CHOOSING TO WORK WITH THE ELDERLY: ANALYZING

DETERMINANTS IN THE DECISION OF THE HEALTH

PROFESSIONS STUDENT

By

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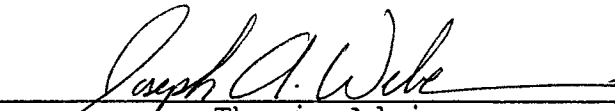University of Central Oklahoma
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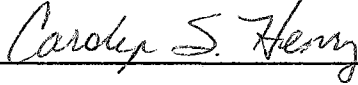the requirements for
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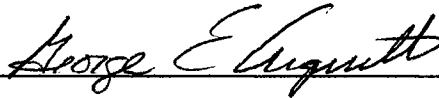_Joseph A. Weber_

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CHAPTER I

INTRODUCTION

Each decade since 1790, the United States has been conducting a census (U. S. Bureau of the Census, 1992). The results of these surveys indicate that the population in America is aging. In 1900, approximately four percent of the population, or 1 in every 25 people, was 65 years of age and older. This figure grew to 1 in 10 people in 1970, and is expected to reach one in five by 2030 (AARP, 1991). Today the elderly (those people 65 years of age and older) constitute 12.6 percent of the U.S. population or one in every eight. Perhaps the greatest contributing factors to this increase are pre-natal care which leads to healthier mothers and children, the control of infectious diseases, medical technology, healthy lifestyles, and the aging of the "baby boomers" (Ferrini & Ferrini, 1993).

In addition to the growth of the elderly population in general, the portion of the population age 85 years and older has also grown at a phenomenal rate. Hooyman and Kiyak (1993) point out that this group of elders "has grown more rapidly than any other age group in our country" (p. 14). In fact, there has been a 300 percent increase in the number of the oldest old since 1960 (AARP, 1990).

The fact that many people today are reaching old age

suggests that there will be an increasing need for services. Possibly the most important of which is health care.

More than four out of five of the elderly within the United States suffer from at least one chronic illness (Ferrini & Ferrini, 1993). These conditions are long-term, progressive, and usually incurable. Chronic illnesses often lead to some loss of quality of life. For example, the elderly individual with arthritis may face one obstacle after another. Getting out of bed, dressing, cooking, cleaning, and dialing the phone can all be a painful experience for the arthritically afflicted person. In addition to this chronic condition, others are somewhat pervasive in the older population. Heart and cerebrovascular disease, as well as respiratory problems show an increased incidence among the aged (Spence, 1989). Each of these can lead to a lessened quality of life.

With at least 80 percent of the older population suffering from one or more chronic conditions it would be expected that the use of health care services would increase (Ferrini & Ferrini, 1993). Haug (1984) found, however, that there is an underutilization of physician services for chronic conditions.

Several reasons have been postulated to explain why older people have relatively low rates of seeking medical help for chronic illnesses. One is that the elderly believe these conditions are a natural occurrence with age and that

doctors can do little to help (Nuttbrock & Kosberg, 1980).
Doctor-patient communication may also play a part. Rowe
(1985) suggests older people may not report symptoms or even
seek help. This may be due to a fear of a diagnosis of a
serious illness or embarrassment of telling the physician
what is wrong. In addition to beliefs held by the elderly
themselves and communication problems with physicians,
underutilization of health care services may be the result
of stereotypical, ageist thought patterns. Ford and
Sbordone (1980) report that negative attitudes on the part
of health professionals have a negative impact on whether
the elderly seek medical attention.

<div align="center">Statement of the Problem</div>

Attitude can be defined as one's perception, viewpoint,
or outlook regarding people, places, or things. Attitude
has been defined as "...a relatively enduring organization
of beliefs around an object or situation predisposing one to
respond in some preferential manner" (Rokeach, 1968, p.
112). Rokeach (1968) suggests that people use attitudes
when they describe, evaluate, or advocate a certain course
of action regarding another individual or a situation. The
action to which an attitude leads "is dictated by the
content of the belief" (p.114). The more deeply seated the
belief, the greater affect it has on attitude and subsequent
behavior.

Purtilo (1990) examined attitude in relation to

interactions between health professionals and patients. Results suggested that the opinion or feeling the health professional has of or toward the elderly can determine the effectiveness of the interaction between the individuals involved.

Since there has been, and continues to be, such growth in the elderly population, it stands to reason that more and more health professionals will have to interact with this cohort. It is therefore important to study the attitudes regarding this older group of people held by students in the health professions. However, even more important is the impact these attitudes have on a health professions student's decision to work with the aged. This study will focus on the determining factors associated with the decision to work with the elderly by students in the health professions.

Purpose of the Study

The aim of this investigation is to determine the relationship between a student's gender, age, race, prior education, and work experience and the student's attitude toward working with the elderly. In addition, the relationship between a student's attitude toward the elderly and the student's attitude toward working with the elderly will be ascertained.

Furthermore, the quality of a student's familial and social experiences with the elderly, as well as the

student's socioeconomic status (SES) will be probed. The student's locus of control will be measured in an effort to determine if perceived expectations from family and friends or the student's personal expectations influence his or her decision to work with the elderly subsequent to graduation.

Theoretical Framework

The study will be grounded in Ajzen and Fishbein's theory of reasoned action (1980). The theory of reasoned action is considered a variation of exchange theory by the investigator. Therefore, an overview of exchange theory will be given before an explanation of Ajzen and Fishbein's theory.

Exchange Theory

The general principle of exchange theory is that "humans avoid costly behavior and seek rewarding statuses, relationships, interactions, and feeling states to the end that their profits are maximized" (Nye, 1979, p. 2) and their losses are minimized. This principle is also stated in propositional form by Nye (1979, p. 6) as follows:

1. Individuals choose those alternatives from which they expect the most profit.

2. Costs being equal, they choose alternatives from which they anticipate the greatest rewards.

3. Rewards being equal, they choose alternatives from which they anticipate the fewest costs.

4. Immediate outcomes being equal, they choose those

alternatives that promise better long-term outcomes.

5. Long-term outcomes being perceived as equal, they choose alternatives providing better immediate outcomes.

A key concept in exchange theory is that of <u>choice</u>. Exchange theory suggests that humans are continuously faced with choices and that they will choose the statuses, relationships, and feeling states which will derive the most profit in the long-run.

In addition to the idea of choice, there are several constructs which should be defined in order to have a clearer understanding of exchange theory. A <u>reward</u> is something a person likes. A <u>cost</u> is something a person dislikes or a reward foregone. A <u>profit</u> is realized when the rewards outweigh the costs. A <u>loss</u> is realized when the costs outweigh the rewards.

"Exchange relationships are governed by orientations and rules that delineate acceptable and appropriate behavior" (Sabatelli & Shehan, 1993, p. 402). One important orientation is that of distributive justice. Distributive justice, or fairness, looks at the balance of rewards and costs (Homans, 1961) as perceived or expected by the individual (Blau, 1964). "...the critical issue in evaluating whether a relationship conforms to the norm of fairness is the determination of the degree to which the

ratio of rewards to costs...compare or contrast to expectations" (Sabatelli & Shehan, 1993, p. 402).

Major Variations Within the Framework

There are several variations within the exchange theory model. One such variation is choice and exchange theory (Nye, 1979) in which the basic premise of maximizing profits and minimizing losses is still the focal point. Several motivating factors which cause an individual to make a specific decision have been suggested by Nye (1979). They are social approval, autonomy, ambiguity, security, money, value and opinion agreement, and equality. An individual will decide upon the alternative which he/she perceives produces the most social approval and which gives a feeling of security while still allowing the individual to remain autonomous. Value and opinion agreement with others along with a feeling of equality are also important. Individuals will also look for alternatives which have the least ambiguity because "not knowing" is seen as a cost. As Shornack (1986) states, individuals "choose among alternatives by weighing rewards against costs and immediate outcomes against long-term outcomes" (p. 55).

Another variation of exchange theory is decision theory (Cook, O'Brien, & Kollock, 1990). Decision theory suggests actors (individuals) desire to make rational decisions. However, making a rational decision is not an easy task. If the most rational alternative is not "easily

discernible...it is sometimes cognitively too difficult for actors to figure out what is the most rational choice" (p. 168). Research on "the way in which actors perceive, process, and retrieve information" (p. 169) is vitally important to the foundation of decision theory. It is only through understanding this cognitive process that theorists can determine if humans are rational beings and therefore capable of recognizing the most rational choice.

Emerson's work on a theory of value is yet another variation of exchange theory. In value theory the actor is not a rational being. Emerson (1987) states "this theory is addressed primarily to value comparisons between domains, and the interplay of values in such choice situations might involve no 'rational calculations' in the sense of conscious attempts to maximize utility" (p. 17). It is important to understand the value an actor puts on a particular item or object in order to predict which alternative will be chosen.

In short, individuals behave according to perceived profit derived from a given situation, another person, or even themselves, based on the value given to the situation or person. In order to understand a person's employment behaviors, for example, the person's perception regarding engaging in that employment behavior must be understood. In addition, social approval by others is considered a reward (Nye, 1979). It is for these reasons that this researcher considers Ajzen and Fishbein's (1980) theory of reasoned

action a variation of exchange theory.

<u>Theory of Reasoned Action</u>

The theory of reasoned action has as its ultimate goal the prediction and understanding of an individual's behavior. "Generally speaking, the theory is based on the assumption that human beings are usually quite rational and make systematic use of the information available to them" (Ajzen & Fishbein, 1980, p. 5). That is, "...people consider the implications of their actions before they decide to engage in a given behavior" (Ajzen & Fishbein, 1980, p. 5).

The prediction and understanding of an individual's behavior involves two basic steps. The first is to clearly define the behavior and the second is to ask what determines the behavior.

The theory of reasoned action "views a person's intention to perform (or not perform) a behavior as the immediate determinant of the action" (Ajzen & Fishbein, 1980, p. 5). It suggests that "...barring unforseen events, a person will usually act in accordance with his/her intention" (Ajzen & Fishbein, 1980, p. 5).

<u>Determinants of Intention</u>

Ajzen and Fishbein (1980) state that "a person's intention is a function of two basic determinants, one personal in nature and the other reflecting social influence" (p. 6). The first factor, "attitude toward the

behavior," is a personal one. It consists of the positive or negative evaluation by the individual of performing the behavior and involves a judgement made by the person as to whether performing the behavior is good or bad, as well as, whether he/she is in favor of, or against, performing the behavior. The second determining factor is labeled "subjective norm." The subjective norm is related to the individual's "perception of social pressures put on him/her to perform or not perform the behavior in question" (p. 6). Ajzen and Fishbein (1980) state that, "generally speaking, individuals will intend to perform a behavior when they evaluate it positively and when they believe that important others think they should perform it" (p. 6).

When a conflict arises between the two determinants of intention, the relative weights of these two factors come into play. In one situation the individual's attitude toward the behavior rather than the subjective norm may weigh more heavily on performing the intended behavior. In another situation, the subjective norm may be the most important determining factor.

In addition to measuring an individual's attitude toward performing a behavior, the subjective norm associated with performing the behavior, and the relative weights given to these factors, it is important to understand why people hold certain attitudes and subjective norms. "According to the theory, attitudes are a function of beliefs" (Ajzen &

Fishbein, 1980, p. 7). The individual who believes that performing the intended behavior will lead to mostly positive outcomes will hold a favorable attitude toward performing that behavior. The individual who holds an unfavorable attitude toward the intended behavior believes that performing the behavior will lead to mostly negative outcomes. Ajzen and Fishbein (1980) term these underlying beliefs of the person's attitude toward the behavior, "behavioral beliefs."

In addition to behavioral beliefs, there are beliefs which underlie an individual's subjective norm. These beliefs are called "normative beliefs." Normative beliefs are "the person's beliefs that specific individuals or groups think he/she should or should not perform the behavior" (p. 7). If an individual perceives social pressure to perform the intended behavior from specific individuals or groups with whom the individual is motivated to comply, the individual will perform the behavior. Conversely, if the individual believes his/her referents think the behavior should not be performed, the individual will avoid performing the intended behavior. The theorists point out that "the subjective norm may exert pressure to perform or not to perform a given behavior, independent of the person's own attitude toward the behavior in question" (Ajzen & Fishbein, 1980, p. 7).

Ajzen and Fishbein's (1980) theory looks at a person's

attitude toward an intended behavior not the individual's attitude toward objects, people, or institutions. In other words, a person's behavior is a function of his/her attitude toward performing the behavior, not toward the object of the behavior.

Finally, Ajzen and Fishbein's (1980) theory of reasoned action addresses the role of demographic variables and personality characteristics in the determination of performing the intended behavior. They refer to these factors as "external variables" and suggest that "an external variable will have an effect on behavior only to the extent that it influences the determinants of that behavior" (Ajzen & Fishbein, 1980, p. 9). Hence the theory of reasoned action "identifies a small set of concepts which are assumed to account for the relations (or lack of relations) between any external variable and any kind of behavior that is under an individual's volitional control" (p. 9).

Insert Figure 1 about here

Objectives of the Study

The objectives of this study are to conduct research in an attempt to:

1. determine the relationship between a student's gender, age, race, SES, prior education, work experience,

familial and social experience, and attitude toward the elderly and the student's attitude toward working with the elderly;

2. determine the relationship between a student's family, friends, and other referents' attitudes toward the elderly as perceived by the student and the attitude of the student's family, friends, and other referents toward working with the elderly as perceived by the student;

3. determine the relationship between the student's locus of control and the student's decision to work with or not work with the elderly.

Research Questions

Behavioral Beliefs

1. What is the relationship between external demographic variables (gender, age, race, SES, prior education) and a student's attitude toward the elderly?

2. Do experiential factors (work experience, familial experience, social experience) have a significant impact on a student's attitude toward working with the elderly?

3. Do students who have positive attitudes toward the elderly have a significantly more positive attitude toward working with the elderly than students who have negative attitudes toward the elderly?

Normative Beliefs

1.   Do attitudes toward the elderly of a student's referent group (family, friends, significant other, important others) impact significantly on a student's subjective norm?

Behavioral Performance

1.   Do students who have positive attitudes toward working with the elderly indicate a significantly greater propensity to work with the elderly than students who have negative attitudes toward working with the elderly?

Subjective Norm

1.   Do students who have higher subjective norms toward working with the elderly indicate a significantly greater propensity to work with the elderly than students who have lower subjective norms?

Locus of Control

1.   To what extent does the student's locus of control impact on the student's intention to work with the elderly?

Limitations

1.   The sample of subjects used in the study is from one university in the state of Oklahoma which offers health profession degrees.

2.   The sample of subjects used in the study may not be representative of all health professions students.

3.   The sample of subjects used in the study may not be

representative of all health professions students in the state of Oklahoma.

4.   The sample size is small.

5.   Data will be collected from subjects while they are in class therefore, all possible subjects may not be queried.

Assumptions

In the current study it will be assumed that:

1.   All Likert scale variables have an underlying measurement continuum that include equal intervals.

2.   All binary scale variables have an underlying measurement continuum.

3.   Independent variables are fixed and therefore can be replicated.

4.   Independent variables are accurately measured and therefore reliable.

5.   Residuals associated with the dependent variables are uncorrelated, normally distributed, and exhibit homogeneity of variance.

6.   Relations among the variables in the model are linear, additive, and causal.

7.   The model is correctly specified.

8.   There is a one-way causal flow in the system.

Summary

The continually growing elderly population in the United States has resulted in a society in which one in

every eight people is over the age of 65. Although people are living longer, this does not mean that all of them are healthy. In fact, approximately 80 percent of the elderly suffer from at least one chronic illness (Ferrini & Ferrini, 1993). Since these conditions are long-term and progressive, it stands to reason that the elderly will need health care services. Often times these services will come at the hand of a health care provider who has recently earned a degree in a health related field.

The determinants involved in the decision of a health professions student to work with or not work with the elderly are therefore important. This is the focus of this particular study.

CHAPTER II

REVIEW OF THE LITERATURE

This study proposes to look at the determining factors associated with the intention of health professions students to work with the elderly. The possible determinants investigated are gender, age, race, socioeconomic status (SES), prior education, work experience, attitude toward the elderly, familial and social experience, perceived familial and referent group attitudes toward the elderly, and locus of control.

A cursory review of the literature indicates that several of these same variables have been studied in relationship to the attitudes students have toward the elderly. For instance, Davis (1988) focused on gender of university students and found women to be more sympathetic and more attuned to reality in regards to the elderly.

Spier (1992) and Adelman, Hainer, Butler, and Chalmers (1988) investigated the relationship between attitude toward the elderly and education in the form of courses and clinical work experience. Each found previous coursework and clinical work experience to positively affect student attitude.

Positive social contact has also been found to reduce stereotypical ageist attitudes. These social contacts may

have been non-familial (Robins & Wolf, 1989; McCauley,

Stitt, & Segal, 1980) or familial (Naus, 1973).

Although these studies all looked at causal factors

associated with attitude toward the elderly none of them

focused on the student's intention to work with the elderly.

However, Adelman, et al., (1988) did point out that

"...only when students have the opportunity to see,

experience, and work with healthy older people can

their...reluctance to work with older people be overcome"

(p. 413).

Following is a more indepth review of previous studies

associated with the determining factors in question.

Attitudes toward the elderly will be discussed first.

Attitudes Toward the Elderly

The tremendous growth of the elderly population coupled

with the fact that at least 80% of the elderly suffer from

one or more chronic conditions suggests that health care

services for this cohort are of great importance. These

services will, in all likelihood, be provided by health

professionals who are somewhat, if not much, younger than

the elderly individual seeking the services.

Several theorists have pointed out that an individual's

attitude toward a person can impact on the individual's

behavior toward that person (Rokeach, 1968; Blumer, 1969;

Purtilo, 1990). For this reason it is important in this

study to examine an individual's attitudes toward the

elderly.

An increasing amount of research has been conducted on attitudes toward the elderly during the past three decades (Murphy-Russell, Die, & Walker, 1986). Varying groups from pre-adolescents to college students have been queried with results indicating that negative attitudes toward the elderly abound (Kastenbaum & Durkee, 1964; Hickey & Kalish, 1968). Other studies have looked at specific college student populations, especially those studying in the health fields.

Nursing Students' Perceptions of the Elderly

Downe-Wamboldt and Melanson (1990) assessed the attitudes toward aging and the aged held by baccalaureate nursing students. Their longitudinal study included a total of 75 subjects who were given pre- and post-tests which evaluated five attitudinal dimensions. The dimensions included realistic toughness toward the elderly, denial of the effects of aging, anxiety about aging, social distance to the old, and family responsibility for the rights and well-being of the aged. The results indicated that the nursing students had little realistic toughness toward aging, were basically uncertain as far as denial of the effects of aging, and that the students were less socially distant after finishing the baccalaureate program than when they entered. The study also suggested that the nursing students believed in family responsibility toward older relatives. Scores on the anxiety about aging dimension indicated that age of the student played an important role,

with the older students becoming less anxious about aging and the younger students more anxious about aging from the beginning to the end of their programs.

Another study which looked at the attitudes of nursing students toward the elderly was conducted by Galbraith and Suttie (1987). Eighty-six students who volunteered for the study were pre-tested using the Oberleader Attitude Toward Aging Scale. The students then completed coursework which included gerontology content and a five-week clinical experience that focused on the elderly. The findings indicate that post-test scores were significantly higher than pre-test scores. This suggests that coursework which includes gerontology content and clinical experiences lead to more positive views of the elderly.

Gomez, Young, and Gomez (1991) looked at the relationship between baccalaureate nursing students' attitude toward the elderly, fear of death, and preference for working with the elderly. They surveyed eighty-six senior level nursing students. Results indicated that there was no significant relationship between fear of death and attitude toward the elderly. However, "a significant positive relationship was found between attitudes toward the elderly and preference for working with patients age 65 and over" (p. 53).

Medical Students' Perceptions of the Elderly

In addition to nursing students, medical students' attitudes toward the elderly have also been the focus of

studies in recent years. Like the studies involving nursing students, these studies also assessed the impact of coursework and experience on attitudes toward the elderly, as well as the willingness of medical students to consider a career in geriatric medicine.

In their study of 132 fourth-year medical students at Mount Sinai School of Medicine, Murden, Meier, Bloom, and Tideiksaar (1986) found that after a required four-week clinical clerkship in geriatrics the students showed a significant improvement in their knowledge of geriatrics. The results also indicated that the students were mildly in favor of the required geriatric clerkship and that their attitudes toward the elderly did not change as a result of the clerkship.

Tarbox, Connors, and Faillace (1987) conducted a longitudinal study to determine the impact of medical education on the attitudes of medical students toward the elderly. One-hundred-three of the subjects who participated in the survey during their freshman year also participated in the survey at the beginning of their senior year. The researchers found that students who receive geriatrics education developed more positive attitudes toward the elderly.

In 1988, Meuleman, Davidson, and Caranasos compared attitudes toward geriatrics among medical residents. The fifty subjects were each "assigned primary responsibility for six to ten nursing home residents" (p. 136) at a

Veterans Administration Nursing Home for the period of one month. Each subject answered a questionnaire before the rotation. The same questionnaire was answered after the rotation. Results of the study indicated that there was only a slight improvement in attitude attributed to the one month geriatrics rotation.

In addition to Meuleman, Davidson, and Caranasos' study, two other research projects have evaluated the impact of clinical experience on the attitude of medical students toward older individuals. Sainsbury, Wilkinson, and Smith (1992) conducted a cross-national comparative study in which sixty-eight students from the Christchurch School of Medicine in Dunedin, New Zealand were questioned using a Rosencranz-McNevin semantic differential scale to measure general attitudes toward old age. A question regarding career preferences was also presented. A significant improvement in attitude was found after the students finished a 5-week clinical attachment in health care of the elderly. There was also an improvement in the numbers of students indicating a career preference in health care for the elderly as a result of the 5-week clinical attachment.

Fields, Jutagir, Adelman, Tideiksaar, and Olson (1992) assessed the impact of a fourth-year geriatrics clerkship on medical students' knowledge of geriatric medicine and attitudes toward the elderly. The researchers indicate that the rotation was considered educationally valuable by seventy percent of the subjects and that over ninety percent

of them would "welcome elderly into their future practice" (p. 964).

The final study which will be discussed on medical students' attitudes toward the elderly is by Wilderon, Press, Perkins, Tebes, Nichols, Calkins, Cryns, and Schimpfhauser (1990). They looked at correlates of entering medical students' attitudes toward geriatrics. Although responses from the students did not indicate a negative attitude toward the elderly, only three percent showed interest in specializing in geriatric medicine. It was found that preference for treating older patients, prior volunteer work with the aged, and a positive attitude toward the elderly enhanced student interest in geriatrics. Student perception of satisfaction of physicians treating the elderly, and feelings of closeness experienced with older family members and friends were causal factors in the students' general attitude toward the aged.

Physical Therapy Students' Perceptions of the Elderly

A recent study of physical therapy students' attitudes toward the elderly was conducted by Brown, Gardner, Perritt, and Kelly in 1992. They investigated the impact of traditional and geriatric mock clinics for physical therapy students on the students' attitude toward older individuals using the Kogan Attitude Toward Old People Scale. Forty-seven subjects each were involved in classroom discussion led by an individual with expertise in geriatrics. Twenty-four of these subjects participated in two 4-week

traditional clinical rotations while twenty-three of the subjects were involved in a 5-week traditional clinical rotation and a 3-week geriatric mock clinic. Positive attitudes toward the elderly increased for both groups and there was no significant difference between the groups in relation to the clinical rotations in which the students participated. This would indicate that geriatric coursework was sufficient to positively impact on the students' attitudes.

Locus of Control

Locus of control is a construct that has been widely studied over the past several decades (Rotter, 1966; Epstein, 1973; Levenson, 1973; Borich & Paver, 1974; Marsh & Richards, 1984; Goodman & Waters, 1987; Rotter, 1990). Rotter (1966) refers to it as "a generalized attitude, belief, or expectancy regarding the nature of the causal relationship between one's own behavior and its consequences..." (p. 173). The choices one makes are thought to be a function of one's locus of control (Rotter, 1966).

An individual may have an internal or external locus of control. A person with an internal locus of control is one who perceives things or events to be contingent upon his/her own behavior. An externally controlled person perceives things or events to be contingent upon the behavior of someone or something other than himself/herself (Rotter, 1966).

External locus of control has been further delineated. This delineation includes those events or things which are under the control of powerful others and those which are under the control of chance or fate (Levenson, 1973).

Intentions to Work with the Elderly

The goal of this study is to examine the correlates of a student's intention to work with the elderly subsequent to graduation. Ajzen and Fishbein's theory of reasoned action considers a person's intention the immediate determinant of the person's behavior (Ajzen & Fishbein, 1980).

In a perfunctory review of the literature, several studies were found which looked at intention as a precursor of behavior (Fishbein & Jaccard, 1973; Pomazal & Brown, 1977; Vinokur-Kaplan, 1978; Schifter & Ajzen, 1985; Ajzen & Madden, 1986; Strader & Katz, 1989; Renfroe, O'Sullivan, & McGee, 1990; Waltman, 1990). However, only one study was found which specifically looked at a health professions student's intention to work with the elderly (Coren, Andreassi, Blood, & Kent, 1987). This study will be discussed in an attempt to further set the stage for the investigation underway.

Intentions of Physical Therapy Students

Factors related to physical therapy students' decisions to work with elderly patients were investigated by Coren, Andreassi, Blood, and Kent (1987). Three-hundred-fourteen subjects from fourteen physical therapy programs were questioned regarding their attitudes, experience, and

intention to work with the elderly. The findings indicated that there was no correlation between either race or gender and the intention to work with the elderly. Statistically significant correlates of the intention to work with older individuals included having a close relationship with an aged person, geriatric coursework and clinical affiliations, and six attitudinal factors (time, motivation, challenge, communication, health, environment, and comfort with one's own aging). It was also found that there was a significant difference between older and younger students, with more older than younger physical therapy students intending to work with elderly individuals in the future.

Summary

The perfunctory review of the literature indicated that several variables, including gender, age, and prior education, have been investigated in regards to intention to work with the elderly. However, race and SES have been somewhat overlooked. Therefore, in the current study, external variables such as gender, age, race, SES, and prior education, as well as other independent variables such as work experience, quality of familial and social experience, personal, familial, and referent group attitude toward the elderly, and the student's locus of control will be evaluated in terms of the extent to which each influences the intended behavior, to work with the elderly.

It is hypothesized that age and prior education will each be positively correlated with a student's attitude

toward the elderly. Furthermore, it is hypothesized that females will have a more favorable attitude toward the elderly. A student's work experience, as well as the quality of the student's familial and social experience with the elderly, and the student's attitude toward the elderly are each suggested to be determining factors in the student's attitude toward working with the elderly. It is further hypothesized that the attitudes of a student's family and other referents toward the elderly as perceived by the student are determining factors in the student's subjective norm. Moreover, it is postulated that the intention of the student to perform or not perform the intended behavior of working with the elderly is a function of the student's attitude toward the behavior, the subjective norm associated with the behavior, and the students locus of control. Finally, it is hypothesized that if the student has the intention of working with the elderly, the student will perform that behavior. This final hypothesis will be the focus of a subsequent study.

CHAPTER III

METHODOLOGY

Introduction

This exploratory study will seek to describe relationships of various student characteristics to the student's attitude toward, and the student's subjective norm regarding, working with the elderly. These two determinants of intention subsequently will be evaluated in an effort to ascertain the propensity of the student to work with the elderly.

As previously stated, intention in this study is considered a direct precursor of the student's behavior. It is therefore important to study the determining factors associated with the student's intention if the student's behavior is to ever be understood and/or predicted.

This study will be based on the model in Figure 2. This model suggests that gender, age, race, SES, and prior education are each external independent variables which may produce an indirect effect on the subject's attitude toward the elderly. The student's attitude toward the elderly, work experience, and quality of familial and social experience with the elderly are each determining factors in the student's attitude toward working with the elderly. In addition, the model indicates that the attitudes of the

student's family and referent group's (friends, mostimportant other, and other important people) toward the elderly as perceived by the student are each determining factors in the student's subjective norm. The relative weight between the student's subjective norm and attitude toward working with the elderly is a function of the student's locus of control. Finally, the model indicates that the student's behavioral intention is a function of the student's attitude toward working with the elderly, the student's subjective norm, and the relative weight between the two.

Sample Selection

Subjects for the study were students who are enrolled in a health professions program at Langston University (LU). LU has health professions programs in gerontology, health administration, nursing, and physical therapy. These programs were chosen because the students within them represent a wide range of individuals in regards to the variables being investigated.

Sample Population

There are 142 students enrolled in the various health professions programs at Langston University. The largest enrollment (86) is in the Physical Therapy Program. Health Administration boasts the second largest enrollment with 29 students. Eighteen students make up the Nursing porgram and the remaining nine students comprise the Gerontology program.

Administrative Permission

Administrative permission to conduct this study was sought from and granted by the directors of the individual programs and the Dean of the School of Nursing and Health Professions. Copies of the instruments and respondent consent form were provided to each of the directors and the Dean.

Instrumentation

Levenson's Locus of Control Scale (LOC)

Levenson's Locus of Control Scale (LOC) is a multidimensional scale based on social learning theory (Levenson, 1981). It is divided into three subscales. The Internality (I) subscale "measures the extent to which people believe that they have control over their own lives" (Levenson, 1981, p. 17). The Powerful Others (P) subscale measures the influence of powerful others on an individual, while the Chance (C) subscale evaluates control associated with luck or chance happenings. There are a total of twenty-four Likert statements, eight in each of the three subscales. Each statement is phrased is such a way "as to pertain only to the person answering" (Levenson, 1981, p. 18).

The I subscale is comprised of items 1, 4, 5, 9, 18, 19, 21, and 23. The P subscale is made up of items 3, 8, 11, 13, 15, 17, 20, and 22. The remaining items (2, 6, 7, 10, 12, 14, 16, and 24) constitute the C subscale.

There are six response categories for each statement:

"strongly disagree," "disagree," "disagree more than agree,"
"agree more than disagree," "agree," and "strongly agree."
These categories are scored 1, 2, 3, 4, 5, and 6
respectively (See Appendix D).

On the I subscale high scores indicate subjects who
feel that they have control over their own lives. Low
scores indicate subjects who feel that they do not have
control over their own lives.

Subjects who score high on the P subscale are those who
feel that their lives are controlled by powerful others.
Subjects who score low on the P subscale are those who feel
that their lives not are controlled by powerful others.

If subjects score high on the C subscale it indicates
that the subjects feel chance forces (luck) have control
over their lives. Conversely, low scores are indicative of
subjects who feel that luck or chance forces do not control
their lives.

As previously stated, there are eight statements on
each of the three subscales. Values assigned to the
subject's response to each of the statements can range from
one to six. Therefore, hypothetically, a subject's score on
each of the subscales could range from eight to forty-eight.
It is conceivable that an individual subject could score
high across all three subscales or low across all three
subscales, although this researcher does not expect that
this will be the case.

The reliability coefficients reported for each of the

subscales is as follows: Internality, .64; Powerful Others, .78; and Chance, .77 (Levenson, 1981). Levenson (1981) points out that the validity of the I, P, and C subscales has been demonstrated through convergent and discriminant methods.

Work Intentions of Health Professions Students (WIHPS)

In addition to the Levenson's Locus of Control Scale, the Work Intentions of Health Professions Students (WIHPS) will be administered. The WIHPS is a researcher developed instrument which queries the student's gender, age, race, SES, area of study, and prior education. It also includes three Likert scale questions regarding a student's work experience with elderly individuals. Two semantic differential scales (Osgood, Suci, & Tannenbaum, 1957) are used to measure the attitude of the student, as well as the student's referent groups (family, friends, most important other, and other important people) as perceived by the student in terms of the elderly and working with the elderly. The semantic differential scales were developed in accordance with the procedure outlined in Isaac and Michael (1990). Finally the WIHPS contains one question to measure the student's intention to work with or not work with the elderly subsequent to graduation.

Procedure

Students were assessed using the Levenson LOC and the WIHPS in the Spring and Summer of 1994. Students were read an information sheet by the researcher. The information

sheet indicated that the study carried with it no direct
benefit or risk for the subject. It also informed the
subjects that they may withdraw at any time without penalty,
and that the information supplied would be held strictly
confidential. Only students who were designated majors in
one of the four health professions programs were invited to
participate.

Data gathered through the use of the Levenson LOC and
WIHPS were then enumerated to facilitate statistical
evaluation. The Levenson LOC and the Likert scale portion
of the WIHPS were analyzed using Statistics With Finesse, a
computer package specially designed to measure the internal
consistency of Likert scale questionnaires. Cronbach's
alpha was calculated for each instrument.

Scoring Instrument Items

Three scores were obtained to measure locus of control,
one for each of the subscales, I, P, and C on the Levenson
LOC. The scores were calculated by adding up the points
associated with the circled answers for the items which
comprise each particular scale. Points for each answer were
assigned as follows: strongly disagree = 1 point; disagree =
2 points; disagree more than agree = 3 points; agree more
than disagree = 4 points; agree = 5 points; strongly agree =
6 points. After determining scores for each of the
subscales, a mean for each subject will be calculated for
the P and C subscales combined. The computated mean score
was considered the subject's external locus of control

score. It was compared to the subject's score on the I
subscale in an effort to assess whether a subject has an
internal or external locus of control orientation. The
theoretical range of scores for each of the subscales is
from eight to forty-eight.

In addition to calculating the scores for the locus of
control construct, a score for SES was assigned using the
Nam-Powers (1980 Census) Socioeconomic Index. This scale
was chosen due to the fact that it presents a single set of
scores for men and women combined (Nam & Powers, 1983). The
score was determined by matching the indicated head of
household occupation with one of the 600 occupations listed.

Scores for each of the two semantic differential scales
(SD1 - The elderly are; SD2 - Working with the elderly is)
were calculated. Each item in each scale was assigned a
value from one to six with the higher values associated with
the most positive response and the lower values associated
with the most negative response. Items for each scale were
scored according to the scoring key found in Appendix C.
Item response values were tallied to derive a total score of
attitude for each of the semantic differential scales. The
theoretical range of scores for each semantic differential
scale is ten to sixty. This procedure was repeated five
times, once for each opinion being measured (self, family,
most important other, friends, other important people). The
tallied attitudinal scores toward the elderly were assigned
as follows: SSD1 to student's attitude toward the elderly;

FSD1 to perceived family's attitude toward the elderly; ISD1 to perceived most important other's attitude toward the elderly; PSD1 to perceived friend's attitude toward the elderly; OSD1 to perceived other important people's attitude toward the elderly. Similar assignment was made for attitudinal scores toward working with the elderly as follows: SSD2 to student's attitude toward working with the elderly; FSD2 to perceived family's attitude toward working with the elderly; ISD2 to perceived most important other's attitude toward working with the elderly; PSD2 to perceived friend's attitude toward working with the elderly; OSD2 to perceived other important people's attitude toward working with the elderly.

The behavioral belief of a student included the student's work experience, quality of familial experience with the elderly, quality of social experience with the elderly, and the student's attitude toward the elderly. The student's attitude toward the behavior, working with the elderly, is the student's SSD2 score. It is considered a function of the student's behavioral belief.

The normative beliefs of a student included the attitudes of the student's family, most important other, friends, and other important people as perceived by the student. The student's subjective norm is considered a function of the student's normative beliefs. The subjective norm was calculated by first summing up the scores for FSD2, ISD2, PSD2, and OSD2 and then computing a mean for those

scores.

The calculated scores for the subject's locus of control subscales, the semantic differential scales, and SES were included with the remaining data obtained from the WIHPS. All data were analyzed using the multiple regression option of the STATS package available through the Applied Behavioral Sciences Department at Oklahoma State University. A path analysis was conducted to determine the statistical significance of the correlates being measured.

<center>Path Analysis</center>

Path analysis is a method of studying patterns of causation among a set of variables. It is a theory based, a priori, technique which originated in the 1920's.

In path analysis, the researcher begins with a set of variables wherein he/she wants to explain the variability within the set. A diagram of the model which shows the relationship between the variables is then constructed. The diagram illustrates the causal flow the researcher expects to find based on theory.

When constructing the path diagram, the researcher draws a curved, double-headed arrow between each pair of exogenous (independent) variables thought to have a non-zero correlation. A straight arrow is then drawn to each endogenous (dependent) variable from each of its sources, either exogenous or endogenous. Finally, a straight arrow is drawn to each endogenous variable from its corresponding residual or error term.

Based on the causal model, the researcher then postulates hypotheses. These hypotheses are subsequently tested through a series of multiple regressions. The calculated Beta-weights are the path coefficients. The values associated with the residuals show the impact of variables not in the model.

The path diagram for the model being assessed in this study appears in Figure 2. It is an over-identified model which indicates that there are more parameters than information from calculated correlations. It should be noted that over-identified models are the only models which can be tested for significance. The strategy which was used in this study to test the validity of the model is the Bentler-Bonnett Goodness-of-Fit test (Pedhazur, 1982). In addition, a process of theory trimming was also utilized.

Insert Figure 2 about here

In theory trimming, each of the non-significant paths is removed in an effort to maximize the variability accounted for in the model with the best set of predictors. It should be noted, however, that theory trimming will ultimately render the a priori technique of path analysis a post-hoc technique, thereby giving up practical significance for statistical significance. In other words, the model is then a data driven model and the data dictates the hypotheses to be tested.

CHAPTER IV

HEALTH PROFESSIONS STUDENTS

CHOOSING TO WORK WITH THE ELDERLY

MANUSCRIPT FOR PUBLICATION

JOURNAL TITLE: EDUCATIONAL GERONTOLOGY

Abstract

This study investigated the specific characteristics and attitudes toward the elderly and working with the elderly associated with health professions students. Fields in which the students were majoring included gerontology, health administration, nursing, and physical therapy. Results indicated that of the 108 respondents, 24 intended on working with the elderly subsequent to graduation. The twenty-four included 12 females and 12 males. They had positive relationships with familial and non-familial elderly, as well as positive work experiences with the elderly. This study revealed significant relationships between the independent variables coursework, quality of work experience with the aged, and student attitude toward working with the elderly and the dependent variable, intention to work with the elderly. This suggests that educators include more coursework in aging, as well as clinical rotations which emphasize interacting with the elderly in health profession's curriculums. In addition to educators, employers who are filling positions related to aging should look for candidates who posses the necessary educational and experiential background to be successful.

Health Professions Students

Choosing to Work with the Elderly

The continually growing elderly population in the United States has resulted in a society in which one in every eight people is over the age of 65 (Hooyman & Kiyak, 1993). Although people are living longer, this does not mean that all of them are healthy. In fact, approximately 80 percent of the elderly suffer from at least one chronic illness (Ferrini & Ferrini, 1993). Since these conditions are long-term and progressive, it stands to reason that the elderly will need health care services. Often times, these services will come from a health care provider who has recently earned a degree in a health related field. These fields may include such disciplines as nursing, physical therapy, health administration, and gerontology.

In addition to a specific health related field, students may also have specialized within their discipline. Areas such as pediatrics, rehabilitation, sports, obstetrics and gynecology, geriatrics, administration, and orthopedics are some of the areas from which students choose. The chosen area will often impact upon the type of employment a student procures subsequent to graduation.

What influences the choice of area in which a health professions student may specialize? Why do some students choose one specialization and others choose a different one? Are there specific characteristics or attitudes, for instance, associated with those health professions students

who choose to work with the elderly? This article reports on the results of a survey which specifically answered the latter question.

The health professions students queried were from a small regional university in a southwestern state. This material will be of value not only to educators but to employers who are endeavoring to suitably match a recently graduated health professional with a specific job opportunity.

Factors Affecting Student Intentions

Several factors are associated with the intention of health professions students to work with the elderly. For example, the demographic characteristics of the student, experiential and educational background, as well as attitudes held by the student may play a role.

A cursory review of the literature indicates that several of these variables have been studied in recent years. For instance, Davis (1988) focused on gender of university students and found women to be more sympathetic to and have a more realistic view of the elderly.

Spier (1992) and Adelman, Hainer, Butler, and Chalmers (1988) investigated the relationship between attitude toward the elderly and education in the form of courses and clinical work experience. Each found previous coursework and clinical work experience to positively affect student attitude.

Positive social contact has also been found to reduce

stereotypical ageist attitudes. These social contacts may have been non-familial (Robins & Wolf, 1989; McCauley, Stitt, & Segal, 1980) or familial (Naus, 1973).

Although these studies all looked at factors associated with attitude toward the elderly none focused on the student's intention to work with the elderly. However, Adelman et al., (1988) did point out that "...only when students have the opportunity to see, experience, and work with healthy older people can their...reluctance to work with older people be overcome" (p. 413).

A study which corroborates the findings of Adelman, et al. (1988) was accomplished by Coren, Andreassi, Blood, and Kent (1987). They questioned over three hundred subjects from fourteen physical therapy programs regarding their attitudes, experience, and intention to work with the elderly. The findings indicated that there was no correlation between either race or gender and the intention to work with the elderly. Statistically significant correlates of the intention to work with older individuals included having a close relationship with an aged person, geriatric coursework and clinical affiliations, and six attitudinal factors. These factors were related to time, motivation, challenge, communication, health, environment, and comfort with one's own aging. Age of the student was also found to be a significant factor, with more older than younger physical therapy students intending to work with elderly individuals in the future.

The Surveyed Institution

The surveyed institution offers disciplines in gerontology, health administration, nursing, and physical therapy. This institution was selected because the students within the four separate programs represent a wide diversity of individuals in regards to the variables being examined.

Sample Population

There are 142 students enrolled in the various health profession programs at the historically black, 1890 Land Grant institution. The Department of Physical Therapy has the largest enrollment with 86 students. Twenty-nine students comprise the Health Administration program and 18 students are enrolled in the Nursing program. The remaining 9 students constitute the Gerontology program.

Subsample

There were a total of 108 students who responded to the survey. Of those, 64 percent were female and 36 percent were male. There was a racial mix of 54 percent caucasian, 37 percent black, six percent native american, two percent asian, and one percent hispanic. The subjects ranged in age from 20 to 60 years with a mean of 26.2 years.

Seventy-one subjects were in the physical therapy program. There were 17 subjects who indicated they were studying nursing, 16 studying health administration, and 4 studying gerontology.

Instrumentation

Students were assessed using a combination of two

instruments. The first was the Levenson's Locus of Control Scale (LOC) which is a multidimensional scale based on social learning theory (Levenson, 1981). It is divided into three Likert subscales, each of which measures various aspects associated with locus of control. These aspects include internal and external locus of control as evaluated by the influence of powerful others and chance. The Work Intentions of Health Professions Students (WIHPS) was the second instrument used to evaluate the specialization intentions held by the students.

The WIHPS was researcher developed and surveys various demographic variables (age, gender, race, socioeconomic status), experiential variables (work, social, familial), prior education, attitudinal aspects, and behavioral intention of each subject. A Likert scale was utilized to assign scores for the experiential variables while the score for socioeconomic status (SES) was assigned using the Nam-Powers (1980 Census) Socioeconomic Index. The attitudinal aspects were measured using semantic differentials (Osgood, Suci, & Tannebaum, 1957). The semantic differential scale used in this study included ten bipolar adjective pairs placed at opposite ends of a six-point scale. The adjective pairs were arranged such that the favorable, more positive end of the scale was randomly placed in either the left or right position.

Procedure

The survey of students took place in the Spring and

Summer of 1994. The researcher visited regularly scheduled classes in each of the four programs. The students were read an information sheet by the researcher which indicated that the study carried with it no direct benefit or risk for the subject. Only students who were designated majors in one of the four programs were invited to participate. Subjects were informed that they could withdraw from the study at any time without penalty.

All information supplied was held strictly confidential. Students devised code names which they put on the two separate instruments (LOC and WIHPS). This helped to insure that responses from the subjects would also be anonymous.

The gathered data were enumerated and checked for errors. A statistical analysis was conducted using the STATS package available through the Applied Behavioral Sciences Department at Oklahoma State University.

Results

The results indicate that of the 108 students, twenty-four intend to work with the elderly subsequent to graduation. The remaining 84 students do not intend to work with the aged after graduation. This article will focus on the differences between these two groups.

Demographic Characteristics

There were a total of 24 students who plan on working with the elderly. They range in age from 21 years to 60 years, with a mean of approximately 30 years. This group of

students was split evenly on gender lines with 12 females and 12 males. Of the 12 females, 75 percent were Caucasian, while only 25 percent of the males were Caucasian. The SES of these subjects could be considered middle class (Mean Nam-Powers score = 49.79).

There were no nursing students in this group. However, approximately 23 percent of the physical therapy students, 25 percent of the health administration students, and all of the gerontology students indicated they intended to work with the elderly.

Eighty-four students indicated they did not plan to work with the elderly. These students ranged in age from 20 years to 49 years, with a mean of approximately 25 years. There were 57 females and 27 males in this group. Thirty-seven of these subjects were minorities (31 Black, 4 Native American, 1 Asian, 1 Hispanic) while forty-seven were Caucasian. Forty-two members of this group scored a 67 or higher on the Nam Powers SES index.

Included in the group of subjects who do not intend to work with the elderly were 12 health administration students, 17 nursing students, and 55 physical therapy students. There were no gerontology students in this group.

Insert Tables 1 & 2 about here

Educational and Experiential Characteristics

Five of the 24 students who plan on working with the

aged population had neither taken a course in aging or been
exposed to a topic in aging in another course. This was
also true for thirty-four of the students in the group who
did not intend to work with the elderly.

Although two of the students who plan on working with
the aged indicated they had no work experience with this
cohort, the twenty-two who had experience indicted the
experience was a good one. Of those students in the group
who do not intend on working with the elderly, twenty-four
had no work experience with the aged. A good work
experience was reported by 55 students in this group while
four of them related that the experience which they had was
bad.

In addition to the quality of work experience, the
quality of relationships with family and non-family elderly
were investigated. It was found that, among students who
plan on working with the elderly, two indicated they had no
relationships with family elderly and one reported a bad
relationship with family elderly. Good relationships with
aged family members were experienced by the remaining nine
students.

The vast majority (98.8%) of the students who do not
intend to work with the elderly subsequent to graduation
signified they had good relationships with family elderly.
In addition, eighty of the students in this group indicated
they had good relationships with non-family members of the
older population.

<u>Attitudinal Characteristics</u>

The semantic differential portion of the WIHPS supplied an abundance of information about the attitudes the students had toward the elderly and toward working with the elderly as well. For instance, student mean scores for each of the adjective pairs related to the concept "the elderly are" were generally high. The most positive response (mean = 5.67) was in relation to the adjective pair unimportant / important. The most negative response (mean = 2.54) was in relation to the adjective pair slow / fast.

Student mean scores for each of the adjective pairs related to the concept "working with the elderly is" were also high. The most positive response (mean = 5.67) was for the adjective pair unimportant / important while the most negative response (mean = 3.71) was for the adjective pair difficult / easy.

The semantic differential portion of the WIHPS also gave the researcher insight into perceptions held by the student of his or her referent groups (significant other, family, friends, and other important people) in regards to the elderly and working with the elderly. For instance, both the students' attitudes and those held by their referent groups as perceived by the students were positive toward the elderly as a whole. The mean score of students' attitudes toward the elderly was 48.38. A score of 10 would be considered very negative and a score of 60 would be considered very positive. The scores for the students'

referent groups were also high in regard to attitude toward the elderly with means ranging from 44.17 to 48.46.

In addition, results indicated the students held positive attitudes toward working with the elderly and perceived their referent groups to hold a similar view. Scores ranged from 28 to 59 with a mean of 49 for the students' attitude toward working with the elderly, with the scores for their referent groups being similarly high. Once again, a score of 10 would be considered very negative and a score of 60 would be considered very positive.

Insert Tables 3 & 4 about here

Significant Differences

Significantly different mean scores were found between the groups in regards to the number of courses in aging taken (p = .0393) and the quality of work experience students had with the elderly (p = .0515). Furthermore, there was a significant difference between the mean score for the groups concerning the attitude the students had toward working with the elderly (p = .0049).

Conclusions and Implications

The data obtained from this study suggests that a small percentage of the health professions students at the surveyed institution intend to work with the elderly subsequent to graduation. However, considering the fact that there has been, and in all likelihood will be, a

continued growth in the number of elderly persons in the
United States, the information gathered from this survey can
be beneficial. For instance, it may be used by both
educators and perspective employers of health professions
students.

Health professions educators may use the data to
strengthen the curriculum in a particular field or
discipline. The findings of this study indicate that those
students who have more positive attitudes toward the elderly
also have more positive attitudes toward working with the
elderly. These attitudes are often influenced by the amount
of education the student has had concerning aging and the
experience the student has had in dealing with the elderly.
Consequently, educators may want to include additional
courses on aging in the various health profession's
disciplines. Also, internships and clinical rotations which
put an emphasis on interacting with the elderly could be
included.

Perspective employers of health professions students
can also utilize the information gleaned from this survey.
Since specific demographic characteristics and attitudinal
components seem prevalent among the students who intend to
work with the elderly, employers should pay attention to
those factors. For instance, the findings portray the most
likely candidates to work with the elderly as Caucasian
females and minority males who are approximately 30 years of
age and middle class. These individuals scored high on the

semantic differential scale, indicating positive attitudes toward the elderly and toward working with the elderly. Therefore, it may prove helpful to employers to use a semantic differential scale as an attitudinal assessment when looking for the most qualified candidate to work with the elderly.

Rueb, Weber, and Hesser (1994) state that "the linkage of education and practical experience is a definite advantage for graduates seeking a career in aging" (p. 153). For this reason, a union between the educational and business communities may be in order. After all, in a society in which the elderly population is growing so rapidly, the need for adequate health care is of concern. An alliance between two such influential groups as business and education could actually provide better qualified individuals to work with our aged citizens.

References

Adelman, R., Hainer, J., Butler, R. N., & Chalmers, M.
   (1988). A well elderly program: An intergeneraltional
   model in medical education. The Gerontologist, 28(3),
   409-413.

Coren, A., Andreassi, M. Blood, H., & Kent, B. (1987).
   Factors related to physical therapy students decisions to
   work with elderly patients. Physical Therapy, 67(1), 60-
   65.

Davis, J. A. (1988). A student perspective on growing old.
   Educational Gerontology, 14, 525-537.

Ferrini A. F. & Ferrini, R. L. (1993). Health in the later
   years. Dubuque, IA: Brown & Benchmark.

Hooyman, N. R. & Kiyak, H. A. (1993). Social gerontology:
   A multidisciplinary perspective (3rd ed.). Needham
   Heights, MA: Allyn and Bacon.

Levenson, H. (1981). Differentiating among internality,
   powerful others, and chance. In H. M. McCauley, C.,
   Stitt, C. L., & Segal, M. (1980). Stereotyping: From
   prejudice to prediction. Psychological Bulletin, 87,
   195-208.

McCauley, C., Stitt, C. L., & Segal, M. (1980).
   Stereotyping: From prejudice to prediction.
   Psychological Bulletin, 87, 195-208.

Nam, C. B. & Powers, M. G. (1983). The socioeconomic
   approach to status measurement. Houston: Cap and Gown.

Naus, P. J. (1973). Some correlates of attitudes toward

old people. <u>International Journal of Aging and Human Development</u>, <u>4</u>, 229-243.

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). <u>The measurement of meaning</u>. Urbana: University of Illinois Press.

Robins, L. S. & Wolf, F. M. (1989). The effect of training on medical students' responses to geriatric patient concerns: Results of a linguistic analysis. <u>The Gerontologist</u>, <u>29</u>(3), 341-344.

Rueb, S. M., Weber, J. A., & Hesser, J. L. (1994). Gerontology graduates' employment opportunities. <u>Educational Gerontology</u>, <u>20</u>, 147-155.

Spier, B. E. (1992). Teaching methodologies to promote positive attitudes toward the elderly. <u>Nursing & Health Care</u>, <u>13</u>(10), 520-524.

Table 1

Demographic and Educational Characteristics of Students Who Intend/Not
Intend to Work with the Elderly

Variable	Intend		Not Intend	
	Caucasian	Minority	Caucasian	Minority
	N = 24		N = 84	
Gender				
Male	9	3	29	28
Female	3	9	18	9
SES				
Low (0-33)	3	3	5	9
Med. (34-66)	5	7	15	13
High (67-100)	4	2	26	16
Major				
Gerontology	3	1	0	0
Health Administration	1	3	2	10
Nursing	0	0	11	6
Physical Therapy	8	8	33	22
Courses in Aging				
None	2	3	17	17
One of More	10	9	29	21
Topics in Aging				
None	3	2	17	10
One or More	9	10	29	28

Table 2

Quality of Experiences with the Elderly of Students Who Intend/Not Intend to Work with the Elderly

Variable	Intend		Not Intend	
	Caucasian	Minority	Caucasian	Minority
	N = 24		N = 84	
Quality of Work Experiences				
None	1	1	12	12
Bad	0	0	1	3
Good	11	11	33	23
Quality of Family Relationships				
None	2	0	1	0
Bad	1	0	0	0
Good	9	12	45	38
Quality of Non-Family Relationships				
None	0	0	3	0
Bad	0	0	0	1
Good	12	12	43	37

Table 3

Student Means of Adjective Pairs Related to the Concepts "The elderly are:" and "working with the elderly is:"

The elderly are:

Negative	Positive	Mean
Cruel	Kind	5.38
Unimportant	Important	5.67
Foolish	Wise	5.42
Boring	Interesting	5.54
Withdrawn	Sociable	4.54
Ugly	Beautiful	4.83
Mean	Nice	4.83
Grumpy	Happy	4.33
Bad	Good	5.29
Slow	Fast	2.54

Working with the elderly is:

Negative	Positive	Mean
Bad	Good	5.54
Dirty	Clean	4.42
Painful	Pleasurable	5.08
Unimportant	Important	5.67
Boring	Interesting	5.42
Difficult	Easy	3.71
Drudgery	Fun	4.88
Sad	Happy	4.38
Tense	Relaxed	4.54
Costly	Rewarding	5.29

Note: Scores range from 1 (negative) to 6 (positive)

Table 4

Mean Comparison of Attitudes of Students and their Referent Groups

Group	Attitude Toward the Elderly	Attitude toward Working with the Elderly
Student	48.38	49.00
Significant Other	47.79	44.42
Family	48.04	45.13
Friends	44.17	42.92
Important Others	48.46	46.79

Note: Scores range from 10 (negative) to 60 (positive)

CHAPTER V

A MODEL FOR PREDICTING WORK INTENTIONS OF HEALTH

PROFESSIONS STUDENTS

MANUSCRIPT FOR PUBLICATION

JOURNAL TITLE: THE SOUTHWESTERN

(The Journal of The Southwest Society on Aging)

Abstract

This study, which was grounded in Ajzen and Fishbein's theory of reasoned action, a variation of exchange theory, sought to develop a model of prediction of specialization intentions of health professions students. A path analysis revealed that the hypothesized model had several non-significant paths. However, two models were developed which fit the data. An analysis of those models indicated that the quality of the student's work experience, attitude toward the elderly, and attitude toward working with the elderly, are associated with the student's intention to work with the elderly.

A Model for Predicting Work Intentions of Health

Professions Students

The twentieth century has seen a tremendous growth in the elderly population. However, these numbers do not translate into numbers of healthy elderly. In fact, more than four out of five of the aged suffer from long-term, progressive, often incurable chronic conditions (Ferrini & Ferrini, 1993). This suggests that more and more health professionals will have to interact with this cohort.

Attitudes Toward the Elderly

An increasing amount of research has been conducted on attitudes toward the elderly during the past three decades (Naus, 1973; Ford & Sbordone, 1980; Murphy-Russell, Die, & Walker, 1986; Davis, 1988; Spier, 1992). Varying groups from pre-adolescents to college students have been queried with results indicating that negative attitudes toward the elderly abound (Kastenbaum & Durkee, 1964; Hickey & Kalish, 1968). Other studies have looked at specific college student populations, especially those studying in the health fields (Murden, Meier, Bloom, & Tideiksaar, 1986; Meuleman, Davidson, & Caranasos, 1988; Gomez, Young, & Gomez, 1991; Sainsbury, Wilkinson, & Smith, 1992; Fields, Jutagir, Adelman, Tideiksaar, & Olson, 1992).

Nursing Students' Perceptions of the Elderly

Downe-Wamboldt and Melanson (1990) assessed the attitudes toward aging and the aged held by baccalaureate nursing students. Their longitudinal study included a total

of 75 subjects. The results indicated that age of the students played an important role in their attitude toward the elderly, with the older students becoming less anxious about aging and the younger students more anxious about aging from the beginning to the end of their programs.

Another study (Galbraith & Suttie, 1987) looked at the attitudes of nursing students toward the elderly. Over eighty student volunteers were pre-tested using the Oberleader Attitude Toward Aging Scale. After completing coursework which included gerontology content and a five-week clinical experience that focused on the elderly, the students were post-tested using the same instrument. The findings indicated that post-test scores were significantly higher than pre-test scores. This suggests that coursework which includes topics on aging and clinical experiences with the aged lead to more positive views of the elderly.

Medical Students' Perceptions of the Elderly

In addition to nursing students, medical students' attitudes toward the elderly have also been the focus of studies in recent years. In addition to assessing the impact of coursework and experience on attitudes toward the elderly, the willingness of medical students to consider a career in geriatric medicine has been investigated.

Tarbox, Connors, and Faillace (1987) conducted a longitudinal study to determine the impact of medical education on the attitudes of medical students toward the elderly. Approximately one hundred of the subjects who

participated in the survey during their freshman year also participated in the survey at the beginning of their senior year. The researchers found that students who receive geriatrics education developed more positive attitudes toward the elderly.

In the 1990 study by Wilderon, Press, Perkins, Tebes, Nichols, Calkins, Cryns, and Schimpfhauser, correlates of entering medical students' attitudes toward geriatrics were investigated. Although responses from the students did not indicate a negative attitude toward the elderly, only three percent showed interest in specializing in geriatric medicine. It was found that preference for treating older patients, prior volunteer work with the aged, and a positive attitude toward the elderly enhanced student interest in geriatrics. Student perception of satisfaction of physicians treating the elderly, and feelings of closeness experienced with older family members and friends were also causal factors in the students' general attitude toward the aged.

Physical Therapy Students' Perceptions of the Elderly

Brown, Gardner, Perritt, and Kelly (1992) investigated the impact of traditional and geriatric mock clinics for physical therapy students on the students' attitude toward older individuals using the Kogan Attitude Toward Old People Scale. Each of the subjects were involved in classroom discussion led by an individual with expertise in geriatrics. Half of these subjects participated in two 4-

week traditional clinical rotations while the other half were involved in a 5-week traditional clinical rotation and a 3-week geriatric mock clinic. Positive attitudes toward the elderly increased for both groups and there was no significant difference between the groups. This would indicate that geriatric coursework was sufficient to positively impact students' attitudes.

Intentions to Work with the Elderly

Several theorists have pointed out that an individual's attitude toward a person can impact the individual's behavior toward that person (Rokeach, 1968; Blumer, 1969; Purtilo, 1990). Rokeach (1968) suggests that people use attitudes when they describe, evaluate, or advocate a certain course of action regarding another individual or a situation. The action to which an attitude leads "is dictated by the content of the belief" (p.114). The more deeply seated the belief, the greater affect it has on attitude and subsequent behavior.

Intentions of Physical Therapy Students

Factors related to physical therapy students' decisions to work with elderly patients were investigated by Coren, Andreassi, Blood, and Kent (1987). Over three hundred subjects from fourteen physical therapy programs were questioned regarding their attitudes, experience, and intention to work with the elderly. No correlation between either race or gender and the intention to work with the elderly was found. However, age of the student,

relationships with an aged person, geriatric coursework and clinical affiliations, and six attitudinal factors (health, environment, challenge, communication, time, and comfort with one's own aging) were found to be statistically significant correlates.

Purpose of the Study

The goal of this exploratory study is to develop a model of predicting work intentions of health professions students. Theory based variables associated with a student's intention to work with the elderly were investigated.

Theoretical Framework

The study will be grounded in Ajzen and Fishbein's (1980) theory of reasoned action (Figure 1). The theory of reasoned action has as its ultimate goal the prediction and understanding of an individual's behavior. This involves two steps. The first is to clearly define the behavior and the second is to ask what determines the behavior.

Determinants of Intention.

Ajzen and Fishbein (1980) state that "a person's intention is a function of two basic determinants, one personal in nature and the other reflecting social influence" (p. 6). The first factor (attitude toward the behavior) is a personal one. It consists of the positive or negative evaluation by the individual of performing the behavior. The second determining factor (subjective norm) is related to the individual's "perception of social

pressures put on him/her to perform or not perform the behavior in question" (p. 6).

When a conflict arises between the two determinants of intention, the relative weights of these two factors come into play. In one situation the individual's attitude toward the behavior rather than the subjective norm may weigh more heavily on performing the intended behavior. In another situation, the subjective norm may be the most important determining factor.

Ajzen and Fishbein's theory looks at a person's attitude toward an intended behavior not the individual's attitude toward objects, people, or institutions. In other words, a person's behavior is a function of his/her attitude toward performing the behavior, not toward the object of the behavior.

Finally, Ajzen and Fishbein's theory of reasoned action addresses the role of demographic variables and personality characteristics in the determination of performing the intended behavior. They refer to these factors as "external variables" and suggest that "an external variable will have an effect on behavior only to the extent that it influences the determinants of that behavior" (Ajzen & Fishbein, 1980, p. 9).

Insert Figure 1 about here

Research Model

The study is based on the model Ajzen and Fishbein (1980) model (Figure 2). The model suggests that gender, age, race, SES, and prior education are each external independent variables which may produce an indirect effect on the subject's attitude toward working with the elderly. The student's attitude toward the elderly, work experience, quality of familial and social experience with the elderly are each determining factors in the student's attitude toward working with the elderly.

Insert Figure 2 about here

In addition, the model indicates that the attitudes of the student's family and referent group's (friends, most important other, and other important people) toward the elderly as perceived by the student are each determining factors in the student's subjective norm. Finally, the model suggests that the student's behavioral intention is a function of the student's attitude toward working with the elderly, the student's subjective norm, and the relative weight between the two. Intention is considered an immediate determinant to the student's subsequent behavior.

Instrumentation

Levenson's Locus of Control Scale (LOC)

Levenson's Locus of Control Scale (LOC) is a multidimensional scale based on social learning theory

(Levenson, 1981). It is divided into three subscales. The Internality (I) subscale "measures the extent to which people believe that they have control over their own lives" (Levenson, 1981, p. 17). The Powerful Others (P) subscale measures the influence of powerful others on an individual, while the Chance (C) subscale evaluates control associated with luck or chance happenings. There are a total of twenty-four Likert statements, eight in each of the three subscales.

Work Intentions of Health Professions Students (WIHPS)

The Work Intentions of Health Professions Students (WIHPS) is a researcher developed instrument which queries the student's gender, age, race, SES, area of study, and prior education. It also includes three Likert scale questions regarding a student's work experience with elderly individuals. Two semantic differential scales (Osgood, Suci, & Tannenbaum, 1957) are used to measure the attitude of the student, as well as the student's referent groups (family, friends, most important other, and other important people) as perceived by the student in terms of the elderly and working with the elderly. Finally the WIHPS contains one question to measure the student's intention to work with or not work with the elderly subsequent to graduation.

Methodology

Sample Population

Subjects for the study were students who are enrolled in one of four health professions programs at a small

regional university in the southwest. These programs include gerontology, health administration, nursing, and physical therapy. The 142 students within these programs are a diverse group in regards to the variables being investigated.

Subsample

A total of 108 of the 142 students participated in the study. Four of the subjects were majoring in gerontology, sixteen were studying health administration, and seventeen indicated they were studying nursing. The greatest number of participants (71) were from the physical therapy program.

Procedure

Students were assessed using the Levenson LOC and the WIHPS in the Spring and Summer of 1994. Students were read an information sheet by the researcher. The information sheet indicated that the study carried with it no direct benefit or risk for the subject. It also informed the subjects that they could withdraw at any time without penalty, and that the information supplied would be held strictly confidential. Only students who were designated majors in one of the four programs were invited to participate.

Scoring Instrument Items

Three scores were obtained to measure locus of control, one for each of the subscales, I, P, and C on the Levenson LOC. The scores were calculated by adding up the points associated with the circled answers for the items which

comprise each particular scale. Point values for each

answer were assigned as follows: strongly disagree = 1;

disagree = 2; disagree more than agree = 3; agree more than

disagree = 4; agree = 5; strongly agree = 6. After

determining scores for each of the subscales, a mean for

each subject was calculated for the P and C subscales

combined. The computed mean score was considered the

subject's external locus of control score. It was compared

to the subject's score on the I subscale in an effort to

assess whether a subject has an internal or external locus

of control orientation. The theoretical range of scores for

each of the subscales is from eight to forty-eight.

In addition to calculating the scores for the locus of

control construct, a score for SES was assigned using the

Nam-Powers (1980 Census) Socioeconomic Index. This scale

was chosen due to the fact that it presents a single set of

scores for men and women combined (Nam & Powers, 1983).

Scores for each of the two semantic differential scales

(SD1 - The elderly are; SD2 - Working with the elderly is)

were calculated. Each item in each scale was assigned a

value from one to six with the higher values associated with

the most positive response and the lower values associated

with the most negative response. Items for each scale were

scored according to the scoring key found in Appendix C.

Item response values were tallied to derive a total score of

attitude for each of the semantic differential scales with a

theoretical range of scores for each semantic differential

scale of ten to sixty.

A path analysis was conducted to determine the statistical significance of the correlates being measured. Non-significant paths were removed in an effort to maximize the variability for which the researcher could account. The remaining significant paths are considered the best set of predictors of the dependent variable.

Results

There were three endogenous (dependent) variables identified in the path, intention to work with the elderly, subjective norm, and attitude toward working with the elderly. Multiple regressions were run on each endogenous variable and its respective exogenous (independent) variables in an effort to identify those paths which were significant.

Attitude toward working with the elderly (SSD2) was the endogenous variable in the first multiple regression. The exogenous variables were quality of work experience the student had with the elderly (qualwor), relationships with familial elderly (famrela), relationships with non-familial elderly (nfamrel), and the student's attitude toward the elderly (SSD1). Statistically significant paths were found between qualwor and SSD2 (p < .05), as well as, SSD1 and SSD2 (p < .01). The amount of variance accounted for by this set of predictors was approximately 44% (R^2 = .4444; F = 9.798, p < .01; e_{SSD2} = .745).

The second multiple regression was conducted with the

student's subjective norm (SN) as the endogenous variable. Attitudes toward the elderly (as perceived by the student) of the student's referent group were the exogenous variables. These included family attitude (FSD1), most important or significant other's attitude (ISD1), friend's attitude (PSD1), and important other's attitude (OSD1). Significant paths were associated with FSD1 ($p < .05$), ISD1 ($p < .01$), and PSD1 ($p < .01$). Nearly 70% of the variance in SN was accounted for by the exogenous variables (R^2 = .6999; F = 28.566, $p < .001$; e_{SN} = .548).

Intention to work with the elderly (intent) was the endogenous variable in the third regression run. The exogenous variables were qualwor, famrela, nfamrel, SSD1, FSD1, ISD1, PSD1, OSD1, SSD2, SN, internal locus of control (LOCI), and external locus of control (LOCPC). It should be noted that two of these variables (SSD2 and SN) each served as an endogenous variable in the previous multiple regressions but were considered exogenous variables to intent. This analysis revealed significant paths existed between famrela and intent ($p < .01$), SSD1 and intent ($p < .01$) and SSD2 and intent ($p < .05$). The variance accounted for by the predictor variables was almost 54% (R^2 = .5364; F = 3.953, $p < .001$; e_{intent} = .681).

The results of these three multiple regressions revealed that significant paths to intent were associated with qualwor, SSD1, and SSD2. In order to determine which of these variables were the best set of predictors of

intent, two subsequent regressions were run. The first one was with intent as the endogenous variable and qualwor, SSD1, and SSD2 as the exogenous variables. This model, Model II (Figure 3), accounted for approximately 26% of the variance in intent (R^2 = .264; F = 5.978, p < .01; e_{intent} = .858). Statistically significant paths were associated with SSD1 (p < .01) and SSD2 (p < .01).

The endogenous variable in the next regression run was SSD2. It was considered a function of qualwor and SSD1. This analysis indicated that nearly 44% of the variance in SSD2 was accounted for by qualwor and SSD1 (R^2 = .4377; F = 19.848, p < .005; e_{SSD2} = .75). Statistical significance was associated with each of the paths (qualwor, p < .05; SSD1, p < .001).

Insert Figure 3 about here

In an effort to discover the best model for this set of data, the researcher proposed a model in which the path from qualwor to intent was eliminated because it was the least significant path (p < .05) in Model II. The exogenous variables in this model were therefore SSD1 and SSD2 with intent remaining the endogenous variable. This model revealed that almost 25% of the variance in intent was accounted for by these predictor variables (R^2 = .2521; F = 8.594, p < .005; e_{intent} = .865). All paths in this model were statistically significant (p < .01).

The Bentler-Bonnett Goodness-of-Fit test was then calculated to determine which of the two proposed models could be considered the best in predicting the intention of a health professions student to work with the elderly. It indicated that the deletion of the path from the quality of the work experience a student had with the elderly is associated with a significant Chi Square. This lead the researcher to the rejection of that proposed model in favor of Model II ($W = 7.16$, $p < .01$).

Insert Tables 5 & 6 about here

Conclusions and Implications

The data obtained from this study suggests that the quality of a student's work experience with the elderly, the student's attitude toward the elderly, and the student's attitude toward working with the elderly are each causal factors associated with the student's intention to work with the elderly. Although the original model (Figure 2) was not supported in this particular inquiry, further examination should be conducted on both Model I and Model II. Replication of this investigation which tests various specialization intentions of health professions students in addition to that of working with the elderly could uncover a reliable model of prediction. Obviously, some changes in the instrument would be necessary. For instance, if students indicated an intention to work in pediatrics or

with the developmentally disabled, the semantic differential
portion of the WIHPS would need revision. In addition,
questions which queried information in relation to the
elderly would have to be altered for the specialization
under investigation.

If a reliable prediction model is found, it has far
reaching implications. For example, the education of the
health professions student could be made more relevant to
that particular student. Elective courses could be taken
which further prepare the student for working in his/her
area of choice. Also, clinical rotations could be arranged
for the student to have more exposure in the specialized
field. This augmented knowledge base could lead to students
who are experts or even leaders in their area of
specialization.

In addition to the educational inferences, a reliable
prediction model could actually have an impact on the health
care consumer. If a consumer goes to a health care provider
who is working in an area which best suits that health care
provider, the ultimate healing process of the patient would
be facilitated. Better treatment plans could be developed
which lead to a speedier recovery, thus lessening the
financial burden on the patient. The patient's
psychological outlook could also be improved.

Certainly, in a society in which health care plays such
a vital role, it is important to have health care providers
employed in an area of specialization which best suits them.

This could only lead to consumers experiencing a better quality of care.

References

Ajzen, I. & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.

Blumer, H. (1969). Symbolic interactionism perspective and method. Englewood Cliffs, NJ: Prentice-Hall.

Brown, D. S., Gardner, D. L., Perritt, L., & Kelly, D. G. (1992). Improvement in attitudes toward the elderly following traditional and geriatric mock clinics for physical therapy students. Physical Therapy, 72(4), 251-260.

Coren, A., Andreassi, M. Blood, H., & Kent, B. (1987). Factors related to physical therapy students decisions to work with elderly patients. Physical Therapy, 67(1), 60-65.

Davis, J. A. (1988). A student perspective on growing old. Educational Gerontology, 14, 525-537.

Downe-Wamboldt, B. L. & Melanson, P. M. (1990). Attitudes of baccalaureate student nurses toward aging and the aged: Results of a longitudinal study. Educational Gerontology, 16, 49-59.

Ferrini A. F. & Ferrini, R. L. (1993). Health in the later years. Dubuque, IA: Brown & Benchmark.

Fields, S. D., Jutagir, R., Adelman, R. D., Tideiksaar, R., & Olson, E. (1992). Geriatric education part I: Efficacy of a mandatory clinical rotation for fourth year medical students. Journal of the American Geriatrics Society, 40, 964-969.

Ford, C. V. & Sbordone, R. J. (1980). Attitudes of
    psychiatrists toward elderly patients. American Journal
    of Psychiatry, 137, 571-575.

Galbraith, M. W. & Suttie, S. M. (1987). Attitudes of
    nursing students toward the elderly. Educational
    Gerontology, 13, 213-223.

Gomez, G. E., Young, E. A., & Gomez, E. A. (1991). Attitude
    toward the elderly, fear of death, and work preference of
    baccalaureate nursing students. Gerontology & Geriatrics
    Education, 11(4), 45-56.

Hickey, T. & Kalish, R. A. (1986). Young peoples'
    perceptions of adults. Journal of Gerontology, 23,
    215-219.

Kastenbaum, R. & Durkee, N. (1964). Young people view old
    age. In R. Kastenbaum (Ed.), New Thoughts on Old Age
    (237-249). New York: Springer.

Levenson, H. (1981). Differentiating among internality,
    powerful others, and chance. In H. M. Lefcourt (Ed.),
    Research with the locus of control construct, Vol. 1.
    (pp. 15-59). New York: Academic Press.

Meuleman, J. R., Davidson, R. A., & Caranasos, G. J.
    (1988). A comparison of attitudes toward geriatrics
    among medical residents. Journal of Medical Education,
    63, 135-137.

Murden, R. A., Meier D. E., Bloom, P. A., & Tideiksaar, R.
    (1986). Responses of fourth-year medical students to a
    required clerkship in geriatrics. Journal of Medical

Education, 61, 569-578.

Murphy-Russell, S., Die, A. H., & Walker, J. L. (1986). Changing attitudes toward the elderly: The impact of three methods of attitude change. Educational Gerontology, 12, 241-251.

Nam, C. B. & Powers, M. G. (1983). The socioeconomic approach to status measurement. Houston: Cap and Gown.

Naus, P. J. (1973). Some correlates of attitudes toward old people. International Journal of Aging and Human Development, 4, 229-243.

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). The measurement of meaning. Urbana: University of Illinois Press.

Purtilo, R. (1990). Health professional and patient interaction (4th ed.). Philadelphia: W. B. Saunders.

Rokeach, M. (1968). Beliefs, attitudes, and values: A theory of organization and change. San Francisco: Jossey-Bass.

Sainsbury, R., Wilkinson, T. J., & Smith, C. W. (1992). Attitudes of medical students to old people: A cross-national comparative study. Medical Education, 26, 285-289.

Spier, B. E. (1992). Teaching methodologies to promote positive attitudes toward the elderly. Nursing & Health Care, 13(10), 520-524.

Tarbox, A. R., Connors, G. J., & Faillace, L. A. (1987). Freshman and senior medical students' attitudes toward

the elderly. <u>Journal of Medical education</u>, <u>62</u>, 582-591.

Wilderon, C. P. M., Press. E. G., Perkins, D. V., Tebes, J.
A., Nichols, L., Calkins, E., Cryns, A. G., &
Schimpfhauser, F. (1990). Correlates of entering
medical students' attitudes toward geriatrics.
<u>Educational Gerontology</u>, <u>16</u>, 429-446.

The person's beliefs that
the behavior leads to
certain outcomes and his ⟶ Attitude toward
evaluations of these   the behavior
outcomes

Relative importance
of attitudinal and ⟶ Intention ⟶ Behavior
normative considerations

The person's beliefs that
specific individuals or
groups think he should
or should not perform the ⟶ Subjective Norm
behavior and his motivation
to comply with the specific
referents

Source: Ajzen, I. & Fishbein, M. (1980). Understanding Attitudes and Predicting Social

Behavior. Englewood Cliffs, NJ: Prentice-Hall.

Figure 1. Theory of Reasoned Action General Model

Attitude Toward the Elderly
Family Relationship
Non-familial relationships ⟶ Attitude Toward
Quality of Work Experience   Working With the
                                       Elderly
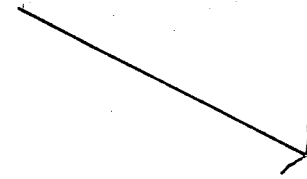
                                                    Intention
                        Locus of Control ⟶   to Work
                                                    With the
                                                    Elderly

Family's Attitude
Significant Other's Attitude ⟶   Subjective
Friend's Attitude   Norm
Important Other's Attitude
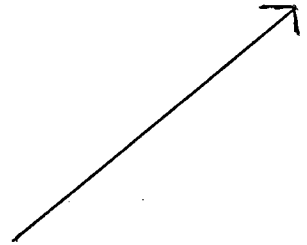
Figure 2. Work Intentions of Health Professions Students (WIHPS) MODEL I

Quality of Work Experience

Attitude Toward
Working With ──────────────⟶ Intention
the Elderly to Work with
the Elderly

Attitude Toward the Elderly
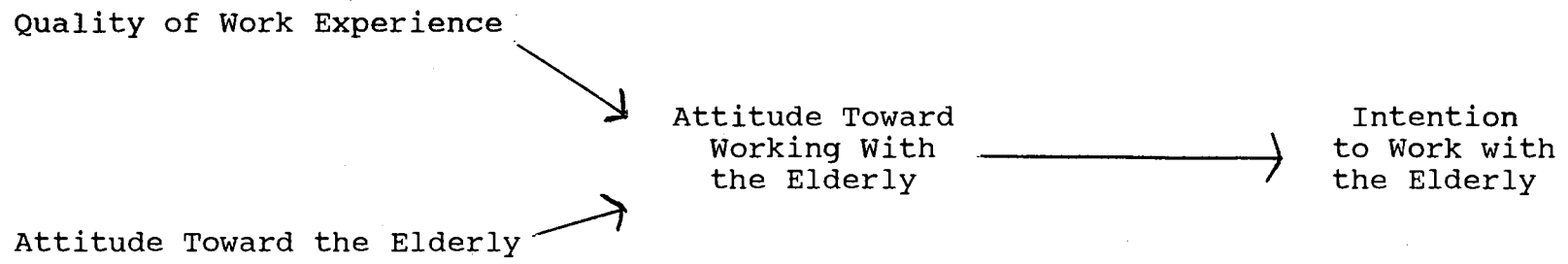
Figure 3.   MODEL II of WIHPS

Table 5

Regression Runs Based on Figure 2: An Over-identified Model

Run	Variable Type	Variable Name	Significance
1	Endogenous	SSD2	
	Exogenous	Qualwor	$p < .05$
		Famrela	Non-significant
		Nfamrel	Non-significant
		SSD1	$p < .01$
	$R^2 = .4444$	$F = 9.798$, $p < .01$	$e = .745$
2	Endogenous	SN	
	Exogenous	FSD1	$p < .05$
		ISD1	$p < .01$
		PSD1	Non-significant
		OSD1	$p < .01$
	$R^2 = .6999$	$F = 28.566$, $p < .001$	$e = .548$
3	Endogenous	Intent	
	Exogenous	Qualwor	Non-significant
		Famrela	$p < .01$
		Nfamrel	Non-significant
		SSD1	$p < .01$
		FSD1	Non-significant
		ISD1	Non-significant
		PSD1	Non-significant
		OSD1	Non-significant
		SSD2	$p < .05$
		SN	Non-significant
		LOCI	Non-significant
		LOCPC	Non-significant
	$R^2 = .5364$	$F = 3.953$, $p < .001$	$e = .681$

Table 6

Regression Runs Based on Figure 3: An Over-identified Model

Run	Variable Type	Variable Name	Significance
4	Endogenous	Intent	
	Exogenous	Qualwor	Non-significant
		SSD1	$p < .01$
		SSD2	$p < .01$
	$R^2 = .2640$	$F = 5.978$, $p < .01$	$e = .858$
5	Endogenous	SSD2	
	Exogenous	Qualwor	$p < .05$
		SSD1	$p < .01$
	$R^2 = .4377$	$F = 19.848$, $p < .005$	$e = .75$
6	Endogenous	Intent	
	Exogenous	SSD1	$p < .01$
		SSD2	$p < .01$
	$R^2 = .2521$	$F = 8.594$, $p < .005$	$e = .865$

Bibliography

Adelman, R., Hainer, J., Butler, R. N., & Chalmers, M.
(1988). A well elderly program: An intergeneraltional
model in medical education. The Gerontologist, 28(3),
409-413.

Ajzen, I. & Fishbein, M. (1980). Understanding attitudes
and predicting social behavior. Englewood Cliffs, NJ:
Prentice-Hall.

Ajzen, I. & Madden, T. J. (1986). Prediction of goal-
directed behavior: Attitudes, intentions, and perceived
behavioral control. Journal of Experimental Social
Psychology, 22, 453-474.

American Association of Retired Persons (AARP). (1990). A
profile of older americans 1990. Washington, D. C.:
AARP.

American Association of Retired Persons (AARP). (1991). A
profile of older americans 1991. Washington, D. C.:
AARP.

Blau, P. M. (1964). Exchange and power in social life.
New York: Wiley.

Blumer, H. (1969). Symbolic interactionism perspective and
method. Englewood Cliffs, NJ: Prentice-Hall.

Borich, G. D. & Paver, S. W. (1974). Convergent and
discriminant validity of the locus of control construct.
Eric, ED 171 731.

Brown, D. S., Gardner, D. L., Perritt, L., & Kelly, D. G.
(1992). Improvement in attitudes toward the elderly
following traditional and geriatric mock clinics for

physical therapy students. Physical Therapy, 72(4), 251-260.

Cook, K. S., O'Brien, J., & Kollock (1990). Exchange theory: A blueprint for structure and process. In George Ritzer (Ed.), Frontiers of social theory: A new synthesis (pp. 158-177). New York: Columbia University Press.

Coren, A., Andreassi, M. Blood, H., & Kent, B. (1987). Factors related to physical therapy students decisions to work with elderly patients. Physical Therapy, 67(1), 60-65.

Davis, J. A. (1988). A student perspective on growing old. Educational Gerontology, 14, 525-537.

Downe-Wamboldt, B. L. & Melanson, P. M. (1990). Attitudes of baccalaureate student nurses toward aging and the aged: Results of a longitudinal study. Educational Gerontology, 16, 49-59.

Emerson, R. M. (1987). Toward a theory of value in social exchange. In K. S. Cook (Ed.), Social exchange theory (pp. 11-46). Newbury Park, CA: Sage.

Epstein, S. L. (1973). A factor analytic study of a revised form of Rotter's internal-external scale. Paper presented at the annual meeting of the International Communication Association (Montreal, April).

Ferrini A. F. & Ferrini, R. L. (1993). Health in the later years. Dubuque, IA: Brown & Benchmark.

Fields, S. D., Jutagir, R., Adelman, R. D., Tideiksaar, R., & Olson, E. (1992). Geriatric education part I:

Efficacy of a mandatory clinical rotation for fourth year medical students. <u>Journal of the American Geriatrics Society</u>, <u>40</u>, 964-969.
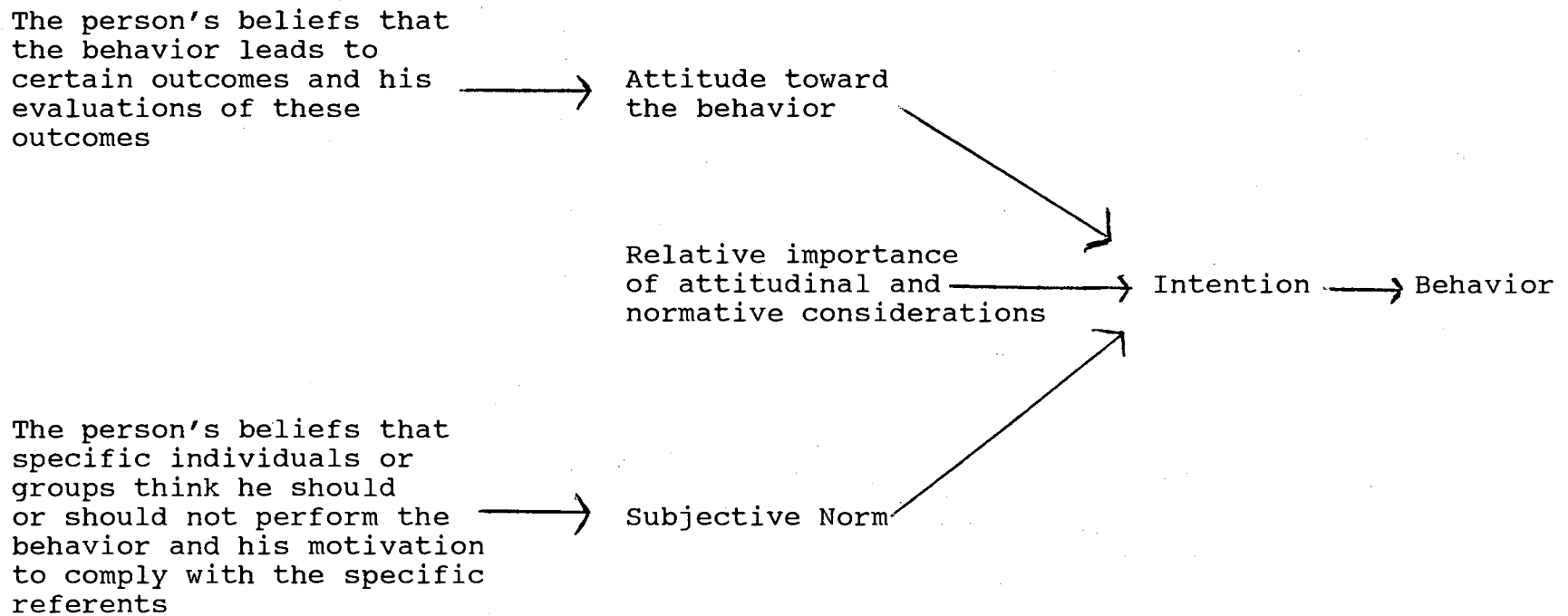
Fishbein, M. & Jaccard, J. J. (1973). Theoretical and methodological considerations in the prediction of family planning intentions and behavior. <u>Representative Research in Social Psychology</u>, <u>4</u>, 37-51.

Ford, C. V. & Sbordone, R. J. (1980). Attitudes of psychiatrists toward elderly patients. <u>American Journal of Psychiatry</u>, <u>137</u>, 571-575.

Galbraith, M. W. & Suttie, S. M. (1987). Attitudes of nursing students toward the elderly. <u>Educational Gerontology</u>, <u>13</u>, 213-223.

Gomez, G. E., Young, E. A., & Gomez, E. A. (1991). Attitude toward the elderly, fear of death, and work preference of baccalaureate nursing students. <u>Gerontology & Geriatrics Education</u>, <u>11</u>(4), 45-56.

Goodman, S. H. & Waters, L. K. (1987). Convergent validity of five locus of control scales. <u>Educational and Psychological Measurement</u>, <u>47</u>(3), 743-747.

Haug, M. (1984). Doctor and elderly patient relationships and their impact on self-care. Paper presented at meetings of the Gerontological Society, San Antonio (Nov.).

Hickey, T. & Kalish, R. A. (1986). Young peoples' perceptions of adults. <u>Journal of Gerontology</u>, <u>23</u>, 215-219.

Homans, G. C. (1961). <u>Social behavior: Its elementary forms</u>. New York: Harcourt, Brace, & World.

Hooyman, N. R. & Kiyak, H. A. (1993). <u>Social gerontology: A multidisciplinary perspective</u> (3rd ed.). Needham Heights, MA: Allyn and Bacon.

Isaac, S. & Michael, W. B. (1990). <u>Handbook in research and evaluation</u>, (2nd ed.). San Diego: Edits.

Kastenbaum, R. & Durkee, N. (1964). Young people view old age. In R. Kastenbaum (Ed.), <u>New Thoughts on Old Age</u> (237-249). New York: Springer.

Levenson, H. (1973). Reliability and validity of the I, P, and C scales: A multidimensional view of locus of control. Paper presented at the American Psychological Association Convention (Montreal, August).

Levenson, H. (1981). Differentiating among internality, powerful others, and chance. In H. M. Lefcourt (Ed.), Research with the locus of control construct, Vol. 1. (pp. 15-59). New York: Academic Press.

Marsh, H. W. & Richards, G. E. (1984). <u>The multidimensionality of the Rotter I-E scale: An application of confirmatory analysis</u>. Eric, ED 253 569.

McCauley, C., Stitt, C. L., & Segal, M. (1980). Stereotyping: From prejudice to prediction. <u>Psychological Bulletin</u>, <u>87</u>, 195-208.

Meuleman, J. R., Davidson, R. A., & Caranasos, G. J. (1988). A comparison of attitudes toward geriatrics among medical residents. <u>Journal of Medical Education</u>,

<u>63</u>, 135-137.

Murden, R. A., Meier D. E., Bloom, P. A., & Tideiksaar, R. (1986). Responses of fourth-year medical students to a required clerkship in geriatrics. <u>Journal of Medical Education</u>, <u>61</u>, 569-578.

Murphy-Russell, S., Die, A. H., & Walker, J. L. (1986). Changing attitudes toward the elderly: The impact of three methods of attitude change. <u>Educational Gerontology</u>, <u>12</u>, 241-251.

Nam, C. B. & Powers, M. G. (1983). <u>The socioeconomic approach to status measurement</u>. Houston: Cap and Gown.

Naus, P. J. (1973). Some correlates of attitudes toward old people. <u>International Journal of Aging and Human Development</u>, <u>4</u>, 229-243.

Nuttbrock, L. & Kosberg, J. I. (1980). Images of the physician and help-seeking behavior of the elderly: A Multivariate assessment. <u>Journal of Gerontology</u>, <u>35</u>, 241-248.

Nye, F. I. (1979). Choice, exchange, and the family. In W. R. Burr, R. Hill, F. I. Nye, & I. L. Reiss (Eds.), Contemporary theories about the family, Vol 2. (pp. 1-41). New York: The Free Press.

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). <u>The measurement of meaning</u>. Urbana: University of Illinois Press.

Pedhazur, E. J. (1982). <u>Multiple regression in behavioral research</u> (2nd ed.). New York: Holt, Reinhart, & Winston.

Pomazal, R. J. & Brown, J. D. (1977). Understanding drug use motivation: A new look at a current problem. _Journal of Health and Social Behavior, 18_, 212-222.

Purtilo, R. (1990). _Health professional and patient interaction_ (4th ed.). Philadelphia: W. B. Saunders.

Renfroe, D. H., O'Sullivan, P. S., & McGee, G. W. (1990). The relationship of attitude, subjective norm, and behavioral intent to the documentation behavior of nurses. _Scholarly Inquiry for Nursing Practice, 4_(1), 47-64.

Robins, L. S. & Wolf, F. M. (1989). The effect of training on medical students' responses to geriatric patient concerns: Results of a linguistic analysis. _The Gerontologist, 29_(3), 341-344.

Rokeach, M. (1968). _Beliefs, attitudes, and values: A theory of organization and change_. San Francisco: Jossey-Bass.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. _Psychological Monographs, 80_, 1-28.

Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. _American Psychologist, 45_(4), 489-493.

Rowe, J. W. (1985). Health care of the elderly. _New England Journal of Medicine, 312_, 827-835.

Sabatelli, R. M. & Shehan, C. L. (1993). Exchange and resource theories. In P. G. Boss, W. J. Doherty, R.

LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), Sourcebbok of family theories and methods. (pp. 385-417). New York: Plenum Press.

Sainsbury, R., Wilkinson, T. J., & Smith, C. W. (1992). Attitudes of medical students to old people: A cross-national comparative study. Medical Education, 26, 285-289.

Schifter, D. B. & Ajzen, I. (1985). Intention, perceived control, and weight loss: An application of the theory of planned behavior. Journal of Personality and Social Psychology, 49, 843-851.

Shornack, L. L. (1986). Exchange theory and the family. International Social Science Review, 61(2), 51-60.

Spence, A. P. (1989). Biology of human aging. Prentice Hall: Englewood Cliffs.

Spier, B. E. (1992). Teaching methodologies to promote positive attitudes toward the elderly. Nursing & Health Care, 13(10), 520-524.

Strader, M. K. & Katz, B. M. (1989). Effects of a persuasive communication on beliefs, attitudes, and career choice. The Journal of Social Psychology, 130(2), 141-150.

Tarbox, A. R., Connors, G. J., & Faillace, L. A. (1987). Freshman and senior medical students' attitudes toward the elderly. Journal of Medical education, 62, 582-591.

U. S. Bureau of the Census. (1992). Statistical Abstract of the United States (112 ed.). Washington, DC.

Vinokur-Kaplan, D. (1978). To have-or not to have-another
child: Family planning attitudes, intentions, and
behavior. Journal of Applied Social Psychology, 8, 29-
46.

Waltman, N. L. (1990). Attitudes, subjective norms, and
behavioral intentions of nurses toward dying patients and
their families. Oncology Nursing Forum, 17(3), 55-62.

Wilderon, C. P. M., Press. E. G., Perkins, D. V., Tebes, J.
A., Nichols, L., Calkins, E., Cryns, A. G., &
Schimpfhauser, F. (1990). Correlates of entering
medical students' attitudes toward geriatrics.
Educational Gerontology, 16, 429-446.

APPRNDIX A

RESEARCH INSTRUMENT

Gender   [ ] Male   [ ] Female

Age   _____

Race   [ ] Asian
           [ ] Black
           [ ] Hispanic
           [ ] Native American
           [ ] White, non-hispanic

What was the occupation of the head of your household when you lived at home?

_____

In what area are you obtaining your degree?

        [ ] Gerontology
        [ ] Health Administration
        [ ] Nursing
        [ ] Physical Therapy

Have you chosen an area of specialization in which you plan to work once you graduate?

     [ ] Yes   [ ] No

If YES, what area of specialization? For example, pediatrics, geriatrics, rehabilitation, longterm care, etc.

_____

How many courses in aging have you taken?

        [ ] None
        [ ] One - Two
        [ ] Three - Four
        [ ] Five or more

In courses other than those in aging, overall how many hours have been spent on topics in aging?

        [ ] None
        [ ] One - Three
        [ ] Four - Six
        [ ] Seven - Nine
        [ ] Ten - Twelve
        [ ] Thirteen or more

Have you had any clinical or work experience with the elderly?

[ ] Yes [ ] No

If YES, How would you rate that experience?

[ ] Extremely Bad
[ ] Bad
[ ] Good
[ ] Extremely Good

Overall, how would you rate your relationship with elderly members of your family?

[ ] Extremely Bad
[ ] Bad
[ ] Good
[ ] Extremely Good
[ ] I have no elderly members in my family

Overall, how would you rate your relationship with non-family elderly?

[ ] Extremely Bad
[ ] Bad
[ ] Good
[ ] Extremely Good
[ ] I do not have a relationship with any non-family elderly

PLEASE GO TO THE NEXT PAGE

In your own opinion, how do you rate the elderly? Put an "S" on the
line to indicate where you are.

The elderly are

Kind	____:____:____:____:____:____	Cruel
Unimportant	____:____:____:____:____:____	Important
Foolish	____:____:____:____:____:____	Wise
Interesting	____:____:____:____:____:____	Boring
Sociable	____:____:____:____:____:____	Withdrawn
Ugly	____:____:____:____:____:____	Beautiful
Nice	____:____:____:____:____:____	Mean
Happy	____:____:____:____:____:____	Grumpy
Bad	____:____:____:____:____:____	Good
Fast	____:____:____:____:____:____	Slow

Working with the elderly is

Good	____:____:____:____:____:____	Bad
Clean	____:____:____:____:____:____	Dirty
Pleasurable	____:____:____:____:____:____	Painful
Unimportant	____:____:____:____:____:____	Important
Interesting	____:____:____:____:____:____	Boring
Easy	____:____:____:____:____:____	Difficult
Fun	____:____:____:____:____:____	Drudgery
Sad	____:____:____:____:____:____	Happy
Relaxed	____:____:____:____:____:____	Tense
Rewarding	____:____:____:____:____:____	Costly

In your own opinion, how does your family rate the elderly? Put an "F"
on the line to indicate where your family are.

The elderly are

Kind   _____:_____:_____:_____:_____:_____ Cruel

Unimportant _____:_____:_____:_____:_____:_____ Important

Foolish   _____:_____:_____:_____:_____:_____ Wise

Interesting _____:_____:_____:_____:_____:_____ Boring

Sociable   _____:_____:_____:_____:_____:_____ Withdrawn

Ugly   _____:_____:_____:_____:_____:_____ Beautiful

Nice   _____:_____:_____:_____:_____:_____ Mean

Happy   _____:_____:_____:_____:_____:_____ Grumpy

Bad   _____:_____:_____:_____:_____:_____ Good

Fast   _____:_____:_____:_____:_____:_____ Slow

Working with the elderly is

Good   _____:_____:_____:_____:_____:_____ Bad

Clean   _____:_____:_____:_____:_____:_____ Dirty

Pleasurable _____:_____:_____:_____:_____:_____ Painful

Unimportant _____:_____:_____:_____:_____:_____ Important

Interesting _____:_____:_____:_____:_____:_____ Boring

Easy   _____:_____:_____:_____:_____:_____ Difficult

Fun   _____:_____:_____:_____:_____:_____ Drudgery

Sad   _____:_____:_____:_____:_____:_____ Happy

Relaxed   _____:_____:_____:_____:_____:_____ Tense

Rewarding   _____:_____:_____:_____:_____:_____ Costly

In your own opinion, how does the most important person to you rate the elderly? Put an "I" on the line **to indicate where the most important person to you is.**

The elderly are

Kind	_____:_____:_____:_____:_____:_____	Cruel
Unimportant	_____:_____:_____:_____:_____:_____	Important
Foolish	_____:_____:_____:_____:_____:_____	Wise
Interesting	_____:_____:_____:_____:_____:_____	Boring
Sociable	_____:_____:_____:_____:_____:_____	Withdrawn
Ugly	_____:_____:_____:_____:_____:_____	Beautiful
Nice	_____:_____:_____:_____:_____:_____	Mean
Happy	_____:_____:_____:_____:_____:_____	Grumpy
Bad	_____:_____:_____:_____:_____:_____	Good
Fast	_____:_____:_____:_____:_____:_____	Slow

Working with the elderly is

Good	_____:_____:_____:_____:_____:_____	Bad
Clean	_____:_____:_____:_____:_____:_____	Dirty
Pleasurable	_____:_____:_____:_____:_____:_____	Painful
Unimportant	_____:_____:_____:_____:_____:_____	Important
Interesting	_____:_____:_____:_____:_____:_____	Boring
Easy	_____:_____:_____:_____:_____:_____	Difficult
Fun	_____:_____:_____:_____:_____:_____	Drudgery
Sad	_____:_____:_____:_____:_____:_____	Happy
Relaxed	_____:_____:_____:_____:_____:_____	Tense
Rewarding	_____:_____:_____:_____:_____:_____	Costly

In your own opinion, how do your friends rate the elderly? Put a "P" on
the line **to indicate where your friends are.**

The elderly are

Kind	____	: ____	: ____	: ____	: ____	: ____	Cruel
Unimportant	____	: ____	: ____	: ____	: ____	: ____	Important
Foolish	____	: ____	: ____	: ____	: ____	: ____	Wise
Interesting	____	: ____	: ____	: ____	: ____	: ____	Boring
Sociable	____	: ____	: ____	: ____	: ____	: ____	Withdrawn
Ugly	____	: ____	: ____	: ____	: ____	: ____	Beautiful
Nice	____	: ____	: ____	: ____	: ____	: ____	Mean
Happy	____	: ____	: ____	: ____	: ____	: ____	Grumpy
Bad	____	: ____	: ____	: ____	: ____	: ____	Good
Fast	____	: ____	: ____	: ____	: ____	: ____	Slow

Working with the elderly is

Good	____	: ____	: ____	: ____	: ____	: ____	Bad
Clean	____	: ____	: ____	: ____	: ____	: ____	Dirty
Pleasurable	____	: ____	: ____	: ____	: ____	: ____	Painful
Unimportant	____	: ____	: ____	: ____	: ____	: ____	Important
Interesting	____	: ____	: ____	: ____	: ____	: ____	Boring
Easy	____	: ____	: ____	: ____	: ____	: ____	Difficult
Fun	____	: ____	: ____	: ____	: ____	: ____	Drudgery
Sad	____	: ____	: ____	: ____	: ____	: ____	Happy
Relaxed	____	: ____	: ____	: ____	: ____	: ____	Tense
Rewarding	____	: ____	: ____	: ____	: ____	: ____	Costly

In your own opinion, how do other important people in your life rate the elderly? Put an "O" on the line **to indicate where other important people in your life are.**

The elderly are

Kind	____:____:____:____:____:____	Cruel
Unimportant	____:____:____:____:____:____	Important
Foolish	____:____:____:____:____:____	Wise
Interesting	____:____:____:____:____:____	Boring
Sociable	____:____:____:____:____:____	Withdrawn
Ugly	____:____:____:____:____:____	Beautiful
Nice	____:____:____:____:____:____	Mean
Happy	____:____:____:____:____:____	Grumpy
Bad	____:____:____:____:____:____	Good
Fast	____:____:____:____:____:____	Slow

Working with the elderly is

Good	____:____:____:____:____:____	Bad
Clean	____:____:____:____:____:____	Dirty
Pleasurable	____:____:____:____:____:____	Painful
Unimportant	____:____:____:____:____:____	Important
Interesting	____:____:____:____:____:____	Boring
Easy	____:____:____:____:____:____	Difficult
Fun	____:____:____:____:____:____	Drudgery
Sad	____:____:____:____:____:____	Happy
Relaxed	____:____:____:____:____:____	Tense
Rewarding	____:____:____:____:____:____	Costly

DIRECTIONS

On the next two pages is a series of attitude statements. Each represents a commonly held opinion. There are no right or wrong answers. You will probably agree with some items and disagree with others. I am interested in the extent to which you agree or disagree with such matters of opinion.

Read each statement carefully. Then, indicate the extent to which you agree or disagree using the following key:

```
Strongly agree ------------    SA
Agree          ------------     A
Agree more than disagree --   AMD
Disagree more than agree --   DMA
Disagree       ------------     D
Strongly disagree   -------    SD
```

First impressions are usually best. Read each statement, decide if you agree or disagree and the strength of your opinion, and then circle the appropriate response.

GIVE YOUR OPINION ON EVERY STATEMENT

If you find that the responses to be used in answering do not adequately reflect your own opinion, use the response that is closest to the way you feel.

```
Strongly agree  ------------     SA

Agree           ------------     A

Agree more than disagree    - AMD

Disagree more than agree    - DMA

Disagree        ------------     D

Strongly disagree  -------       SD
```

1. Whether or not I get to be a   SD D DMA AMD A SA
    leader depends mostly on my
    ability.

2. To a great extent my life is   SD D DMA AMD A SA
    controlled by accidental
    happenings.

3. I feel like what happens in my   SD D DMA AMD A SA
    life is mostly determined by
    powerful people.

4. Whether or not I get into a   SD D DMA AMD A SA
    car accident depends mostly on
    how good a driver I am.

5. When I make plans, I am almost   SD D DMA AMD A SA
    certain to make them work.

6. Often there is no chance of   SD D DMA AMD A SA
    protecting my personal
    interests from bad luck
    happenings.

7. When I get what I want, it's   SD D DMA AMD A SA
    usually because I'm lucky.

8. Although I might have good   SD D DMA AMD A SA
    ability, I will not be given
    leadership responsibility
    without appealing to those in
    positions of power.

9. How many friends I have   SD D DMA AMD A SA
    depends on how nice a person I
    am.

10. I have often found that what   SD D DMA AMD A SA
    is going to happen will
    happen.

11. My life is chiefly controlled   SD D DMA AMD A SA
    by powerful others.

12. Whether or not I get into a   SD   D   DMA   AMD   A   SA
    car accident is mostly a
    matter of luck.

13. People like myself have very   SD   D   DMA   AMD   A   SA
    little chance of protecting
    our personal interests when
    they conflict with those of
    strong pressure groups.

14. It's not always wise for me to   SD   D   DMA   AMD   A   SA
    plan too far ahead because
    many things turn out to be a
    matter of good or bad fortune.

15. Getting what I want requires   SD   D   DMA   AMD   A   SA
    pleasing those people above
    me.

16. Whether or not I get to be a   SD   D   DMA   AMD   A   SA
    leader depends on whether I'm
    lucky enough to be in the
    right place at the right time.

17. If important people were to   SD   D   DMA   AMD   A   SA
    decide they didn't like me, I
    probably wouldn't make many
    friends.

18. I can pretty much determine   SD   D   DMA   AMD   A   SA
    what will happen in my life.

19. I am usually able to protect   SD   D   DMA   AMD   A   SA
    my personal interests.

20. Whether or not I get into a   SD   D   DMA   AMD   A   SA
    car accident depends mostly on
    the other driver.

21. When I get what I want, it's   SD   D   DMA   AMD   A   SA
    usually because I worked hard
    for it.

22. In order to have my plans   SD   D   DMA   AMD   A   SA
    work, I make sure that they
    fit with the desires of people
    who have power over me.

23. My life is determined by my   SD   D   DMA   AMD   A   SA
    own actions.

24. It's chiefly a matter of fate   SD   D   DMA   AMD   A   SA
    whether or not I have a few
    friends or many friends.

APPRNDIX B

ANALYSIS OF RESEARCH QUESTIONS

Research Questions

Behavioral Beliefs

1. **What is the relationship between external demographics factors (gender, age, race, SES, prior education) and a student's attitude toward the elderly?**

    Correlations for the external variables ranged in magnitude from a low of -.068 (SES) to a high of .340 (topics in aging). When the correlations for topics in aging and courses in aging were considered together the correlation between prior education and a student's attitude toward the elderly increased to .376.

2. **Do experiential factors (work experience, familial experience, social experience) have a significant impact on a student's attitude toward working with the elderly?**

    A path analysis indicated that the quality of a student's work experience was significantly related to the student's attitude toward working with the elderly (p < .05). Familial and social experience were both associated with non-significant paths.

3. **Do students who have positive attitudes toward the elderly have a significantly more positive attitude toward working with the elderly than students who have negative attitudes toward the elderly?**

    The correlation between a student's attitude toward the

elderly and the student's attitude toward working with the elderly was .61. A path analysis indicated that a student's attitude toward the elderly was significantly related to the student's attitude toward working with the elderly ($p < .01$).

Normative Beliefs

1. **Do attitudes toward the elderly of a student's referent group (family, friends, significant other, important others) impact significantly on the student's subjective norm?**

    Significant paths were found between the student's family, friends, and significant other's attitudes toward the elderly as perceived by the student and the student's subjective norm ($p < .05$, $p < .01$, $p < .01$, respectively). The path between the student's important other's attitudes toward the elderly as perceived by the student and the student's subjective norm was found to be non-significant.

Behavioral Performance

1. **Do students who have positive attitudes toward working with the elderly indicate a significantly greater propensity to work with the elderly than students who have negative attitudes toward working with the elderly?**

    The correlation between a student's intention to work

with the elderly and the student's attitude toward working with the elderly was .325. The path associated with these two variables was found to be significant (p < .01).

<u>Subjective Norm</u>

1. **Do students who have higher subjective norms indicate a significantly greater propensity to work with the elderly than students who have lower subjective norms?**

The correlation between a student's intention to work with the elderly and the student's subjective norm was .173. The path associated with these two variables was found to be non-significant.

<u>Locus of Control</u>

1. **To what extent does the student's locus of control impact on the student's intention to work with the elderly?**

The path analysis indicated that the paths associated with intention and a student's locus of control were non-significant.

APPENDIX C

INSTRUMENT CODING KEY

1. Whether or not I get to be a   1   2   3   4   5   6
    leader depends mostly on my
    ability.

2. To a great extent my life is   1   2   3   4   5   6
    controlled by accidental
    happenings.

3. I feel like what happens in my   1   2   3   4   5   6
    life is mostly determined by
    powerful people.

4. Whether or not I get into a   1   2   3   4   5   6
    car accident depends mostly on
    how good a driver I am.

5. When I make plans, I am almost   1   2   3   4   5   6
    certain to make them work.

6. Often there is no chance of   1   2   3   4   5   6
    protecting my personal
    interests from bad luck
    happenings.

7. When I get what I want, it's   1   2   3   4   5   6
    usually because I'm lucky.

8. Although I might have good   1   2   3   4   5   6
    ability, I will not be given
    leadership responsibility
    without appealing to those in
    positions of power.

9. How many friends I have   1   2   3   4   5   6
    depends on how nice a person I
    am.

10. I have often found that what   1   2   3   4   5   6
    is going to happen will
    happen.

11. My life is chiefly controlled   1   2   3   4   5   6
    by powerful others.

12. Whether or not I get into a   1   2   3   4   5   6
    car accident is mostly a
    matter of luck.

13. People like myself have very   1   2   3   4   5   6
    little chance of protecting
    our personal interests when
    they conflict with those of
    strong pressure groups.

14. It's not always wise for me to   1   2   3   4   5   6
    plan too far ahead because
    many things turn out to be a
    matter of good or bad fortune.

15. Getting what I want requires   1   2   3   4   5   6
     pleasing those people above
     me.

16. Whether or not I get to be a   1   2   3   4   5   6
     leader depends on whether I'm
     lucky enough to be in the
     right place at the right time.

17. If important people were to   1   2   3   4   5   6
     decide they didn't like me, I
     probably wouldn't make many
     friends.

18. I can pretty much determine   1   2   3   4   5   6
     what will happen in my life.

19. I am usually able to protect   1   2   3   4   5   6
     my personal interests.

20. Whether or not I get into a   1   2   3   4   5   6
     car accident depends mostly on
     the other driver.

21. When I get what I want, it's   1   2   3   4   5   6
     usually because I worked hard
     for it.

22. In order to have my plans   1   2   3   4   5   6
     work, I make sure that they
     fit with the desires of people
     who have power over me.

23. My life is determined by my   1   2   3   4   5   6
     own actions.

24. It's chiefly a matter of fate   1   2   3   4   5   6
     whether or not I have a few
     friends or many friends.

The elderly are

Kind	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Cruel
Unimportant	__1__ : __2__ : __3__ : __4__ : __5__ : __6__	Important
Foolish	__1__ : __2__ : __3__ : __4__ : __5__ : __6__	Wise
Interesting	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Boring
Sociable	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Withdrawn
Ugly	__1__ : __2__ : __3__ : __4__ : __5__ : __6__	Beautiful
Nice	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Mean
Happy	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Grumpy
Bad	__1__ : __2__ : __3__ : __4__ : __5__ : __6__	Good
Fast	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Slow

Working with the elderly is

Good	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Bad
Clean	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Dirty
Pleasurable	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Painful
Unimportant	__1__ : __2__ : __3__ : __4__ : __5__ : __6__	Important
Interesting	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Boring
Easy	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Difficult
Fun	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Drudgery
Sad	__1__ : __2__ : __3__ : __4__ : __5__ : __6__	Happy
Relaxed	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Tense
Rewarding	__6__ : __5__ : __4__ : __3__ : __2__ : __1__	Costly

VARIABLE NAME	LEVEL OF MEASUREMENT	THEORETICAL RANGE	MEASUREMENT INSTRUMENT
Gender	Nominal	0 - Male 1 - Female	WIHPS
Age	Interval		WIHPS
Race	Nominal	0 - White 1 - Nonwhite	WIHPS
SES	Interval		NAM-POWERS
Area	Nominal	1 - Gerontology 2 - Health Admin. 3 - Nursing 4 - Physical Therapy	WIHPS
Spec	Nominal	0 - No 1 - Yes	WIHPS
Gerspec	Nominal	0 - No 1 - Yes 2 - Not Chosen	WIHPS
Courses	Ordinal	0 - None 1 - One/Two 2 - Three/Four 3 - Five/More	WIHPS
Topics	Ordinal	0 - None 1 - One/Three 2 - Four/Six 3 - Seven/Nine 4 - Ten/Twelve 5 - Thirteen/More	WIHPS
Workexp	Nominal	0 - No 1 - Yes	WIHPS
Qualwork	Interval	0 - None 1 - Extremely Bad 2 - Bad 3 - Good 4 - Extremely Good	WIHPS
Famrela	Interval	0 - None 1 - Extremely Bad 2 - Bad 3 - Good 4 - Extremely Good	WIHPS

VARIABLE NAME	LEVEL OF MEASUREMENT	THEORETICAL RANGE	MEASUREMENT INSTRUMENT
Nfamrela	Interval	0 - None 1 - Extremely Bad 2 - Bad 3 - Good 4 - Extremely Good	WIHPS
SSD1	Interval	10 to 60 (Neg to Pos)	SD1
FSD1	Interval	10 to 60 (Neg to Pos)	SD1
ISD1	Interval	10 to 60 (Neg to Pos)	SD1
PSD1	Interval	10 to 60 (Neg to Pos)	SD1
OSD1	Interval	10 to 60 (Neg to Pos)	SD1
SSD2	Interval	10 to 60 (Neg to Pos)	SD2
FSD2	Interval	10 to 60 (Neg to Pos)	SD2
ISD2	Interval	10 to 60 (Neg to Pos)	SD2
PSD2	Interval	10 to 60 (Neg to Pos)	SD2
OSD2	Interval	10 to 60 (Neg to Pos)	SD2
SN	Interval	10 to 60 (Neg to Pos)	SD2
LOCI	Interval	8 to 48	LEVENSON
LOCP	Interval	8 to 48	LEVENSON
LOCC	Interval	8 to 48	LEVENSON
LOCPC	Interval	8 to 48	LEVENSON
Intent	Interval	0 - No 1 - Yes	WIHPS

APPENDIX D

HUMAN SUBJECTS RESEARCH APPROVAL

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 04-15-94   **IRB#:**HE-94-016

Proposal Title:CHOOSING TO WORK WITH THE ELDERLY: ANALYZING DETERMINANTS IN THE DECISION OF THE HEALTH PROFESSIONS STUDENT

Principal Investigator(s): Dr. Joseph Weber

Reviewed and Processed as: Exempt

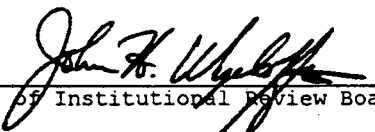**Approval Status Recommended by Reviewer(s):** Approved

APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL. ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

SUGGESTION: Separate information letter from survey immediately upon receipt.

Signature: _____   Date: April 20, 1994
              Chair of Institutional Review Board

VITA

Suzanne M. Rueb

Candidate for the Degree of

Doctor of Philosophy

Thesis: CHOOSING TO WORK WITH THE ELDERLY: ANALYZING
          DETERMINANTS IN THE DECISION OF THE HEALTH
          PROFESSIONS STUDENT

Major Field: Human Environmental Sciences

Biographical:

    Personal Data: Born in St. George, Bermuda,
        July 7, 1953, the daughter of Walter R. Saber
        and Theresa A. Mercier.

    Education: Graduated from Marina High School,
        Huntington Beach, California, in June, 1971;
        received Bachelor of Science Degree in Computer
        Science from University of Central Oklahoma in
        Edmond, Oklahoma in May, 1990; received Master of
        Education Degree in Adult Education/Gerontology
        from University of Central Oklahoma in Edmond,
        Oklahoma in May, 1991; completed requirements for
        the Doctor of Philosophy Degree at Oklahoma State
        University in Stillwater, Oklahoma in July, 1995.

    Professional Experience: Assistant Professor,
        Department of Physical Therapy, Langston
        University, August, 1991 to present.