the respondent's definition or standard of healthful habits.

Lastly, a low response rate is always a limitation when collecting data through mailed questionnaires. A higher response rate would have allowed greater generalizability and a broader representation of health professionals.

Significance

Health professionals are depended upon to provide active leadership in obtaining the goals of "Healthy People 2000." This research reveals the extent to which they themselves are actively pursuing healthful lifestyle

habits. Research indicates that modeling is essential in the teacher-student relationship (Glover, 1978). If one is to believe the importance of modeling theory, knowledge about the health behaviors of health professionals is a helpful gauge in determining progress towards achieving the objectives of "Healthy People 2000."

If health professionals are found to possess proactive healthful behaviors, then the missing ingredient to successful health education and transference of the same positive behaviors to clients may be the inclusion of actively modeling these behaviors when implementing health intervention programs. Areas that may be found where health professionals are not practicing healthful behaviors may suggest a need for intervention specifically designed for health educators.

CHAPTER 2

LITERATURE REVIEW

The desire and quest for health dates back to ancient times, and the progression of health promotion activities around the world has been steady. People have studied the effects of environment and lifestyle as factors affecting health for centuries. Today, much of the focus is on lifestyle, and how it relates to chronic illness. Presently, theories on how to change health behaviors are in abundance; and health educators are faced with the challenge of integrating health theories that will produce positive lifestyle behaviors in their clients.

History of Public Health

Public health has long been seen as a community responsibility for the protection of life and the promotion of health (Smillie, 1976). Archeological finds as well as written history prove that maintaining healthy communities has been at the forefront of most civilizations. Some societies were more advanced in prevention and medical care than others, but all put forth much effort in health maintenance and disease prevention. Whether through the sanitation efforts of the ancient Egyptians or the striving for physical excellence of ancient Greeks, people have searched for ways to improve and maintain their health.

According to Green (1990), health promotion dates back to ancient Babylon. Excavations reveal a formulated set of laws called the Code of

Hammurabi that governed the conduct of physicians and proscribed good health practices. Early Hebrew societies expanded these concepts through the promotion of the Mosaic law that focused on cleanliness. Green further explains that Greek history reveals the establishment of the Hippocratic Oath through which physicians pledged to work towards the preservation of all human life. History is replete with examples of societies promoting good health and researching the causes of disease (McKenzie & Jurs, 1993; Williams & Torrens, 1993).

The Era of Modern Health

The era of “modern” health, an organized, disciplined attack on health problems and diseases, was initiated worldwide from 1850 through 1975 (Green, 1990). Green documents how, during this period, researchers began to share information and world leaders joined together to fight disease. Health professionals gathered to discuss the relationship between sanitation and disease at the first International Sanitary Conference held in Paris in 1851. International voluntary health service agencies such as the Red Cross were also established around this time. Between 1880 and 1910, various bacteria such as typhoid, malaria, diphtheria, and tubercle bacillus were identified; rabies was treated successfully; x-rays were discovered; the African sleeping sickness was traced to the tsetse fly; and immunizations and antibiotics were developed and tested successfully. All of these findings were shared internationally among health professionals.

In 1872, the American Public Health Association (APHA) was founded. Previous health organizations focused on quarantine as a means of dealing with sanitation, disease prevention and transmission, and all other health problems. The new APHA expanded its concentration to include the study of health administration, communicable disease control, sanitary engineering, health education, industrial hygiene, housing, food sanitation, school health promotion, nutrition and its relation to disease processes, and the influence of environmental factors on the health and welfare of the community (Smillie, 1976).

The major health threats in the late 1800s continued to be epidemics of infectious diseases such as smallpox, typhoid fever, and diphtheria. Public health activities began to flourish with the discovery of drugs to fight these diseases and the recognition of the importance of environmental health interventions. State departments of health were formed to oversee the prevention of disease, disability, and premature death. These departments of health were staffed by full time professionals and headed by medically trained health officers.

By 1900, every state in the United States had a Board of Health. Their main functions were to develop ordinances regarding waste disposal, street drainage, removal of filth, drainage of swamps, and other measures that would improve sanitary environments. Later, their responsibilities expanded

to include immunizations, maternal and child health care services, and other public health activities (Raffel & Raffel, 1989).

These environmental controls were put into place in response to a report published in Britain by Edwin Chadwick, a lawyer and civil servant. Chadwick believed that epidemic diseases were caused by environmental filth and that the means of prevention were the provision of clean water supplies; effective sewage and drainage; removal of nuisances, such as refuse from all streets and roads; control of industrial effluents; and the establishment of new standards of environmental and personal cleanliness. The report recommended that entirely new structures of administration should be created for achieving these goals (Fee & Acheson, 1991). State boards of health were created in response to this report.

In the early 1900s, the United States was experiencing unprecedented epidemics of communicable diseases. This grave status was generally believed to be due to a tremendous increase in immigration and rising poverty levels. In regard to this era, Fee and Acheson state:

The overwhelming influx of immigrants crowded into narrow alleys and tenement housing, the terrifying death and disease rates of working class slums, the total inadequacy of water supplies and sewage systems for the rapidly growing population, the spread of endemic and epidemic diseases from the slums to the homes of the wealthy, and the escalating squalor and violence of the streets all demonstrated the

urgent need for attention to public health. Almost all families lost children to diphtheria, smallpox, typhoid fever, whooping cough, infant diarrhoea [sic], and other infectious diseases. Poverty and disease could not be treated as simply individual failings (p. 20).

As cities in the United States grew, and the flow of immigrants continued, public health problems became ever more obvious. Pressure mounted for more effective responses.

New knowledge of the importance of sanitation in food preparation and handwashing before performing communicable activities, as well as advances in sewage and garbage control contributed largely to a decrease in the devastating communicable disease epidemics. In addition, the discovery and use of antibiotics and vaccines began to severely reduce the threat of early death from these diseases (Fee & Acheson, 1991).

The above changes resulted in a tremendous increase in the lifespan of United States citizens. As individuals were living longer, morbidity and mortality were now attributed to long term chronic and degenerative diseases. As health professionals studied this new phenomenon, they began to notice a link between lifestyle and chronic disease.

Post World War II, the United States began a health education campaign in response to a mandate set forth by the World Health Organization (WHO) established in 1946 (Rosen, 1958). With support from U.S. President Harry S. Truman, health professionals set out to educate and

inform people of ways to enhance their health and prevent disease through consistent, positive lifestyle behaviors (Smillie, 1976).

Further investments toward this end included the establishment of Schools of Public Health in several American universities. These new centers of focused study of public health led to a renewed dissemination of health education in public health, particularly within health care systems. Additionally, health education curricula were introduced into secondary and primary schools. Information regarding healthful lifestyles and statistics on the prevalence of chronic diseases were published. In the 1950s, the Hill-Burton program was developed to ensure financial resources for hospitals (Lamarche, 1995). Later in the 1960s, the United States introduced Medicare and Medicaid to improve access to health services for all people. Record amounts of money were being spent by this time to improve the health status of the country. It seemed at this time, according to Lamarche (1995), that the theory of government was that "health is determined primarily by the care provided...if one wants to improve a population's health, the quality of health care must be improved, and this is achieved through the application of increased health resources" (p. 234). However, this proved to be insufficient.

The Health Promotion Era

As more and more funds were channeled into health care systems, a search for cost containment strategies began. This marked the introduction of the "health promotion" period in the 1970s (Green, 1990). The United States

began the decade with the report of The President's Committee on Health Education, and in 1976 published the task force report. "Preventive Medicine USA". Education and prevention began to be emphasized as important components in health planning.

The present environment of health promotion encourages a lifestyle that is conducive to healthful living. This is accomplished not only through individual behavioral change, but also through organizational, economic, and environmental supports to enable people to change their lifestyles and to effect positive health behaviors (Green, 1990).

Today, Americans are living longer than ever before. By the year 2010, twenty percent of the population will be 65 years of age or older (Glanz, Lewis, & Rimer, 1990). "Healthy People 2000" (USDHHS, 1995) reports that as of 1990, the life expectancy of Americans was 75 years. Sixty four of these 75 years of life are expected to be healthy. Some 11.4 years of life are estimated to be unhealthy, with limitations in major life activities such as self-care (bathing, grooming, and cooking), recreation, school, and work.

In response to this new longevity, medical and health personnel are placing more emphasis on changing the lifestyle behaviors of individuals so that their later years will be healthy and productive. The challenge is to minimize disability and to increase independence and health in people throughout their lifespan. Much of this interest in health promotion has been stimulated by the epidemiologic transition from infectious to chronic

diseases as the leading causes of death (Glanz et al., 1990). Seventy years ago, medical emphasis was placed on treatment, while today much of the attention is on prevention (USDHHS, 1995).

Numerous scientific discoveries and achievements, along with new astounding advances in medical treatments and diagnostic procedures, demonstrate the eagerness of medical science to expand our lifespan. With the knowledge that most chronic diseases are preventable through positive lifestyle changes, health promotion and education have emerged as very necessary elements to maintaining health throughout life.

Healthy People 2000

Since the 1970s, the U.S. government has been actively working towards the goal of improving the quality of our longer lives. In 1979, the U.S. Public Health Service published "Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention." The health strategy set out in that publication was expanded in 1980 with the publication "Promoting Health, Preventing Disease: Objectives for the Nation," (USDHHS, 1980) which set an agenda for the 10 years leading up to 1990. Published in 1990, "Healthy People 2000" builds on previous accomplishments and sets a strategy for the next 10 years (USDHHS, 1995).

"Healthy People 2000" calls upon professionals, private organizations, and public agencies, to work together to promote the benefits of a healthy life. The Surgeon General's report calls upon health educators from various

disciplines to assist in meeting the goals of the initiative through health promotion and health education. The first of three broad goals of the initiative is to increase the lifespan of Americans through the prevention of premature death, disability, and disease. The second goal is to reduce health disparities among Americans, and the final goal is to achieve access to preventive services for all Americans (USDHHS, 1995).

Health promotion is strengthened through the close collaboration of health professionals of different disciplines. Each discipline contributes a unique perspective to the health education process. For example, psychology brings a rich legacy of over 100 years of research and practice on individual differences, motivation, learning, persuasion, and attitude and behavior change (Glanz et al., 1990). Nurses and social workers bring their particular expertise in working with individual patients, groups of patients, and patients' families (Breckon, Harvey, & Lancaster, 1989). Health educators contribute much with their knowledge and study of human behavior theory. Physicians are important collaborators and are in key roles to effect change in health behavior and health status (Breckon et al., 1989). Each profession brings a different expertise in working with individuals to obtain optimal health benefits.

Health Education for Healthy Lifestyles

One of the priorities in health education has been training a wide range of lay and professional educators to motivate individuals in a number of

settings. This is one of the ways in which broader changes in our collective health status can occur. According to Glanz, et al. (1990), health education today is omnipresent. Schools, communities, worksites, health care settings, and the consumer marketplace are now seen as the five major settings particularly relevant to health education. Each of these settings provides a unique opportunity to reach individuals with the health promotion message.

When experienced in diverse settings and understood through multiple channels, health education focused on healthful lifestyles becomes a consistent and reinforced message for individuals and society at large. However, deciding how to educate is equally as important as where education takes place. Numerous theoretical frameworks for health education suggest how to deliver this important message.

Early health education techniques consisted of the distribution of health pamphlets, health conferences, public health reports, and health journals (Smillie, 1976). However, annual statistics revealed that these methods were not comprehensive enough, because mortality and morbidity rates continued to rise.

Changing deeply ingrained lifestyle behaviors is not easy. Individuals move from awareness of the need to make a behavioral change to actual maintenance of a new habit with varying degrees of difficulty. Health professionals, with their unique combination of authority, information, and

access to individuals concerned about or interested in their own health, can be key players in health education for healthful living.

Multi-theoretical public health education programs have also provided greater practical power to stimulate change and the integration of more than one theory offers greater strength when addressing the variety of issues that affect health behaviors (Glanz et al., 1990).

Modeling

Research shows that health professionals are more prone to teach the behaviors they are modeling (Delnevo, Abatemarco, & Gotsch, 1996; Najem, Passannante, & Foster, 1994; Smith, Bibeau, Altschuld, & Heit, 1988) and students tend to emulate their teachers (Glover, 1978; Haughey et al., 1992; Piaget, 1962). This suggests that education and interventions incorporating role-modeling theory (modeling) would have a powerful effect on clients of health professionals who practice healthful habits.

A review of the literature suggests that modeling theory is not necessarily the explicit, prospective methodology of choice for a large majority of health professionals. Instead, modeling emerges retrospectively as a mechanism to explain how students developed attributes and behavior patterns similar to those of their parents and social models such as teachers (Glover, 1978).

Labels given to modeling historically are imitation (Piaget, 1962), observational learning (Bandura, 1986), copying (Erickson, Tomlin, & Swain,

1983), identification, social facilitation, vicarious learning, contagion (Glanz et al., 1990) and role playing (Glover, 1978). Piaget (1962) said, "In a word, imitation is acquired through constant assimilation of models to schemas which are capable of being accommodated to them" (p. 175). This suggests that clients will imitate the health professional if they feel what is being modeled is attainable. The client will study and even imitate the image being portrayed by her role model.

Erickson, Tomlin, & Swain (1983) define modeling as "the act of imitating a standard or copying a representation of something. The word model often refers to the standard or representation to be copied" (p. 239). They further explain the art of modeling as "the development of a mirror image from the client's perspective" (p. 239). Role modeling is "the essence of nurturance that begins the second the health professional begins the process of planning interventions" (p. 115).

Modeling begins early in life as children learn to emulate their parents. According to Piaget, (1962)

during the early years, the family constitutes the basic reference group; and at this stage, the range of available real life models is restricted to family members, particularly the parents who serve as the source of biological and conditioned rewards for the child. Once a child reaches school age, the model is sometimes the teacher (p. 333).

Health professionals serve as models to their clients, just as teachers do for students and parents for children (Glover, 1978). Therefore, the importance of communicating healthful habits to clients goes beyond verbal conversation. Clients may be persuaded more by the actions and habits they observe in the health professional.

The relationship between the client and health professional is most frequently described in the literature as patient-provider interaction. Most current theories on this relationship integrate social and psychological perspectives on interpersonal influence to explain how the characteristics and behavior of others affect a person's behavior (Glanz et. al, 1990). Solid, positive communication between the two are crucial. However, the client must believe in what the health professional is espousing before modeling can be effective.

Social Learning Theory

Modeling is a key construct within the broader Social Learning Theory (Bandura, 1986). According to the Social Learning Theory (SLT), human behavior is determined by an individual's capability to foresee the outcomes of given behavior patterns they observe in others (Glanz et. al, 1990).

According to Bandura (1986), observational learning occurs when an observer watches the actions of another person and notes the reinforcements that other person receives. By this process, the client will learn what is appropriate by observing the behavior of the health professional. When the

client notes the positive reinforcement the health professional receives (i.e. healthful body weight, cardiovascular endurance, muscular strength, and a healthy body), she will desire the same for herself. This makes it all the more important that the health professional be a credible role model whom the client will want to emulate.

Social Learning Theory further explains human behavior in terms of a triadic, dynamic model in which behavior, personal factors, and environmental influences all interact. Crucial factors according to SLT theory are an individual's ability to symbolize the meanings of behavior, to foresee the outcomes of given behavior patterns, to learn by observing others, to self-determine or self-regulate behavior, and to reflect and analyze experiences.

Despite the prominence of Social Learning Theory in studies of health communication, surprising little research attention is given to the potential for health professionals to serve as role models for their patients or clients. Verbal communication regarding healthful lifestyles are a primary way in which clients learn health behaviors. However, the power of modeling can even more greatly enhance verbal communication. The synergy of verbal communication and the client's observation of the results of the provider's own healthful lifestyle can intensify the learning by observation experience of the client.

Health Behaviors of Health Professionals

Past studies report on the lifestyle practices of health professionals within particular disciplines. Haughey et al. (1992) studied the health practices of 499 critical care nurses. The study suggested that “the critical care nurses surveyed were not fulfilling their roles as health exemplars. Although some reported favorable health practices, many indicated habits that were less desirable” (p. 203).

Other studies have examined the health behaviors of different professional groups. In 1994, Jenkins and Olsen conducted a national study exploring the health behaviors of health educators. They surveyed 372 members of five health professional organizations. They reported that the lifestyles of the responding health educators were not much different from the general population and that they may not be practicing the ideal behaviors that might be expected of them. However, they further explained that “overall, the health behaviors of the health educators in the sample are positive and within the guidelines set forth by the American College of Sports Medicine, and the national health goals for the year 2000” (Jenkins & Olsen, 1994 p. 559).

Research by Nakamura and Lescault (1983) on the health behaviors of 40 California school health educators provided strong evidence that the majority of those responding practiced positive and healthful behaviors. Finally, a study of health behaviors and health promotion/disease

prevention perceptions of 512 medical students by Delnevo, Abatemarco, & Gotsch (1996) reported, "overall, results indicated that the preponderance of respondents are engaging in healthy behaviors. However, some high-risk behaviors such as drinking and driving and possible binge drinking were reported by at least 15% of the respondents" (p. 841). They further reported that "even though this cohort is healthy overall, some students are engaging in behaviors that are not conducive to maintaining a healthy lifestyle" (p 40).

With all the strides made nationally toward healthy lifestyle habits, disease prevention, and health education, it is noteworthy that health educators in various disciplines are practicing healthful habits overall. Although inconsistencies exist in several areas, based on the above studies health educators may possess the habits necessary for successful modeling by clients.

CHAPTER 3

METHODS

The goals of this research were (1) to evaluate the self-reported health behaviors of a diverse group of health professionals, and (2) to investigate the differences and similarities in health behaviors among the various disciplines of the participating health professionals. Specifically, the study attempted to learn whether or not health professionals are practicing the positive health habits they are called upon to encourage in their clients.

Objectives

This study was designed to meet the following objectives:

1. To assess the self-reported health behaviors of a diverse group of health professionals.
2. To investigate the differences and similarities in health behaviors among various groups of participating health professionals.
3. To generate data which can be used by professional health organizations to develop discipline-specific recommendations that will enhance members' effectiveness as health models.
4. To stimulate awareness of the value of role modeling in effective health care and health promotion.

Questions

The research questions addressed in the study were:

1. What are the self-reported health behaviors of health professionals?
2. How consistent are the personal health practices of health professionals with the positive health behaviors they are called upon to teach?
3. What are the health behavior differences and similarities between groups of health professionals?

Methodology

To determine whether health professionals are modeling the healthful lifestyle they are called upon to promote in their clients, a self-administered survey was mailed to 235 individuals. The survey questions focused on the lifestyle practices, personal characteristics, and nutritional habits of participants. Participants were also asked about their current professions and academic achievements.

Study Design

The design of this study was descriptive research, using a written, self-administered questionnaire as the method for collecting data. The study also used a non-experimental, cross-sectional research design for collecting, analyzing, and reporting quantitative data. A survey was used because it had the benefit of gathering a wide range of information from the subjects in a short period of time.

Survey Questionnaire

The researcher gained permission to use a questionnaire from an earlier study by Haughey et al. (1992) that evaluated the health care practices of critical care nurses (see Appendix A). The instrument used in this study was adapted from the Haughey study (see Appendix C). The instrument was two pages in length, with a total of 27 questions divided into four content areas. The two page survey was photocopied front and back for easier handling by respondents and the researcher.

Part 1 of the questionnaire contained 12 questions related to lifestyle practices. Specifically, participants were asked about their seat belt use, physician and dental visits, dental care, smoking habits, and activity/exercise levels.

Part 2 was concerned with personal characteristics. Participants were asked their age, gender, height, and weight. Participants were also questioned about their perceptions regarding their weight. They were asked if they considered themselves at or near, slightly over or under, or considerably over or under their ideal weight. They were also asked about their satisfaction levels concerning their weight. These two questions were asked because what is considered "ideal" weight is variable and controversial. Appropriate body size may be relative to an individual's cultural or emotional ideals.

Part 3 asked participants six questions about their nutrition practices. The questions explored participants' fruit, vegetable, fat, salt, sugar, and

alcohol intake on a daily to weekly basis. Following this section, females were asked how often they perform breast self-examination and how often they have a Pap test. Males were asked how often they perform testicular self examination.

Part 4 inquired of participants' current profession, career title and academic degrees. To protect confidentiality, participants were not asked to provide any identifying variables (e.g., address, county, social security number, or phone number).

Twenty two questions from Haughey's survey that matched the 11 core lifestyle objectives identified in "Healthy People 2000" (see Appendix B) were incorporated into this questionnaire.

Assumptions

Several assumptions were identified in the design and analysis of this research. The following assumptions concern health professionals and their behavior.

1. The subjects would be knowledgeable of healthful behaviors based on the professions' standards.
2. Health professionals are not as effective in encouraging healthy behavior change because they may have not included or considered the power of modeling theory when designing health education programs.
3. Health professionals may not be practicing positive health behaviors.

4. Including a stamped self-addressed envelope would ensure a high response rate.
5. The data would be gathered and analyzed in an unbiased manner.
6. The survey instrument used was reliable and valid.
7. The mailing list would adequately represent the diverse disciplines of the health profession.

Sample Population

Subjects were randomly selected from the physician and school nurse mailing list of the American Lung Association of Santa Clara-San Benito Counties. The researcher selected every tenth person from each list. In addition, every fourth person on the membership roster of the Northern California Society for Public Health Education (NCSOPHE) was solicited for participation. A total of 235 questionnaires were mailed to potential participants. The NCSOPHE membership roster was used because it offered a diverse group of health educators who work in hospitals, community based clinics, public health agencies, and academic settings. All participants live and or work in Northern California.

Survey Distribution

Upon approval by the Human Subjects Institutional Review Board of San Jose State (see Appendix E), the surveys were mailed over a 3 month period. The researcher was not in direct contact with any of the potential respondents at any point in data collection. The original plans called for

follow-up mailing and reminder cards, but this was not done due to the researcher's limited resources.

All potential participants received a survey, a stamped envelope with the researcher's address, and a letter of explanation (see Appendices C and D). The letter briefly detailed the purpose of the study, the voluntary nature of the study, privacy concerning responses, and the method for receiving future information about the conclusion of the study. Respondents were assured their participation would in no way jeopardize their relationship with any professional organizations.

Data Entry and Analysis

A comprehensive codebook was developed for data entry and analysis purposes (see Appendix F). All of the questions in the survey were quantitative and each was assigned a code prior to distribution. A five point Likert scale was used to determine the value of each response. Answers to closed questions were also coded directly, using pre-assigned values (i.e., 1 = yes, 2 = no).

Data were entered into a microcomputer and analyzed using the statistical program Epi Info, Version 6.02 (Dean et al., 1994). All data were entered twice by the researcher and then checked for accuracy using a validation function of Epi Info. Descriptive statistics were calculated to determine the characteristics of the sample, including male to female ratio,

mean age group, and the distribution of respondents between health professions.

Frequency analysis was used to determine comparisons of means (i.e. age, height, weight, etc.). The quantitative analysis was centered on the relationship of key dependent variables (i.e. seat belt use, activity levels, frequency of medical exams, etc.) and the independent variable which was health profession. Statistical significance was noted with a two-tailed P value of $\leq .05$.

CHAPTER 4:

RESULTS

Sample

A total of 235 questionnaires were mailed to potential participants between October 1997 and December 1997. Sixty five (28%) surveys were sent to physicians, 113 (48%) to school nurses, and 57 (24%) were mailed to health educators.

A total of 126 health professionals responded to the survey. Four questionnaires that were mailed to physicians were returned by the post office as undeliverable, and another four were returned from a particular school district because the potential participants were no longer employed there. One respondent was excluded from the study because she identified her current profession as a clerk, which did not meet the sample eligibility criteria. Responding participants used in the study included 41 physicians, 43 school nurses, and 33 health educators, for a total of 117 participants (a 54% response rate).

Sample Characteristics

The data collection instrument included questions about personal characteristics such as gender, age, height, and weight. Twenty seven percent of physicians who responded were female, and 73% were male. The ages of the physicians ranged from 22 to 76, with a mean age of 53 ($SD = 11.08$). The physicians' height ranged from 5 ft to 6 ft 7 in. with a mean of 5 ft 7 in. ($SD =$

3.93). Their weight ranged from 108 to 220 pounds with a mean of 172 (SD = 23.35).

One hundred percent of participating nurses were female. Their ages ranged from 24 to 69, with a mean age of 51 (SD = 9.33). The height of the nurses ranged from 5 ft to 6 ft 4 in. with a mean height of 5 ft 5 in. (SD = 2.97). Their weight ranged from 110 to 300 pounds with a median weight of 142 (SD = 32.53).

Like the nurses, all responding health educators were female, ranging from 23 to 80 years old with a mean age of 42 (SD = 13.50). Their heights ranged from 4 ft 1 in. to 5 ft 8 in. with a mean height of 5 ft 4 in. (SD = 3.09). The weight of health educators ranged from 100 to 190 pounds with a mean weight of 133 pounds (SD = 20.69).

The first 12 questions in the survey asked respondents about their lifestyle practices (i.e. seat belt use, medical exams, dental practices, smoking habits, and activity levels). In response to the question regarding seat belt usage, the data indicated 102 of 115 (89%) participants always use their seat belts. There was no significant difference by profession ($\chi^2(2, N=115), p=.70$).

Table 1 reflects the significant difference reported in frequency of physical exams by physicians as compared to health educators and nurses ($\chi^2(2, N=115), p=.002$). Only 13% of physicians reported having a routine

physical exam at least once a year, while 66% of health educators and 65% of nurses indicated they have routine medical exams annually.

No significant difference existed among health professionals regarding visits to the dentist ($\chi^2(2, N=116)$, $p=.09$). One hundred two of 116 (88%) health professionals reported they visit the dentist at least once a year. No significant difference was found among health professionals' reported frequency of teeth brushing either ($\chi^2(2, N=116)$, $p=.14$). Of 116 responding, 95 (82%) claim they brush their teeth more than once a day.

Table 1

How often do you visit the physician for a routine physical exam?

	Physicians (n=41)	Health Educators (n=33)	Nurses (n=41)
Once a year	13 (32%)	22 (67%)	27 (66%)
Every 2 years	8 (20%)	3 (9%)	8 (20%)
Less frequently	12 (29%)	6 (18%)	5 (12%)
Never	8 (19%)	2 (6%)	1 (2%)

Note: Variables are rounded percentages and may not equal 100%.

Flossing of teeth, however, did prove to be significantly different among health professionals ($\chi^2(2, N=114)$, $p=.009$). Only 1 (2%) physician, 5

(15%) health educators and none (0%) of the nurses reported flossing their teeth more than once a day (see Table 2).

Table 2

How often do you floss your teeth?

	Physicians (n=41)	Health Educators (n=33)	Nurses (n=40)
More than once a day	1 (2%)	5 (15%)	0 (0%)
Once a day	18 (44%)	12 (37%)	19 (48%)
Less frequently	19 (46%)	13 (39%)	21 (52%)
Never	3 (8%)	3 (9%)	0 (0%)

Note: Variables are rounded percentages and may not equal 100%.

Most respondents reported never having smoked. Of 116, only 83 (72%) said they have never smoked, and there was no significant difference among professionals in smoking behavior ($\chi^2(2, N=116), p=.29$). Of the 34 participants that said they had the habit of smoking, 19 (56%) of them smoked a half pack of cigarettes or less a day, with no significant difference reported among professions ($\chi^2(2, N=34), p=.31$).

Sixty people (51%) responded to the question regarding current smoking habits. Fifty-seven (95%) of this group said they do not currently smoke, and no significant differences were found among the professions

($\chi^2(2, N=60)$, $p=.80$). Only two nurses reported that they currently smoke, and both smoke a half pack of cigarettes or less per day. Two of 31 (6%) respondents said they quit smoking over five years ago, with no significant difference among the professions ($\chi^2(2, N=31)$, $p=.81$) in this area.

Regarding physical activity, 61 of 114 (54%) respondents said they exercise three to seven days a week. The health professionals showed no significant difference among the disciplines ($\chi^2(2, N=114)$, $p=.12$). Seventy eight of 114 (68%) respondents reported that they expend a great to moderate amount of physical effort in their daily activities. No significant differences were shown ($\chi^2(2, N=114)$, $p=.68$).

There was a significant difference reported between the professionals regarding their consideration of ideal weight ($\chi^2(2, N=116)$, $p=.0003$). Table 3 reports most of the responding physicians (56%) indicated they were at or near their ideal weight, while only 36% of health educators and 14% of nurses felt the same.

There was also a significant difference reported by responding nurses as compared to physicians and health educators regarding weight satisfaction ($\chi^2(2, N=112)$, $p=.001$). Nearly all of the responding physicians (49%) and health educators (48%) were very satisfied or satisfied with their weight, while only 14% of nurses felt the same (see Table 4).

Nutritional practices of health professionals were also analyzed. There were no significant differences regarding variety of food consumption ($\chi^2(2, N=112), p=.60$). Of 112 respondents, 21 said they always or almost always eat a variety of food daily such as vegetables, fruit, whole grains, meats, and legumes.

Table 3

Do you consider yourself:

	Physicians (n=41)	Health Educators (n=33)	Nurses (n=42)
At or near your ideal weight	23 (56%)	12 (36%)	6 (14%)
Slightly under my ideal weight	2 (5%)	2 (6%)	0 (0%)
Considerably under my ideal weight	2 (5%)	15 (45%)	22 (52%)
Considerably over my ideal weight	14 (34%)	3 (10%)	4 (10%)
Obese	0 (0%)	1 (3%)	10 (24%)

Note: Variables are rounded percentages and may not equal 100%.

There was no significant difference in dietary limitation of fat ($\chi^2(2, N=111)$, $p=.07$), salt ($\chi^2(2, N=111)$, $p=.37$), or sugar ($\chi^2(2, N=111)$, $p=.12$) among the responding health professionals. Eighty three (75%) health professionals reported that they always or almost always limit their consumption of fat, salt and sugar.

Table 4

Regarding your weight are you:

	Physicians (n=39)	Health Educators (n=31)	Nurses (n=42)
Very satisfied	5 (13%)	2 (6%)	1 (2%)
Satisfied	14 (36%)	13 (42%)	5 (12%)
Slightly concerned	19 (49%)	13 (42%)	26 (62%)
Very concerned	1 (2%)	3 (10%)	9 (22%)
Unconcerned	0 (0%)	0 (0%)	1 (2%)

Note: Variables are rounded percentages and may not equal 100%.

There was not a significant difference in alcohol consumption among health professionals either ($\chi^2(2, N=108)$, $p=.067$). Thirty five of 108 (32%) respondents said they never drink alcohol. Also, ten of 99 (10%) respondents said they have less than one alcoholic beverage per occasion. No significance was shown among the disciplines ($\chi^2(2, N=99)$, $p=.90$) in this area.

Regarding the frequency of breast self examination, 24 of 83 (29%) female respondents said they check their breasts monthly. No significance was noted among the disciplines ($\chi^2(2, N=83), p=.29$). There was also no significance found among health professionals concerning annual Pap tests ($\chi^2(2, N=82), p=.069$). Sixty two of 82 (76%) respondents reported they have a Pap test at least once a year. Ten of 29 (34%) men said they perform testicular self examination monthly. Only one male respondent did not answer this question.

Summary

The data indicated that the majority of responding physicians practice positive preventative behaviors. Their responses to the survey indicated that they always or almost always use a seat belt when driving or riding in a car, and they care well for their teeth by having frequent dental exams, and brushing their teeth regularly. Most of the physicians have never smoked, and only one reported current tobacco use.

Most of the responding physicians also indicated that they exercise frequently, are at or near their idea weight, and always or almost always eat a variety of foods. The majority indicated they limit their intake of dietary salt, fat, and sugar. Regular breast self examination, annual Pap tests, and testicular exams are common preventative practices among the physicians as well.

The responding physicians did not indicate positive preventative behaviors in three areas. Their response to regular physical exams was very low. Over half of the physicians answered they have physical exams less frequently than every two years. Thirteen (32%) of the physicians indicated they never have physical exams.

Although the responding physicians practice some positive oral hygiene practices, a significant number of them do not floss their teeth often. The majority responded they floss once a day or less. Many of the physicians indicated they drink alcohol daily, and when they do, they drink at least one to two servings per occasion. The BMI of the physicians was high at 26.9.

Like the responding physicians, data from the responding nurses indicated the majority of them practice overall positive preventative behaviors. The mean BMI for the participating nurses was 23.7, which is considered desirable for good health.

The nurses indicated regular seat belt use when driving or riding in a car, physical and dental exams, and frequent brushing and flossing of their teeth. The majority of the nurses have never smoked, and only two (5%) indicated they currently smoke. The nurses responded they always or almost always eat a variety of foods, they limit their consumption of dietary fat, salt, sugar, and alcohol, and over half of them indicated they exercise three to five times a week.

The responding nurses also perform regular self breast exams, and have a Pap test annually. The majority of nurses, however, did indicate they were slightly concerned about their weight and responded they were slightly overweight.

The data from responding health educators indicates they too practice positive preventative behaviors overall. The mean BMI of the health educators was 23.0, which is within the desirable range.

The data from the responding health educators indicates the majority of them always or almost always use their seat belt when driving or riding in a car, have annual physical and dental exams, brush and floss their teeth frequently, do not smoke, and exercise regularly. The majority indicated they were satisfied with their weight, they eat a variety of food, and they limit their sugar, salt, fat, and alcohol consumption. Additionally, breast self examination and Pap smears were performed regularly.

The majority of the responding health educators indicated, however, they do not floss their teeth more than once a day. They also expressed concern for their weight. Most of the health educators indicated they felt they were slightly over their ideal weight.

Additional descriptive statistics (means tables) of each question asked by professional discipline is provided in Appendix G.

CHAPTER 5

DISCUSSION

The purpose of this research was to evaluate the self-reported health behaviors of health professionals, and to investigate differences and similarities in the responses of the participating health professions. The study attempted to learn whether or not health professionals are practicing the positive health habits they are called upon to model and encourage in their clients (USDHHS, 1995).

Limitations

Although many of the study's limitations were anticipated, some unanticipated problems occurred which may have affected the results. One anticipated limitation, as outlined in Chapter One, centered on problems inherent in a self-administered questionnaire, such as the possibility of participants over- or under-exaggerating responses. In addition, individuals whose lifestyles are very unhealthy may have declined involvement in the research, causing under-representation of that particular group in the sample.

Because the survey was administered through the mail, the researcher was unable to gain background information regarding respondents' personal habits that may have been beneficial to the study, such as cultural influences on health-related attitudes, beliefs and practices. Also, the researcher had to assume that participants' knowledge of positive health behaviors was similar to her-own. Discrepancies may have existed between health definitions

and/or personal or cultural standards of health habits, but these discrepancies could not be detected with a mailed, self-administered survey.

A low response rate is always a potential limitation when collecting data through the mail. An additional limitation occurred because part of the data collection took place during the winter holiday season. Questionnaires were mailed in three groups, beginning in June 1997. The response rate was above what had been expected from August to mid-November. However, the return rate for the surveys sent out in the third mailing in mid-November was considerably lower than that of the first groups. This difference was attributed to the pace of the holiday season. Unfortunately, due to time and resource constraints, the researcher was unable to produce a second mailing to this same group, which happened to be the nurses. This resulted in a slightly lower response rate for the nurses compared to the two other professions in the sample. A second mailing would have probably yielded a larger response.

Discussion of Results

Overall findings from the research revealed that the health professionals responding to the survey report do have positive health behaviors. However, there were some important areas that do warrant improvement.

Positive Behaviors and Modeling

The data indicated that the responding professionals are conscientious about using their seat belts when driving or riding in a car. They also have frequent dental exams. All but three of the responding health professionals indicated that they do not smoke, and the majority responded that they do physically active things such as jogging, swimming, or power walking for at least 20 minutes three to five times a week.

If health professionals are conscientious about these personal health behaviors, they may be more likely to encourage them in their clients. By modeling and teaching seat belt use, health professionals may reduce risk of injury while driving or riding in an automobile by one half according to Roseen (1994). By continuing and urging regular dental exams for themselves and their clients, health professionals help reduce the risk of gum disease and cavities.

Tremendous mortality and morbidity risks are eliminated or reduced by not smoking. Health professionals who do not smoke may be likely to actively support the same behavior in their clients. Encouraging clients to never start smoking, quit, or cut down may save them from many diseases that are directly linked to smoking, such as cancer of the lung, esophagus, mouth and tongue, larynx, uterus, kidney, bladder, pancreas, and stomach (Pierce et al., 1994).

The responding health professionals also indicated they always or almost always eat a variety of food daily from the four basic food groups, and they limit their intake of dietary fat, salt, and sugar. Modeling and encouraging a healthful diet and exercise to clients will help them maintain a healthy weight and ward against vitamin deficiencies and malnutrition, and improve cardiovascular health. Eating a diet low in fat and cholesterol, with fresh fruit, vegetables and high fiber grains, also lowers the risks of colon, rectum, stomach and uterine cancer significantly (USDHHS, 1996).

The female professionals indicated their conscientiousness about performing regular breast self-examinations and receiving Pap tests, while the men reported they regularly perform testicular self examinations. Encouraging self examinations and annual Pap exams can result in early disease detection, reduce morbidity, and save the lives of clients. By modeling and passing on positive health behaviors to their clients, health professionals will encourage longevity and health among those they serve.

Unhealthy Behavior and Modeling

A number of the health behaviors reported by the professionals in this study are disturbing in view of their tendency to be detrimental to one's general health status. A large percentage of the participants (83%) reported that they do not floss their teeth more than once a day. This was a surprising finding given the well documented effectiveness of flossing in preventing

periodontal disease, and the fact that flossing is a simple procedure requiring very little time to perform.

The finding that responding physicians do not have regular physical exams was also surprising. A significant number of the physicians (29%) reported they have physical exams less than every two years, and an alarming 20% of them never see a colleague for a routine physical.

Anecdotal evidence suggests that neglecting physical exams could be due to a number of factors (A. Mayes, MD, personal communication, May 13, 1998). Physicians' work schedules are often busy. They may mistrust the judgment or expertise of colleagues, or they may have enough training to diagnose many everyday concerns on their own. Indeed, these factors might hold true for any of the health professionals, but additional anecdotal evidence suggest a few other factors specific to physicians. Physicians alone among the three groups surveyed have access to prescriptions, testing, and colleague consultation, which may enable them to receive considerable informal health care and health advice outside of the normal channels. This might explain why so few physicians reported regular physical examinations.

The reported height to weight ratio of the responding professionals also warrants some concern. The data indicate that all groups are slightly above a healthy weight. The majority of responding females expressed concern about their weight, and felt that they were slightly over their ideal weight. The men, however, were generally satisfied with their weight.

This is not a new phenomenon, as per the researcher's experience, women tend to worry more about their weight than do men. Much of this may be due to the constant media messages that thinner women are healthier, happier, and more attractive; and bulkier men are more desirable and appealing. Despite media and other outside influences, maintaining a healthy weight is beneficial to good health. Maintenance of a healthy weight for age, height, and body type reduces the risk of colon, uterine, prostate and breast cancer (Roseen, 1994).

Another area that deserves consideration are the responses to alcohol consumption. A large percentage of the responding health professionals reported drinking alcohol one to two times per week, and having one to two servings per occasion. Determining whether or not this is a problem is difficult as behaviors related to drug and/or alcohol use are difficult to define because of the fine line between use and abuse (Nakamura & Lescault, 1983). However, limited alcohol intake reduces the risk of injury, inadequate nutrition and liver damage (Roseen, 1994).

It is important to note that, race was deliberately not asked of respondents, nor was it intended to be used as a variable in data analysis for this research. The researcher assumed the responding health professionals would be knowledgeable of the basic tenants of healthful lifestyle habits as outlined in the national publication "Healthy People 2000", regardless of race. It was further assumed that race would not contribute to understanding,

promoting and modeling positive health habits. Fullilove (1998) defines race as "an arbitrary system of visual classification." Therefore, rather than work with needless stereotypes, this research sought to examine the healthful habits of health professionals as a total group.

Gender differences were not thoroughly explored either, for the same reasons as stated above. However, the survey questionnaire did gather gender information in order to understand the BMI measurements of males and females. Additionally, some questions were gender specific, such as frequency and breast or testicular self examination.

Summary

As previously stated, the results indicated that health professionals have good overall health practices, and they could model the objectives set forth by the Surgeon General in the "Healthy People 2000" Report. The health investments of the responding health professionals are sound, and if their health behaviors are consistent with their instruction to clients, they may serve well as health leaders in the new millennium. Glover (1978) states, "The role of health educators as models is often overlooked, but it may be our most powerful change agent" (p 176).

Recommendations for Health Professionals

Working together as a team, health professionals can effectively influence people to develop healthful lifestyles. With common goals and attitudes, health professionals can become a multidisciplinary team that can

affect communities on a variety of levels. Recommendations for health professionals as a group are:

1. Health Promotion. Promoting health is the number one responsibility of all health professionals whether it be through modeling, one on one or group education, or any other method. Health professionals can use their knowledge and influence to promote healthy alternatives in a number of settings. Health promotion can extend beyond the constraints of the work environment. Simple illustrations, gestures and advice can be given to people involved in the professionals' personal life.

2. Proactive Modeling. The health professional can pro-actively model their healthful lifestyle in a number of ways. The professional can spread the word on the importance of modeling positive health habits through published journals, speeches and personal communication. The professional can explore tactful ways to showcase themselves to clients.

Recommendations for Research

This thesis research revealed some interesting and useful findings on the self-reported health behaviors of a group of 117 health professionals. It also raised interesting considerations for future research. Further research on the health behaviors of health professionals could include:

1. An expanded study of the health practices and behaviors of health professionals that includes a larger sample and a more diverse group of health professionals. This study was restricted to physicians, nurses, and

health educators in the Northern California area. Future research could survey a larger and more diverse national representation of health professionals. Future research could also expand the sampling frame to include physical/occupational therapists, nurse practitioners, physicians assistants, and other technical health professionals.

2. The study's research design gathered quantitative data from health professionals regarding their health habits. A qualitative study that explores the health professionals' values and attitudes regarding practicing and modeling positive health behaviors may serve as an indicator of their proclivity to influence their clients by pro-actively modeling positive health behaviors.

3. A study on the dynamics of proactive modeling may reveal underutilized methods of health promotion and education. Specifically, how can health professionals who practice positive health behaviors be best supported in actively modeling those behaviors with their patients and clients? Are there subtle and indirect modeling dynamics that occur without the practitioner's conscious awareness? Addressing these questions will help link practitioner's personal habits to the health behaviors of their clients.

4. Regular review of the health status and health habits of health professionals would provide a consistent measurement or report card for them to determine their ability to serve as role models.

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APPENDIX A
HAUGHEY SURVEY

OFFICE USE ONLY

Study ID _____ (1-2)
 Serial Number _____ (3-6)
 Card Number _____ (7)

STATE UNIVERSITY OF NEW YORK AT BUFFALO
 Student Nurse Smoking Behavior Questionnaire

Statement of Informed Consent

We are conducting a study of the factors associated with smoking behavior among student nurses. This research is part of a larger study of student health behavior and lifestyles. The questionnaire we are asking you to complete should take only about ten minutes of your time. Participation in this research is entirely voluntary and you need not identify yourself by name. Be assured that participation, or non-participation, will have no academic consequences. If you have questions about the study, you may call Dr. Brenda Haughey at 831-3701. Your completion of the questionnaire will be considered as your voluntary, informed consent to participate in the research. We will inform you and your school about the results of the study.

INSTRUCTIONS: Please circle the number corresponding to your answer or fill in the information requested. Ignore the numbers in parentheses. They are for coding purposes.

These first questions are about your personal characteristics.

1. What is your sex?
 Female 1 (8)
 Male 2
2. How old were you at your last birthday? (years old) _____ (9-10)
3. What is your current marital status?
 Single (never married) 1
 Married 2
 Widowed, divorced or
 separated 3 (11)
4. Do you have any children?
 Yes 1 (12)
 No 2
5. During your high school years, what would you estimate was your family's total income?
 Less than \$10,000 1
 \$10,000 to \$19,000 2
 \$20,000 to \$29,000 3
 \$30,000 to \$39,000 4
 \$40,000 or more 5 (13)
6. What is your present height?
 _____ (feet) _____ (inches) (14-16).
7. What is your current weight? (in pounds)
 _____ (17-19)

8. Please indicate what type of nursing program you are currently attending?
 Diploma 1
 Associate degree 2
 Baccalaureate degree 3 (20)
9. What year of your educational program are you completing?
 1
 2
 3
 4 (21)

If you are in a diploma or associate degree program, please skip to question 11.

10. Are you a registered nurse?
 Yes 1
 No 2 (22)
- 11a. Are you currently employed?
 Yes, in nursing 1
 Yes, outside nursing 2
 No 3 (23)

If not employed, or employed outside of nursing, please skip to question 12.

-2-

11b. What type of position do you currently hold?

Staff nurse	1	
Head nurse	2	
Supervisor	3	
Administrator	4	
Other (specify)	5	

(24)

12. Are you a:

Full-time student	1	
Part-time student	2	(25)

13. Is (was) your entry into the nursing profession a career change?

Yes	1	
No	2	(26)

These next questions deal with tobacco use.

14. Do you currently smoke cigarettes?

Yes	1	
No	2	(27)

If no, please skip to question 18.

15. Do you want to quit smoking?

Yes	1	
No	2	
Not sure	3	(28)

16. Have you ever tried to stop?

Yes	1	
No	2	(29)

If no, please skip to question 22.

17a. What method(s) have you tried?
(Please answer each item.)

	Tried	Not Tried	
on your own & all at once	1	2	(30)
on your own & gradually	1	2	
formal program & all at once	1	2	
formal program & gradually	1	2	(33)

17b. How many times have you tried to quit? (number of times)

_____ (34-35)
Skip to question 21b.

18. Did you ever smoke cigarettes?

Yes	1	
No	2	(36)

If no, please skip to question 27.

19. For how many years did you smoke?
(number of years)

_____ (37-38)

20. When did you last smoke cigarettes?

Less than 1 month ago	1	
1-2 months ago	2	
3-6 months ago	3	
7-12 months ago	4	
One or two years ago	5	
Three or more years ago	6	(39)

21a. What method did you use to stop smoking?

On your own & all at once	1	
On your own & gradually	2	
Formal program & all at once	3	
Formal program & gradually	4	(40)

21b. Was your stopping (or trying to stop) related to any of the following reasons? (Please answer each item.)

	Yes	No	
occurrence of certain symptoms	1	2	(41)
scientific reports convinced me	1	2	
protect my future health	1	2	
save me money	1	2	
self-discipline	1	2	
pressure from professional colleagues to do so	1	2	
pressure from significant other(s) to do so	1	2	
set good example for patients	1	2	
religious reasons	1	2	
set good example for children & teenagers	1	2	
illness	1	2	
pregnancy	1	2	
just stopped - no particular reason	1	2	
other (specify)	1	2	(54)

21c. How many times did you try to quit before you were successful? (number of times)

_____ (55-56)

22. Over the last year of your smoking, what was the average number of cigarettes you smoked per day? (number of cigarettes)

_____ (57-58)

23. How old were you when you started smoking? (years old)

_____ (59-60)

24. Why did you start smoking? (Please answer each item.)

	Yes	No	
was the "thing" to do	1	2	(61)
peer pressure	1	2	
pleasure of smoking	1	2	
to lose weight	1	2	
pressures at nursing school	1	2	
pressures at work	1	2	
to make me more relaxed in			
social situations	1	2	
don't know	1	2	
other (specify)	1	2	

_____ (69)

25a. Did your smoking habits change after you started nursing school?

Yes 1
No 2 (70)

If no, please skip to question 26.

25b. How did your smoking habits change?

Started smoking 1
Smoked more 2
Smoked less 3
Quit smoking 4 (71)

26. Where were you living when you started to smoke?

Parents home 1
Own home/apartment 2
Dormitory 3
Other 4 (72)

27. When you were growing up, did your parents smoke?

Yes, mother only 1
Yes, father only 2
Yes, both 3
No 4 (73)

28a. Do any of the persons with whom you live smoke cigarettes?

Yes 1
No 2
Doesn't apply 3 (74)

28b. If yes, please circle all that apply.

Spouse	1	(75)
Sibling	2	
Parent	3	
Children	4	
Friend/roommate	5	(79)

OFFICE USE ONLY

2

(1-7)

29. If the following health programs were offered at your school, how important would each be to you? (Please answer each item.)

Possible programs:	Very	Moderately	Slightly	Not	
stress reduction	1	2	3	4	(8)
weight control	1	2	3	4	
drug-alcohol abuse	1	2	3	4	
breast self-examination	1	2	3	4	
quit smoking	1	2	3	4	
cardiovascular fitness	1	2	3	4	
other (specify)	1	2	3	4	(14)

30. If your school were to offer a quit smoking program at a time convenient for you, what method would you most prefer? (choose one)

Does not apply; nonsmoker 1
No preference for kind of program 2
Group program (classes) 3
Films/movies 4
Reading material 5
Individual counseling 6
Other (specify) 7

_____ (15)

31. If a quit smoking program were offered at a time convenient for you, would you participate?

Yes 1
No 2
Does not apply; nonsmoker 3 (16)

These next items ask about various lifestyle and health practices.

32. How many hours do you normally sleep in a 24 hour period?
(number of hours)

_____ (17-18)

33. In describing your general level of physical activity, how many times a week do you have a chance to do active things like jogging, swimming, sports, long walks, physical exercises, etc.? (times per week)

_____ (19-20)

34. What amount of physical effort do you expend during your usual daily activities?

A great deal	1
Moderate	2
Small	3
Hardly any	4 (21)

35. How often do you drink beer, wine and/or liquor? Would you say that you:

Never drink (skip to ques 37)	1
Drink less than once a week	2
Drink once or twice a week	3
Drink more than twice a week	4 (22)

36. When you drink, how many bottles of beer, glasses of wine, and servings of mixed drinks do you usually have on one occasion? (number of drinks)

_____ (23)

37. How often do you eat breakfast?

Almost every day	1
Sometimes	2
Rarely or never	3 (24)

38. How often do you eat between meals?

Almost every day	1
Sometimes	2
Rarely or never	3 (25)

39. On the average day, how many cups of coffee do you drink? (number of cups)

_____ (26-27)

40. Do you use a seat belt?

Almost always	1
Frequently	2
Once in a while	3
Hardly ever	4 (28)

41. How often do you visit the doctor for a routine physical exam?

At least once a year	1
Every two years	2
Less frequently	3 (29)

42. How often do you visit the dentist for a routine check up?

At least every six months	1
Once a year	2
Every two years	3
Less frequently	4 (30)

43. Do you floss your teeth daily?

Yes	1
No	2 (31)

44. How often do you brush your teeth?

More than once a day	1
Once a day	2
Less frequently	3 (32)

45. Please answer each of the following questions about your diet.

	Almost always	Some- times	Almost never
--	------------------	----------------	-----------------

- a. I eat a variety of foods each day, such as fruits & vegetables, whole grain breads & cereals, lean meats, dairy products, dry peas & beans, & nuts & seeds

1	2	3 (33)
---	---	--------

- b. I limit the amount of fat, saturated fat, & cholesterol I eat (including fat on meats, eggs, butter, cream shortenings, & organ meats such as liver)

1	2	3
---	---	---

- c. I limit the amount of salt I eat by cooking with only small amounts, not adding salt at the table, & avoiding salty snacks)

1	2	3
---	---	---

- d. I avoid eating too much sugar (especially frequent snacks of sticky candy or soft drinks)

1	2	3 (36)
---	---	--------

For females only (males please skip to question 49).

46. How often do you do breast self-examination?

Monthly	1	
Occasionally	2	
Not at all	3	(37)

47. How often do you have a pap test?

At least once a year	1	
Once every two years	2	
Once every three years	3	
Less frequently	4	(38)

The next questions deal with the relationship between smoking and health and the nurse's attitude toward smoking.

48. Do you ever talk about the effects of smoking on health with your fellow students?

Very frequently	1	
Frequently	2	
Occasionally	3	
Hardly ever	4	(39)

49. For each of the diseases or conditions listed below, please indicate whether you think that cigarette smoking is associated with the disease or condition.

	Yes	No	Not Sure	
bladder cancer	1	2	3	(40)
coronary artery disease	1	2	3	
lung cancer	1	2	3	
chronic bronchitis	1	2	3	
oral cancer	1	2	3	
pulmonary emphysema	1	2	3	
laryngeal cancer	1	2	3	
diseases of blood vessels	1	2	3	
pre-cancerous lesions	1	2	3	
neo-natal death	1	2	3	
low-birth weight syndrome	1	2	3	(50)

50. In looking over the table of contents of a professional journal, if you saw an article on smoking and health, how likely would you be to read it?

Very likely	1
Fairly likely	2
Fairly unlikely	3
Very unlikely	4

(51)

51. Please indicate whether you agree/disagree with the following statements:

	Strongly agree	Moderately agree	Slightly agree	Slightly disagree	Moderately disagree	Strongly disagree	
It is the nurse's responsibility to help patients who wish to stop smoking to accomplish this.	1	2	3	4	5	6	(52)
It is the nurse's responsibility to actively encourage patients to stop smoking.	1	2	3	4	5	6	
It is the nurse's responsibility to set a good example by not smoking cigarettes.	1	2	3	4	5	6	
The nurse's time can be much better spent teaching patients other things than smoking cessation.	1	2	3	4	5	6	
The whole problem of cigarette smoking and health is a very minor one.	1	2	3	4	5	6	
Nurses should be more active than they have been in speaking before lay groups about cigarette smoking.	1	2	3	4	5	6	
Most patients will not give up smoking even if their care provider tells them to.	1	2	3	4	5	6	
There is no method around today to really help a cigarette smoker who wants to quit but can't do it on his own.	1	2	3	4	5	6	(59)

APPENDIX B

SELECTED HEALTHY PEOPLE 2000 CORE LIFESTYLE OBJECTIVES

Healthy People 2000 Core Lifestyle Objectives

Objective 9.12: Increase the use of safety belts to 85 percent of motor vehicle occupants.

Objective 21.3: Increase to at least 95 percent the proportion of people who have a specific source of ongoing primary care for coordination of their preventive and episodic health care.

Objective 13.14 Increase to at least 50 percent the proportion of people aged 35 and older using the oral health care system during each year.

Objective 3.4: Reduce cigarette smoking to a prevalence of no more than 15 percent among people aged 18 and older.

Objective 1.6: Increase to at least 40 percent the proportion of people aged 6 and older who regularly perform physical activities that enhance and maintain muscular strength, muscular endurance, and flexibility.

Objective 1.2: Reduce overweight to a prevalence of no more than 20 percent among people aged 20 and older.

Objective 2.6: Increase complex carbohydrate and fiber-containing foods in the diets of people aged 2 and older to an average of five or more daily servings for vegetables (including legumes) and fruits, and to an average of six or more daily servings for grain products. In addition, increase to at least 50 percent the proportion of people aged 2 and older who meet the Dietary Guidelines' average daily goal of five or more servings of vegetables/ fruits,

and increase to at least 50 percent the proportion who meet the goal of six or more servings of grain products.

Objective 2.5: Reduce dietary fat intake to an average of 30 percent of calories or less and average saturated fat intake to less than 10 percent of calories among people aged 2 and older. In addition, increase to at least 50 percent the proportion of people aged 2 and older who meet the Dietary Guidelines' average daily goal of no more than 30 percent of calories from fat, and increase to at least 50 percent the proportion of people aged 2 and older who meet the average daily goal of less than 10 percent of calories from saturated fat.

Objective 2.9: Decrease salt and sodium intake so at least 65 percent of home meal preparers prepare foods without adding salt, at least 80 percent of people avoid using salt at the table, and at least 40 percent of adults regularly purchase foods modified or lower in sodium.

Objective 4.8: Reduce alcohol consumption by people aged 14 and older to an annual average of no more than 2 gallons of ethanol per person.

Objective 16.12: Increase to at least 95 percent the proportion of women aged 18 and older who have ever received a Pap test, and to at least 85 percent those who have received a pap test within the preceding 1 to 3 years.

APPENDIX C
ADAPTED QUESTIONNAIRE/SURVEY INSTRUMENT

PERSONAL HEALTH BEHAVIORS OF HEALTH PROFESSIONALS

Lifestyle practices

1. How often do you wear your seat belt when driving or riding in a car?

- ☐ Always ☐ Almost always
☐ Once in a while ☐ Hardly ever or never

2. How often do you visit the doctor for a routine physical exam?

- ☐ At least once a year
☐ Every two years
☐ Less frequently
☐ Never

3. How often do you visit the dentist for a routine check up?

- ☐ At least once a year
☐ Every two years
☐ Less frequently
☐ Never

4. How often do you floss your teeth?

- ☐ More than once a day
☐ Once a day
☐ Less frequently
☐ Never

5. How often do you brush your teeth?

- ☐ More than once a day
☐ Once a day
☐ Less frequently
☐ Never

6. Have you ever smoked?

- ☐ Yes ☐ No

7. If yes, how much did you smoked?

- ☐ 1/2 pack or less per day
☐ 1 pack a day
☐ 2 packs a day
☐ 3 or more packs per day

8. Do you currently smoke?

- ☐ Yes ☐ No

9. If yes, how much

- ☐ 1/2 pack or less per day
☐ 1 pack a day
☐ 2 packs a day
☐ 3 or more packs per day

10. If not currently smoking, how long since you quit?

- ☐ Less than 1 year
☐ 1 to 2 years
☐ 3 to 5 years
☐ Over 5 years

11. In describing your general level of physical activity, how many times a week do you do active things like jogging, swimming, power walking or other physical activity for at least 20 minutes?

- ☐ Daily ☐ 3 to 5 times a week
☐ 1 or 2 times a week ☐ Never

12. What amount of physical effort do you expend during your usual daily activities?

- ☐ A great deal
☐ A moderate amount
☐ A small amount
☐ Hardly any

Personal characteristics:

13. ☐ Age ☐ Male ☐ Female
☐ Height ☐ Weight

14. Do you consider yourself: (check most appropriate)

- ☐ At or near my ideal weight
☐ Slightly under my ideal weight
☐ Slightly over my ideal weight
☐ Considerably under my ideal weight
☐ Considerably over my ideal weight

15. Regarding your weight, are you:
(check most accurate)

- ☐ Very satisfied
☐ Satisfied
☐ Slightly concerned
☐ Very concerned
☐ Unconcerned

Nutrition practices

16. I eat a variety of food each day, such as 5 or more servings of vegetables and fruit, and 6 or more servings of whole grain breads and cereals, and 2 or more servings of lean meats, dairy products and legumes.

- ☐ Always
☐ Almost always
☐ Sometimes
☐ Almost never

17. I limit the amount of fat, saturated fat, and cholesterol I eat (including fats on meats, eggs, butter and organ meats) to 30 percent or less of my calories per day.

- ☐ Always
☐ Almost always
☐ Sometimes
☐ Almost never

18. I limit the amount of salt I eat by cooking only with small amounts, not adding salt at the table, and avoiding salty snacks.

- ☐ Always
☐ Almost always
☐ Sometimes
☐ Almost never

19. I avoid eating too much sugar (especially frequent snacks of sticky candy or soft drinks).

- ☐ Always
☐ Almost always
☐ Sometimes
☐ Almost never

20. How often do you drink beer, wine and/or liquor?

- ☐ Daily ☐ 3 to 5 times a week
☐ 1 or 2 times a week ☐ Never

21. When you drink, how many bottles of beer, glasses of wine, and/or servings of mixed drinks to you usually have on one occasion (number of drinks)?

- ☐ Less than 1 ☐ 1 to 2 ☐ 3 to 4 ☐ 5+

For females only (Males skip to #24)

22. How often do you perform breast self-examination?

- ☐ Monthly ☐ Occasionally
☐ Rarely ☐ Never

23. How often do you have a Pap test?

- ☐ At least once a year
☐ Once every two years
☐ Once every three years
☐ Less frequently
(Females skip to #25)

For males only

24. How often do you perform testicular self examination?

- ☐ Monthly ☐ Occasionally
☐ Rarely ☐ Never

Career Information

25. What is your current profession?

26. What is your current career title?

27. What academic degrees have you obtained?

APPENDIX D
QUESTIONNAIRE COVER LETTER

**San José State
UNIVERSITY**

**College of Applied
Sciences and Arts
Department of Health Science**

One Washington Square
San José, CA 95192-0052
Voice: 408-924-2970
Fax: 408-924-2979
<http://www.sjsu.edu/depts/casa/dept/hs.html>

PERSONAL HEALTH BEHAVIORS OF HEALTH PROFESSIONALS SURVEY

I am employed by the American Lung Association of Santa Clara-San Benito Counties (ALA/SCSB), and I am a graduate student at San Jose State University. The ALA/SCSB is graciously assisting me in completion of my thesis project by allowing me access to their data base of health professionals.

You have been randomly selected to participate in a confidential survey about the personal health behaviors of health professionals. The Data for this graduate thesis research are being collected from a wide range of health professionals in California.

Please be aware that your participation is entirely voluntary, and you have the right to skip any questions you'd rather not answer. Your privacy will be strictly protected. The results of the survey will only be presented as group data. Your decision regarding participation will in no way jeopardize your relationship with the American Lung Association or any other professional organization.

Please return the completed survey in the enclosed stamped, self addressed envelope within three weeks. Completion of this survey will serve as permission to use the data you will provide. You may contact me for additional information at 408/998-5864. Complaints may be directed the Dr. William Washington, Health Science Department Chair 408/924-2970, and questions regarding human subjects rights may be directed to Serena Stanford, AAVP of Graduate Studies at 408/924-2480.

Thank you for your participation.

The California State University:
Chancellor's Office
Bakersfield, Chico, Dominguez Hills,
Fresno, Fullerton, Hayward, Humboldt,
Long Beach, Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San José, San Luis Obispo,
San Marcos, Sonoma, Stanislaus

APPENDIX E

SAN JOSE STATE UNIVERSITY HUMAN SUBJECTS

INSTITUTIONAL REVIEW BOARD APPROVAL

San José State
UNIVERSITY

Office of the Academic
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Associate Vice President
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One Washington Square
San José, CA 95192-0025

Voice: 408-924-2480

Fax: 408-924-2477

E-mail: gstudies@wahoo.sjsu.edu

<http://www.sjsu.edu>

TO: Alma L. Burrell
111 South 15th Street
San Jose, CA 95112

FROM: Serena W. Stanford *Serena W. Stanford*
AAVP, Graduate Studies & Research

DATE: August 19, 1997

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Personal Health Behaviors of Health Professionals"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Serena Stanford, Ph.D., immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

The California State University:
Chancellor's Office
Bakersfield, Chico, Dominguez Hills,
Fresno, Fullerton, Hayward, Humboldt,
Long Beach, Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San José, San Luis Obispo,
San Marcos, Sonoma, Stanislaus

APPENDIX F

CODEBOOK

PERSONAL HEALTH BEHAVIORS OF HEALTH PROFESSIONALS

Lifestyle practices

1. How often do you wear your seat belt when driving or riding in a car?

- 4 Always 3 Almost always
2 Once in a while 1 Hardly ever or never

2. How often do you visit the doctor for a routine physical exam?

- At least once a year
 Every two years
 Less frequently
 Never

3. How often do you visit the dentist for a routine check up?

- 4 At least once a year
3 Every two years
2 Less frequently
1 Never

4. How often do you floss your teeth?

- 4 More than once a day
3 Once a day
2 Less frequently
1 Never

5. How often do you brush your teeth?

- 4 More than once a day
3 Once a day
2 Less frequently
1 Never

6. Have you ever smoked?

- 1 Yes 2 No

7. If yes, how much did you smoked?

- 4 1/2 pack or less per day
3 1 pack a day
2 2 packs a day
1 3 or more packs per day

8. Do you currently smoke?

- 1 Yes 2 No

9. If yes, how much

- 4 1/2 pack or less per day
3 1 pack a day
2 2 packs a day
1 3 or more packs per day

10. If not currently smoking, how long since you quit?

- 4 Less than 1 year
3 1 to 2 years
2 to 5 years
1 Over 5 years

11. In describing your general level of physical activity, how many times a week do you do active things like jogging, swimming, power walking or other physical activity for at least 20 minutes?

- 4 Daily 3 3 to 5 times a week
2 1 or 2 times a week 1 Never

12. What amount of physical effort do you expend during your usual daily activities?

- 4 A great deal
3 A moderate amount
2 A small amount
1 Hardly any

Personal characteristics:

13. Age Male Female
 Height Weight

14. Do you consider yourself: (check most appropriate)

- 5 At or near my ideal weight
4 Slightly under my ideal weight
3 Slightly over my ideal weight
2 Considerably under my ideal weight
1 Considerably over my ideal weight

15. Regarding your weight, are you: (check most accurate)

- 5 Very satisfied
4 Satisfied
3 Slightly concerned
2 Very concerned
1 Unconcerned

Nutrition practices

16. I eat a variety of food each day, such as 5 or more servings of vegetables and fruit, and 6 or more servings of whole grain breads and cereals, and 2 or more servings of lean meats, dairy products and legumes.

- 4 Always
3 Almost always
2 Sometimes
1 Almost never

17. I limit the amount of fat, saturated fat, and cholesterol I eat (including fats on meats, eggs, butter and organ meats) to 30 percent or less of my calories per day.

- 4 Always
3 Almost always
2 Sometimes
1 Almost never

18. I limit the amount of salt I eat by cooking only with small amounts, not adding salt at the table, and avoiding salty snacks.

- 4 Always
3 Almost always
2 Sometimes
1 Almost never

19. I avoid eating too much sugar (especially frequent snacks of sticky candy or soft drinks).

- 4 Always
3 Almost always
2 Sometimes
1 Almost never

20. How often do you drink beer, wine and/or liquor?

- 1 Daily 2 3 to 5 times a week
3 1 or 2 times a week 4 Never

21. When you drink, how many bottles of beer, glasses of wine, and/or servings of mixed drinks to you usually have on one occasion (number of drinks)?

- 4 Less than 1 3 1 to 2 2 3 to 4
1 5+

For females only (Males skip to #24)

22. How often do you perform breast self-examination?

- 4 Monthly 3 Occasionally
2 Rarely 1 Never

23. How often do you have a Pap test?

- 4 At least once a year
3 Once every two years
2 Once every three years
1 Less frequently

(Females skip to #25)

For males only

24. How often do you perform testicular self-examination?

- 4 Monthly 3 Occasionally
2 Rarely 1 Never

Career Information

25. What is your current profession?

26. What is your current career title?

27. What academic degrees have you obtained?

APPENDIX G
MEANS TABLES

MEANS TABLES

The first part of the questionnaire asked participants about their lifestyle practices. Tables 1 - 12 below describes responses to these questions by professional discipline.

Question 1

How often do you wear your seat belt when driving or riding in a car?

	Always	Almost always	Once in a while	Hardly ever or never
Doctors (n=41)	90%	7%	0	3%
Nurses (n=42)	86%	14%	0	0
Health Educators (n=33)	91%	9%	0	0

Question 2

How often do you visit the doctor for a routine physical exam?

	At least once a year	Every two years	Less frequently	Never
Doctors (n=41)	32%	19%	29%	20%
Nurses (n=42)	64%	21%	12%	3%
Health Educators (n=33)	67%	9%	18%	6%

Question 3

How often do you visit the dentist for a routine check up?

	At least once a year	Every two years	Less frequently	Never
Doctors (n=41)	80%	10%	7%	3%
Nurses (n=43)	88%	9%	3%	0
Health Educators (n=33)	97%	3%	0	0

Question 4

How often do you floss your teeth?

	More than once a day	Once a day	Less frequently	Never
Doctors (n=41)	2%	44%	46%	8%
Nurses (n=41)	0	46%	54%	0
Health Educators (n=33)	15%	36%	40%	9%

Question 5

How often do you brush your teeth?

	More than once a day	Once a day	Less frequently	Never
Doctors (n=41)	73%	27%	0	0
Nurses (n=43)	81%	19%	0	0
Health Educators (n=33)	91%	9%	0	0

Question 6

Have you ever smoked?

	Yes	No
Doctors (n=41)	34%	66%
Nurses (n=43)	30%	70%
Health Educators (n=33)	18%	82%

Question 7

If yes, how much did you smoke?

	1/2 pack or less per day	1 pack a day	2 packs a day	3 or more packs a day
Doctors (n=13)	54%	44%	0	0
Nurses (n=15)	47%	40%	13%	0
Health Educators (n=6)	83%	17%	0	0

Question 8

Do you currently smoke?

	Yes	No
Doctors (n=14)	7%	93%
Nurses (n=41)	5%	95%
Health Educators (n=6)	0	100%

Question 9

If yes, how much?

	1/2 pack or less per day	1 pack a day	2 packs a day	3 or more packs a day
Doctors (n=0)	0	0	0	0
Nurses (n=2)	100%	0	0	0
Health Educators (n=0)	0	0	0	0

Question 10

If not currently smoking, how long since you quit?

	Less than 1 year	1 to 2 years	3 to 5 years	Over 5 years
Doctors (n=13)	0	0	8%	92%
Nurses (n=19)	0	5%	63%	32%
Health Educators (n=5)	0	0	0	100%

Question 11

In describing your general level of physical activity, how many times a week do you do active things like jogging, swimming, power walking or other physical activity for at least 20 minutes?

	Daily	3 to 5 times a week	1 or 2 times a week	Never
Doctors (n=41)	7%	46%	27%%	20%
Nurses (n=41)	10%	34%	39%	17%
Health Educators (n=33)	15%	52%	33%	0

Question 12

What amount of physical effort do you expend during your usual daily activities?

	A great deal	A moderate amount	A small amount	Hardly any
Doctors (n=40)	12%	60%	25%%	3%
Nurses (n=42)	12%	52%	33%	3%
Health Educators (n=33)	24%	46%	27%	3%

Question 11

In describing your general level of physical activity, how many times a week do you do active things like jogging, swimming, power walking or other physical activity for at least 20 minutes?

	Daily	3 to 5 times a week	1 or 2 times a week	Never
Doctors (n=41)	7%	46%	27%%	20%
Nurses (n=41)	10%	34%	39%	17%
Health Educators (n=33)	15%	52%	33%	0

Question 12

What amount of physical effort do you expend during your usual daily activities?

	A great deal	A moderate amount	A small amount	Hardly any
Doctors (n=40)	12%	60%	25%%	3%
Nurses (n=42)	12%	52%	33%	3%
Health Educators (n=33)	24%	46%	27%	3%

Question 17

I limit the amount of fat, saturated fat, and cholesterol I eat (including fats on meats, eggs, butter and organ meats) to 30 percent or less of my calories per day.

	Always	Almost always	Sometimes	Almost never
Doctors (n=39)	23%	49%	21%%	7%
Nurses (n=42)	21%	67%	12%	0
Health Educators (n=31)	29%	61%	10%	0

Question 18

I limit the amount of salt I eat by cooking only with small amounts, not adding salt at the Question, and avoiding salty snacks.

	Always	Almost always	Sometimes	Almost never
Doctors (n=39)	28%	44%	13%%	15%
Nurses (n=43)	26%	44%	21%	9%
Health Educators (n=30)	40%	43%	10%	7%

Question 19

I avoid eating too much sugar (especially frequent snacks of sticky candy or soft drinks).

	Always	Almost always	Sometimes	Almost never
Doctors (n=39)	31%	33%	26% %	10%
Nurses (n=43)	12%	49%	37%	2%
Health Educators (n=30)	13%	70%	13%	4%

Question 20

How often do you drink beer, wine and/or liquor?

	Daily	3 to 5 times a week	1 or 2 times a week	Never
Doctors (n=39)	21%	13%	46%	20%
Nurses (n=40)	20%	18%	27%	35%
Health Educators (n=30)	10%	7%	36%	47%

Question 21

When you drink, how many bottles of beer, glasses of wine, and/or servings of mixed drinks do you usually have on one occasion (number of drinks)?

	Less than 1	1 to 2	3 to 4	5+
Doctors (n=36)	8%	72%	17%%	3%
Nurses (n=37)	11%	86%	3%	0
Health Educators (n=26)	11%	85%	4%	0

Part 4 of the survey asked female respondents about breast care and frequency of Pap exams, while males were asked about their testicular self examination. Tables 19 - 21 list responses to these questions.

Question 22

How often do you perform breast self-examination?

	Monthly	Occasionally	Rarely	Never
Doctors (n=10)	50%	50%	0	0
Nurses (n=43)	26%	54%	16%	4%
Health Educators (n=31)	26%	42%	16%	16%

Question 23

How often do you have a Pap test?

	At least once a year	Once every two years	Once every three years	Less frequently
Doctors (n=9)	44%	56%	0	0
Nurses (n=43)	77%	14%	7%	2%
Health Educators (n=31)	81%	10%	10%	0

Question 24

How often do you perform testicular self examination?

	Monthly	Occasionally	Rarely	Never
Doctors (n=29)	35%	34%	24%	7%
Nurses (n=0)	0	0	0	0
Health Educators (n=0)	0	0	0	0

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