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MEASURING THE LEARNING OUTCOMES OF A CONTINUING EDUCATION SEMINAR ABOUT THE AGING PROCESS ON THE KNOWLEDGE LEVEL OF REGISTERED NURSES

DISSERTATION

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By

Roberta M. Burris, B.S.N., M.S.
Denton, Texas

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Although many argue that a lack of knowledge about the aging process exists in the nursing profession, a thorough knowledge of the aging process should be a crucial element in the educational foundation of registered nurses. This study was designed to answer the question: Can a concise continuing education seminar increase the knowledge level about the aging process in a sample of currently licensed registered nurses?

The impact on the learning outcomes of an accredited continuing education seminar that was developed for this study was analyzed. The continuing education seminar focused on some of the major areas of social gerontology pertinent to nursing. A quasi-experimental design using 67 registered nurses was employed, 33 subjects were in a comparison group and 34 subjects were in an experimental group. The measurement instrument combined Palmore's Facts on Aging Quiz: Parts One and Two to evaluate learning outcomes. Nurses in the comparison group answered an

average of 58% of the items on the quiz correct, and nurses in the experimental group answered an average of 78% of the items correct on Palmore's Facts on Aging Quiz: Parts One and Two. An anlysis using a t-test for independent samples and a multiple regression demonstrated that the continuing education seminar had a positive effect on the nurses' level of knowledge about the aging process. Although other variables (age, gender, educational level, and previous gerontological training) were analyzed, none were found to have a significant effect on the level of knowledge. An analysis of the internal consistency reliability comparing Part One of Palmore's Facts on Aging Quiz to Part Two revealed a Cronbach's Coefficient Alpha of .86.

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CHAPTER ONE

INTRODUCTION

In Why Survive: Being Old in America, Butler (1975) stated:

> Aging is the neglected stepchild of the human life cycle. Though we have begun to examine the socially taboo subjects of dying and death, we have leaped over that long period of time preceding death known as old age. In truth, it is easier to manage the problem of death than the problem of living as an old person. (p. 1)

Many believe this to be true even today. As a culture, Americans have had shifting values attributed to this phenomenon of aging. Although aging has always been a part of the human experience, its importance has fluctuated in the collective consciousness of society. Being a senior citizen is a reality for an ever-increasing proportion of the population. Presently 12.6% of the American population is over the age of 65; by the year 2020 the elderly will account for 20% of the population (Tollett & Adamson, 1982), and by the year 2030 the elderly population is projected to be 21.8% (A profile of older Americans, 1991). No society in the history of the world has experienced a situation in which over 22% of its population was over the age of 65 (Uhlenberg, 1987). Although presently many countries have

an elderly population that is greater than that of the United States, the elderly population is not expected to increase as rapidly in other countries in the near future as it is in the United States. This is explained by the fact that the baby boom that occurred following World War II only lasted for 3 to 6 years in other countries, but lasted for almost 2 decades in the United States. As a result, one third of all Americans presently living were born between 1946 and 1964 (Dychtwald & Flower, 1989). The impact and ramifications of this fact will become more apparent and urgent to American society in the near future. It would be prudent and judicious for society to plan for this future reality.

A disparity exists between the realities of aging and the popularly held views that Americans, including many professionals who work with the elderly, have about the aged (Kluge, Mansbach, & Johnson, 1984). Stereotypical ideas and beliefs about the elderly not only affect individuals' behavior toward and relationships with older people, but also influence social policies, the types of services available, and the mental and physical health care received by the elderly (Murphy-Russell, Die, & Walker, 1986). Health care for the elderly is, and will remain, a major concern for American society. Census Bureau projections suggest that the 85-and-older population will double between

1980 and 2000, reaching 14.1% of the total aged population in this country by the year 2000 (Rosenwaike & Dolinsky, 1987). Nursing service is the largest single component of all the services involved in providing health care for elderly persons (Benson, 1982). As the elderly population increases, so does the incidence of their everyday difficulties (Watson & Maxwell, 1977). More than four out of five persons 65 years of age and older have at least one chronic health problem and multiple chronic health problems are commonplace among the elderly population (Palmore, 1988).

Demographic projections suggest that older individuals will soon make up the majority of registered nurses' clientele. In 1988, 29% of older persons assessed their health as fair or poor compared to 7% of persons under 65 (A profile of older Americans, 1991). Older persons, who are a relatively small percentage (12.6%) of the total United States population, occupy 60% (Fulmer, Ashley, & Reilly, 1986) and some estimate 70% (Tollett & Adamson, 1982) of all hospital beds nationally. The average number of days per stay in the hospital is also longer (8.9 days versus 5.3 days) for the elderly than for persons who are under the age of 65 (A profile of older Americans, 1991). When today's health professional students reach the prime of their careers, they will likely spend 75% of their practice time

with the elderly (Butler [1980] cited in Williams, Lusk, & Kline, 1986). Yet few nurses identify themselves as gerontological nurses. Less than 5% of a research group of 282 registered nursing students expressed interest in working with the aged after graduation (Williams et al., 1986). This negative response toward gerontological nursing was also reported by Campbell (1971), Gillis, (1973), Kayser and Minnigerode (1975), Rankin and Burggraf (1983). Hannon (1980) stated that until nurses integrate the concept and dynamics of aging into their theory and clinical practice, "they cannot provide therapeutic nursing care [to] the older adult" (p. 604).

This reluctance by members of the nursing profession to deal with the elderly is reflected in American society as a whole. In a National Council on Aging survey, Harris (1975) found that "the picture drawn in the public's mind of old age and its problems is a gross distortion of what older people say they experience personally" (p. 46). Most Americans seem to have an exaggerated negative picture of what they perceive to be found in later life. Dychtwald and Flower (1989) developed the following list of comparisons that have emerged from our culture:

> If young is good, older must be bad.
> If the young have it all, then the old must be losing it.
> If young is creative and dynamic, older must be dull and staid.
> If young is beautiful, old must be

> unattractive.
>
> If it's exciting to be young, it must be boring to be old.
>
> If the young are full of passion, the old must be beyond caring.
>
> If children are our tomorrow, then older people must be our yesterday. (p. 27)

Although one may feel initially that their list is absurd and may intellectually know it is wrong, the reflection of these beliefs can easily be identified in individuals' behavior and in the media today. These negative depictions have become embedded in American culture's everyday thinking and actions; gerontophobia has some deep roots in modern society.

Palmore (1982) suggested a theoretical model that explains the relationship between knowledge and attitudes and behavior. This model is exemplified in Figure 1.

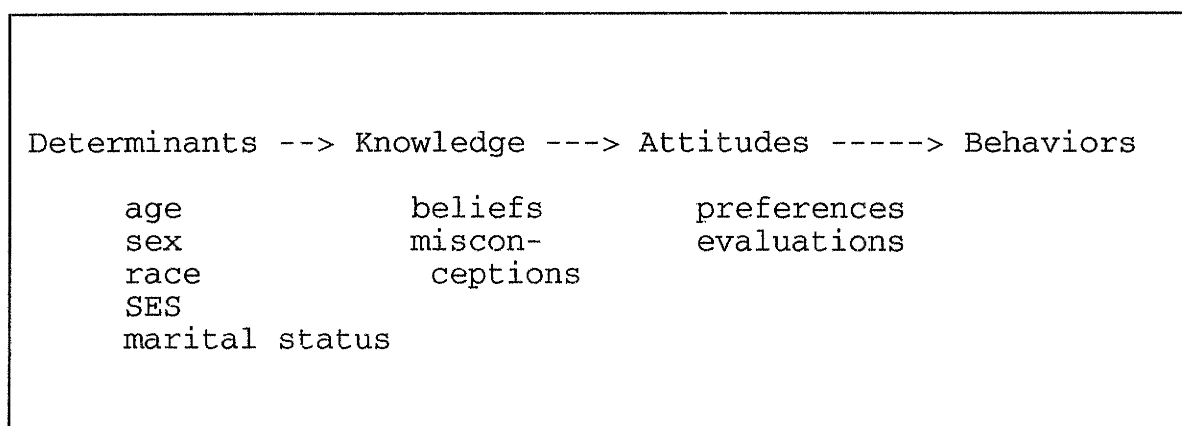

Figure 1. Proposed Theoretical Model for Illustrating Behavior Formation. *Note*. From "Attitudes Toward the Aged" by E. Palmore, 1982, *Research on Aging*, p. 341.

The model shown in Figure 1 is very similar to one proposed by Fishbein and Ajzen (1975). Both models show that a person's knowledge influences one's attitudes and ultimately one's behavior. Miller (1976) also agreed with these models and added that when negative behavior is present it is the result of an imbalance between a person's knowledge and attitude toward some object. Miller suggested that attitudes are learned but can be changed. According to Fishbein and Ajzen (1972; 1975), attitudes are the result of a society's belief system. Individuals' beliefs influence their attitudes and this influence, in turn, is related to the intentions or actual behavior the person exhibits. Based on Fishbein and Ajzen's conceptual framework, beliefs are the fundamental building blocks of attitude formation. Beliefs refer generally to an individual's subjective probability judgments concerning some discrete aspect of the environment. More specifically, a belief represents the information that an individual has about something and serves to link that object to some attribute (Fishbein and Ajzen, 1975).

In formulating a belief, an individual uses information and knowledge about an object. If a belief associates an object with primarily favorable attributes, the resultant attitude is positive. Fishbein and Ajzen (1975) explained that the performance of a particular behavior may lead to

new beliefs about an object that may, in turn, influence attitude. Similarly an attitude, once established, may influence the formation of new beliefs. This concept is graphically illustrated in Figure 2.

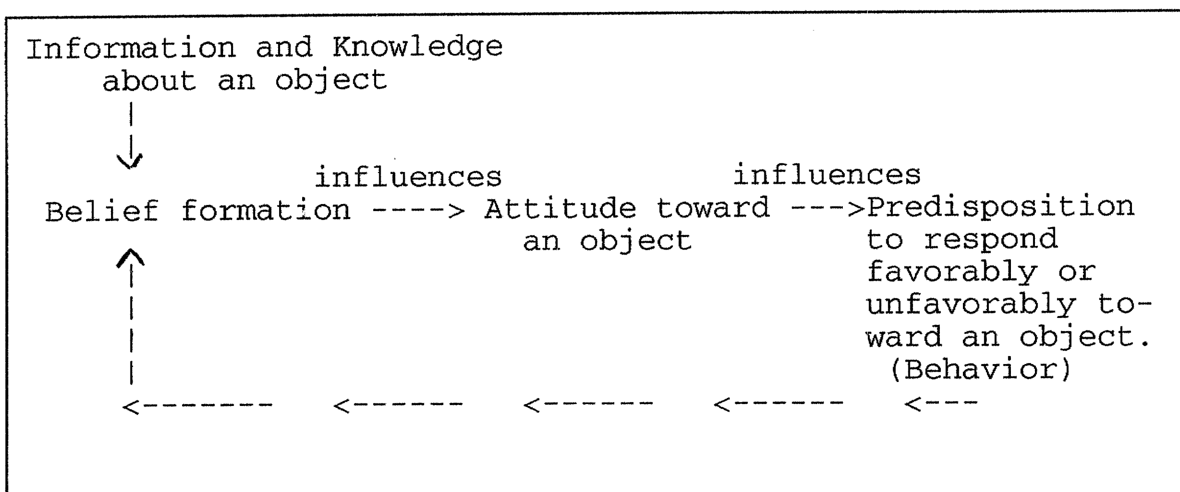

Figure 2. Conceptual Framework of Developing Attitudes and Behaviors. _Note_. From _Belief, Attitude, Intention and Behavior_ (pp. 14-15) by M. Fishbein and I. Ajzen, 1975, Reading, Ma.: Addison-Wesley.

Therefore, when utilizing these models one of the first steps is an assessment of the present level of knowledge. Assessments identify specific misinformation and misconceptions that may have contributed to the existing attitude. Stereotypical ideas of the elderly must be overcome before attitudes can change. The two models suggest that a change in knowledge must occur before attitudes can change. Health workers must be educated to the realities of the aging process. Prevailing negative stereotypes of old age are often even stronger among health

personnel who work closely with older patients (Gunter, 1971).

According to Hayter (1976), many of the commonly held negative attitudes about aging are merely myths with no basis in facts. Thus, an analysis of the impact of a short-term continuing education seminar on the level of knowledge about the elderly in registered nurses should be useful. The results of research in this area may help to focus future strategies for nursing educators and, eventually, remedy the current situation. In addition, educational programs and interventions may improve attitudes and behavioral intentions toward the elderly as well as improving knowledge about the elderly (Almquist, Stein, Weiner, & Linn, 1981; Hart, Freel, & Cromwell, 1976; Heller & Walsh, 1976; Ross, 1983).

The Problem

Can a portable and concise continuing education seminar that is based upon the fundamental components of the normal aging process increase the level of gerontological knowledge of a sample of currently licensed registered nurses?

Purpose of the Study

The following objectives were addressed by this study:

1. To analyze the impact of a continuing education seminar in gerontology on the level of knowledge about the

aging process in registered nurses as measured by Palmore's Facts of Aging Quiz: Parts One and Two.

2. To compare and contrast the level of knowledge about the aging process for the sample group with that of other professional groups who have completed Palmore's Facts on Aging Quiz.

3. To correlate the demographic factors of age, years in nursing practice, and previous gerontological training in aging with levels of knowledge about the aging process as measured by the Facts of Aging Quiz: Parts One and Two.

4. To identify the most common misconceptions about the aging process within the sample of registered nurses.

Hypotheses

The following directional hypotheses were tested:

1. A continuing education seminar in gerontology for registered nurses will increase their level of knowledge about the aging process.

2. The level of knowledge about the aging process in the sample group will be approximately equal to that which is reported in the literature for registered nurses who have completed the Facts on Aging Quiz: Parts One and Two.

3. There will be a significant positive relationship between the ages of the registered nurses in this sample and their level of knowledge about the aging process as measured

by the Facts on Aging Quiz: Parts One and Two.

4. There will be a significant positive relationship between the nurses' number of years in practice and their level of knowledge about the aging process as measured by the Facts on Aging Quiz: Parts One and Two.

5. There will be a significant positive relationship between the registered nurses' professional educational preparation (ADN, Diploma, BSN, MSN, PhD) and their level of knowledge about the aging process as measured by the Facts on Aging Quiz: Parts One and Two.

6. There will be a significant positive relationship between the nurses' previous gerontological training and their level of knowledge about the aging process as measured by the Facts on Aging Quiz: Parts One and Two.

Significance of the Study

Experiments are needed to determine which methods for modifying knowledge, attitudes, and behaviors are most effective and efficient in terms of cost-benefit. According to Eddy (1986) strategies must be developed to design programs that will change nursing attitudes so that the elderly are seen in a more positive way. As shown by Fishbein and Ajzen's (1975) and Palmore's (1982) conceptual models, a change in the knowledge and information base of an individual may lead to a change in attitude. Ziv (1989)

also echoed this approach. She reported that "courses in geriatrics do not alter the professionals' attitude toward the elderly unless they have some background in gerontology content, at least in theory, but preferable in theory and practice" (p. 234). Before the instigation of any educational undertaking designed to have long-term positive outcomes for nursing care and the elderly is begun, the issue of misconceptions and misperceptions about the elderly must be addressed and clarified. Because there is a lack of knowledge in the nursing profession about the aging process, an educational undertaking to address this issue is needed. Such an educational endeavor should produce beneficial and favorable outcomes for members of the nursing profession and for the elderly as well. This study is a beginning step in that direction and represents the initial phase of assessing nurses' knowledge level about the aging process. Further investigation as part of this study included evaluation of the learning outcomes of a continuing education seminar on nurses' level of knowledge about the aging process.

Definitions

Operational definitions used in this study include the following:

A registered nurse is an individual licensed by the State of Texas to practice professional nursing who is a

graduate of a diploma, associate degree, or baccalaureate program.

Gerontological training is any previous educational activity or training in gerontological concepts completed in one or more of the following three categories: a human growth and development college credit course that includes the entire life span, a college credit nursing course that focuses on gerontological nursing, a continuing education workshop or seminar that focuses on the processes of aging.

Elderly is arbitrarily defined as persons who are 65 years of age and older.

Delimitations

The subjects for this study were registered nurses who were employed in a major city in East Texas. An experimentally accessable sample was drawn from registered nurses who attended a continuing education seminar on gerontology at one of several local healthcare agencies.

The length of the continuing education seminar for the sample was 3 hours. The seminar covered the informational knowledge included in the Facts on Aging Quiz: Parts One and Two. The seminar also included major areas of social gerontology that are pertinent to the nursing profession which have been the basis for stereotypical information about the elderly. Continuing educational units for this

seminar were obtained from the Texas Nurses' Association, which is accredited as an approver of continuing education for nursing by the Western Regional Accrediting Committee of the American Nurses' Association.

The presenter of the continuing education seminars was also the investigator of this study.

Assumptions

It was assumed that the registered nurses' knowledge about the aging process could be measured by Palmore's Facts on Aging Quiz: Parts One and Two and that the score on this measure reflects the level of knowledge of the individuals about the aging process.

It was also assumed that continuing education is the best method available for changing registered nurses' level of knowledge about the aging process.

CHAPTER TWO

LITERATURE REVIEW

Misconceptions Versus Ignorance

Webster (1988) defined knowledge as all that has been perceived or grasped by the mind. According to Spear and Issacson (1982), every action or thought is ultimately limited by an individual's total knowledge, that which is potentially available, and the immediate accessibility of a particular aspect of knowledge. As pointed out by Palmore (1988), a misconception involves a belief that one knows the correct answer when actually one does not. Ignorance involves a recognition that one does not know the correct answer. A misconception is a wrong idea, while ignorance is an absence of an idea. Spear and Issacson (1982) stated that false beliefs (misconceptions) mixed with "true knowledge" can account for some of the negative behavior expressed by individuals. Palmore (1988) suggested that it is usually more difficult to correct a misconception than to replace ignorance with knowledge. In a sense, correcting a misconception involves two steps: one must first become convinced that the information is wrong and then be convinced that the right answer is, indeed, correct. In ignorance, only the latter step is involved.

In many cases nurses, like a majority of society, have the wrong information (knowledge) about the aging process. Stereotypes, according to Levin (1988) can be exaggerations or caricatures of a truth that are applied to entire groups of people. Many of today's myths about aging historically contained an element of truth to them. For example, in the industrial revolution when the majority of work-related activities relied on heavy manual labor or physical force, a younger worker could be more productive than an older one. Although this is simply not true in today's work place the stereotype lives on. The continuation of erroneous beliefs is perpetuated by a lack of vocal challenge by society to these misconceptions. The elderly are one of the most heterogeneous groups of individuals, and yet they are lumped together and negatively evaluated, even on characteristics for which there is no evidence or poor evidence of decline (Levin, 1988).

It seems then that a concentrated educational effort would be one component of an effective strategy to combat ageism. It has been employed in the other "ism's" (i.e., racism and sexism) with some, albeit small and slow, measurable success. Butler (1989) stated that, although "the war against ageism is largely showing signs of success, our fears about aging are so deep that ageism will probably never totally disappear" (p. 146). An ongoing educational

intervention then is essential for successful achievement to be realized in this area.

Age Stereotypes

Although individuals hold both positive and negative views of the typical elderly person, some think this mixture of views contains more negative attributes than positive ones. Neussel (1982) reported that the English language has many more negative terms to describe the elderly than positive ones. He further suggested that the "dearth of agreeable vocabulary is symptomatic of [the] deep-rooted nature of individual and institutional ageism in our society" (p. 273). Others (Barrow & Smith, 1979; Levin & Levin, 1980) have supported the premise that negative stereotypes guide most Americans' views and actions toward the elderly. Still others (Green, 1981; Kogan, 1979; Lutsky, 1980) have concluded that widespread negative stereotypes of the elderly do not exist. In some studies, when a difference in attitudes toward the elderly and attitudes toward other age groups was evident, and the difference was in favor of younger age groups, ratings of the elderly still often fell on the positive side of neutral. But as Crockett and Hummert (1987) pointed out, individuals' views of the elderly are still more negative than their views of younger adults. Unfavorable beliefs

about the nature of old age exceed favorable ones. According to Lubkin (1985) nurses share the same negative values and attitudes about the elderly as the society at large.

The existence of these two extreme positions may be explained by the fact that conflicting evidence has arisen from gerontological studies. Fisher (1977) reported a decline in the general status of the elderly in America over the last 250 years. Palmore (1982) found clear evidence of general stereotyping of the elderly by Americans. From his review of existing research, Palmore found that: (a) relative to ratings of other age categories, ratings of old age tend to be more negative; (b) most individuals have mixed feelings about various aspects of old age and tend to rate old age positively on some dimensions and negatively on others; (c) there are more sterectypes associated with old age than with younger ages; (d) many negative stereotypes of the elderly are held by a majority of persons (old and young); and (e) knowledge about aging can be improved and misconceptions can be reduced by providing training in gerontology, but attitudes are more resistant to change. The first part of this last finding by Palmore was the major impetus of this research study.

Continuing Education as a Change Strategy

Fishbein and Ajzen (1975) identified two major strategies for changing beliefs, active participation and persuasive communication. In each strategy, subjects are exposed to information that may produce changes in beliefs. The success of the influence in Fishbein & Ajzen model (shown in Figure 2), depends upon the relationship between the beliefs and the dependent variable; that is, ultimately, overt or actual behavior. Each of these strategies is feasible in a continuing education setting.

There is an increasing demand by society for cost effective and efficient health care. To assist in meeting this requirement, mandatory continuing education for health care professionals has been instituted in many states, including Texas. Many believe that mandatory continuing education will retain high standards of accountability and responsibility from healthcare professionals. Although there is some argument in the health disciplines as to the vehicle of delivery for continuing education, most agree to its perpetual need. Continuing education can have a positive impact on the delivery of health care. Stein (cited in Walthall, 1984) reported that a positive measurable effect can be demonstrated within a specified area of competence, performance, or patient care as a result of continuing education that utilizes clearly circumscribed objectives. Continuing education has been traditionally

endorsed by the nursing profession as an appropriate method of obtaining the desired effect of optimal health care delivery. In a survey by the American Nurses' Association (n = 1,153) in 1986, gerontological nurses named continuing education/ongoing development as the most critical issue in their field of nursing. The identification of this educational need is an important step to remedy the current situation.

Kluge, Mansbach, and Johnson (1984) found that misconceptions about aging originated primarily from personal experiences and casual observation rather than from media (factual and fictional) and formal educational sources. Ross (1983) supported this view with her conclusion that many nurses derive their knowledge about aging from experiences with the institutionalized elderly. As a result, nurses tend to focus on disabilities rather than abilities. Penner, Ludenia, and Mead (1984) found that nursing staffs' attitudes were conditioned as a by-product of the individual patients they cared for. Hayter (1976) reported that nurses encounter and interact with elderly persons who are sick much more frequently than they do with the far greater number of elderly who are not sick. There seems to be a tendency for nurses, then, to generalize from their own experiences with the very sick elderly who are a small minority of the elderly population.

Taken together, these findings lead to the conclusion that providing specific educational material to individuals is one way of minimizing the negative impact of stereotypes about old age. Although some documented research has been conducted on the impact of various educational offerings on the attitudes of nursing students, very little is known about registered nurses' attitudes and their level of knowledge about aging. Because registered nurses represent the largest segment of professional care providers in the American health care system (Chandler, Rachal, & Kazelskis, 1986), it seems reasonable to include them in any approach to the dilemmas of health care administration for the elderly.

Gunter (1971) found a positive impact on the attitude of nurses after a short period of educational training. Campbell (1971) found that registered nurses who had the most extensive educational backgrounds were least willing to accept stereotyped statements. Gillis (1973) reviewed a number of variables and found that education was the only variable that positively affected stereotypic attitudes. Both nurse educators and geriatric nurse researchers have sought ways to change stereotypic or negative attitudes held by nurses and nursing students by increasing knowledge as a way of balancing the somewhat negative affective component found toward the elderly (Strumpf & Mezey, 1980). On-going

professional continuing education would be a viable and effective strategy to accomplish this end.

Aging's Implications For Health Caregivers

The overall, and most disturbing, finding by Palmore (1988) after reviewing 90 studies that used the Facts on Aging Quiz: Parts One and Two was that most individuals know little and have many misconceptions about aging. The average person (with high-school or less education) tends to score slightly more than half the items correct. When the findings are combined with Crenshaw, McLin, and Lewis' (1990) finding that formal education in gerontological nursing is deficient in most undergraduate programs across the country, the predicament facing the nursing profession is apparent. Many factors are requiring registered nurses to become the major provider of professional nursing care for the elderly. These factors include a greater percentage of hospital patients who are over the age of 65 and a national health (Medicare) policy directed toward early hospital discharge that results in the need for a greater amount of acute home health care and short-term stays in skilled nursing care facilities by the elderly. A crucial element in this developing health care scenario is the inadequate knowledge base of registered nurses about the elderly. A knowledge base that has a correct and accurate informational foundation is crucial if a successful

professional relationship is to develop between the elderly and registered nurses. It is essential then, that registered nurses become familiar with various aspects of the normal aging process.

In the Institute of Medicine's study (1983) on nursing and nursing education, the elderly were identified as the largest single population group that suffers from a lack of adequate nursing services. The elderly are frequent users of the health care system. Illnesses of the elderly require additional health services and cost more money than any other age group (Brower, 1985). Most nurses (with the exception of pediatric and obstetrical specialists) spend some, if not the majority, of their time with elderly clients. Although only 5% of the elderly live in nursing homes, approximately 20% of the elderly will use institutions that provide long-term care at some point in their lives (Institute of Medicine, 1983). Of the elderly living in communities, 40% to 80% have chronic disabilities that limit their independence (Caserta, 1983). Nurses are the primary providers of care for the elderly (Bagshaw & Adams, 1986; Ross, 1983). Brower (1977) estimated that community health nurses spend 85% to 95% of their time with elderly clients.

Nurses, then, have a major impact on the quality of care received by the elderly. Professional nurses are not

well equipped to take care of a majority of their clientele. Crenshaw, McLin, and Lewis (1990) found in a survey of registered nurses (n = 27) that the nurses were unfamiliar with "theories pertaining to aging, specific ways to establish a therapeutic environment, and research findings relating to geriatric nursing" (p. 7). Additionally, participants from the sample group of Crenshaw et al. (1990) were not able to differentiate between physical and psychosocial changes attributed to the normal aging process and those attributed to pathological manifestations. This may be due to the fact that a majority of undergraduate nursing education programs provide minimal theoretic or clinical preparation in geriatrics or long-term care (Kayser-Jones cited in Taft, 1986). This educational void should no longer be tolerated by the nursing profession. For projected needs and statistics indicate a change in an educational direction is necessary.

The following future trends were identified by the National Task Force on Gerontology and Geriatric Care (1987):

> 1. People are living longer, but not necessarily better.
> 2. Older age groupings are increasingly female. Higher older female prevalence rates for arthritis, osteoporosis, hip fracture, and general hypertensive disease have important implications for healthcare needs.
> 3. The need for help with activities of daily living (ADL) increases with age as does the frequency of unmet ADL needs.

> 4. The prevalence of chronic conditions with high associated disability is rising while death rates for most major causes of death continue to fall.
> 5. Rates of use of health services for older persons will rise sharply across the next four decades, particularly for long-term care.
> 6. Chronic mental illness is an escalating problem in the communities and in nursing homes.
> 7. In excess of 85% of Americans of all ages are either underinsured or uninsured against catastrophic and long-term care costs.
> 8. The number of people living in their own homes or communities who receive formal care for extended periods of time has increased over the last 15 years. (p. 301)

All of these trends have important implications for the nursing profession. It behooves those in the profession to take note of forthcoming changes and to prepare for them. Educational re-tooling concerning the elderly is a well-documented necessity in the nursing profession. The existing nursing leadership must take charge of and implement the necessary steps so that needed changes can occur. This must occur soon, for it seems that the impetus for this change is lagging not only in the nursing profession but in others as well. Perhaps the advent of an expected rapid increase in the elder population will provide the necessary stimulus.

Gerontological Education Among Nurses

A variey of programs, courses, and workshops to educate or change persons' knowledge and attitudes about the elderly are reported in the literature. Because there is not a

standard or widely accepted norm for a gerontological curriculum component in nursing education, health care agencies must assume responsibility for teaching this needed content to currently employed registered nurses. Hagan (1983) is one of few researchers who specifically used registered nurses as a sample group. Although her sample size was only nine, she attributed a change in the nurses' cognitive base about the elderly and aging, indicating that some misconceptions were altered due to a 15-hour educational in-service program attended by the sample group. Nodhturft, Banks, and Macmullen (1986) used a two-day multidisciplinary gerontological training program with 68 hospital personnel participants. Using a one-group pretest and posttest design, they demonstrated that increased knowledge and positive attitudes toward the elderly resulted from the training program. Nodhturft et al. determined that "increased knowledge about the aging process and pathology would assist hospital personnel to cope with the needs of the elderly and improve the quality of care given" (p. 28). Other researchers (Dail, 1983; Hannon, 1980; Harrison & Novak, 1988; Hart, Freel, & Cromwell., 1976; Ross, 1983; Williams, Lusk, & Kline, 1986) drew their samples from within the nursing discipline and assessed undergraduate nursing students after a university or college course on human growth and development, or personal contact

experiences with well elderly persons. All of these studies showed improvements in knowledge levels after gerontological training.

Nodhturft, et al. (1986) stated that, in the United States, little emphasis is placed on gerontological nursing in curricula of schools of nursing or in hospital in-service programs. An example of the consequences of the damage that can occur with the existing situation was reported by Lowenthal (cited in Nodhturft et al., 1986). Lowenthal found that 80% of incontinence in elderly patients had no pathological basis. The patients took the incontinence for granted and the nursing personnel accepted it as part of routine geriatric care. The effects of the misconceptions present in this one study are unfortunately, reflected many times over in similar health care situations today.

Presently there is no standardized gerontological component in either the basic nursing education curriculum or in the continuing education process for professional registered nurses. Robb and Malinzak (1981) reported that formal education preparation of nurses for gerontological nursing has been deficient in both quality and quantity. Rankin and Burggraf (1983) charged that schools of nursing do not prepare graduates to be viable initiators of creative nursing care to the growing number of elderly.

Rankin and Burggraf's (1983) concern was later

validated by the American Nurses' Association survey of American nursing schools in 1986. The Association surveyed 79% (n = 498) of the nursing schools in the United States. This survey revealed that 40% of the nursing faculty responsible for teaching gerontological content in nursing courses had no educational preparation for this teaching. This trend also carried over into the workplace. Clinical preceptors and supervisors in health care agencies were also chided for lack of preparation in gerontology. An important conclusion by this report was that "there is a current lack of sufficient professional nurses prepared in gerontology and the biopsychosocial characteristics of the elder population" (p. 16). Hogstel (1981) reports that nursing has had little impact on the care of the elderly in the twentieth century. Traditionally the main focus of nursing has mirrored society's youth oriented paradigm. These findings of the Association's survey clearly indicate that future educational directions for professional nursing must include a gerontological component. Research is needed that can explore and guide the nursing profession toward the attainment of this goal.

A possible strategy proposed by Rankin and Burggraf (1983) to increase nursing participation in gerontological care was to increase the number of educationally prepared nursing faculty in gerontology. The increase in faculty

would serve as positive role models for future generations of registered nurses and decrease the present negative stigma that gerontological nursing has. These gerontological mentors could assure future interest and direction of nursing professionals.

The lack of participation of registered nurses in gerontological nursing is fast becoming a problem that is projected to be critical in the next century. Nodhturft et al (1986), Rankin and Burggraf (1983), Tollett and Adamson (1982), all found registered nurses' interest in working with the elderly to be quite low. For the professional relationship between registered nurses and the elderly to be successful this prevailing condition must change. As Martinson (1984) points out, the registered nurse remains the leader of the nursing team as well as the role model and teacher of other levels of nursing personnel.

Although there is a paucity of research on the impact nursing care has on the elderly, what has been done suggests that professional nursing makes a difference in the funtioning of the elderly in society (Martinson, 1984). The nursing profession must explore approaches that can maintain and improve this positive impact on the health and wellness of this growing body of clients.

CHAPTER THREE

RESEARCH DESIGN

The research design for this study was quasi-experimental with a pretest-posttest comparison group design as defined by Borg and Gall (1989). This design is a variation of Stanley and Campbell's posttest only control group design where O_2 (see Figure 3) was treated as the comparison group's "post" observation. This design controls for threats to internal validity and the external validity of interaction of testing and treatment. For the potential threat to external validity by the interaction of selection and treatment the continuing education seminar was presented at all hospitals and the one baccalaureate school of nursing in Smith County. Advanced advertisement for the continuing education seminar was of the same format for all participating institutions. The other possible threat to external validity, reactive arrangements, was controlled by having co-sponsorship of the continuing education seminar by each hospital's continuing education department and adapting to each institution's routine of seminar presentation. Since seminar attendance is a familiar and expected activity by nurses, this type of threat to external validity is not a

factor in this study.

Subject Group					Number of Subjects
Experimental	R		X	O_1	34
Comparison	R	O_2	(X)		33

Figure 3 Research Design of Study
Key: R = Random assignment to group
O = Observation/Measurement of knowledge by Palmore's Facts on Aging Quiz: Parts One and Two
X = Continuing education seminar

The two variables of this study were the continuing education seminar (independent) and the level of knowledge of the aging process (dependent). Other demographical factors of the subjects were assessed in the analysis.

An informed consent statement, which was provided as a cover sheet on all research packets distributed to the subjects, provided a brief summary of the purpose, outcomes, benefits, and risks to subjects. The voluntary completion of the research instrument, Palmore's Facts on Aging Quiz: Parts One and Two and the demographic and preference survey, was assumed to be an expression of the subjects' consent to participate in this research study. Those subjects who chose not to participate in the research study were not treated any differently than those who participated. The presenter of the continuing education seminar was unaware of

the subjects who chose to participate in the study and those who did not participate.

Seminar Content

A nursing continuing education seminar was developed with comments and critical analysis from three faculty members of two universities. The content for this seminar focused on major areas of social gerontology that have been the basis for stereotypical information about the elderly. Also included in the seminar were issues pertinent to the nursing profession. About one-third of the time-frame of the seminar was devoted to the information contained in Palmore's Facts on Aging Quiz: Parts One and Two. One of the original purposes of this instrument was to stimulate group discussion about the elderly and the effects of the aging process. Plans for the developed seminar were submitted to the Texas Nurses' Association, which is accredited as an approver of continuing education for nursing by the Western Regional Accrediting Committee of the American Nurses' Association. This agency reviews submitted subject content for accuracy and appropriateness and also for educational methodology and administration (see evaluation checklist in Appendix for approval criteria). Approval for 3 contact hours of continuing education units for registered nurses was obtained on August 27, 1991.

The approved continuing education seminar utilized a variety of learning activities that encouraged group discussion and the exploration of misinformation. Audio-visual media included slide photographs of elderly people which portrayed the content of the seminar. A balanced portrayal of the elderly was strived for in this seminar. Actual case studies and interviews of elderly persons depicted specific concepts or areas of information that have been prone to misperceptions. Essential information was also delineated by slide presentation. This educational strategy allowed the concepts and information to be grasped easier than would the presention of concepts, research statistics, and demographical data in an audio lecture alone. Positive end comments and responses by audiences supported the choice of this type of format.

The continuing education seminar was scripted before the experimental period began and the same person presented the continuing education seminar to all audiences. Care was taken so that the seminar presentation and group activities were exactly the same for each audience. Length of discussion periods for the continuing education seminar was relatively the same for all presentations. The physical environment for all presentations of the seminar were also essentially the same. The registered nurses at each facility were accustomed to using the same facilities for

similar educational purposes in the past. Members of the institution's continuing education department were present during the presentation of the seminar. The lecture outline for the continuing education seminar, Myths and Realities of Aging: Implications for Nurses, follows:

1. Demographics
    A. Who are the elderly?
    B. Historical overview
2. Social Characteristics of the Elderly
    A. Adaptability
    B. Civic or Political Involvement
    C. Companionship
    D. Living Arrangements
    E. Religion
    F. Crime and the Elderly
    G. The Older Driver
3. Physical Health
    A. The Five Senses
    B. Reaction Time
    C. Respiratory Changes
    D. Integumental Changes
    E. Cardiovascular Changes
    F. Musculoskeletal Changes
    G. Sexual Relations
    H. Types of Illness
4. Mental Health
    A. Old Age Does Not Equal Senility
    B. Learning
    C. Self-Actualization
5. Socioeconomic Characteristics
    A. Retirement and the Older Worker
    B. Income
    C. Health Care Costs
6. Theories of Aging
    A. Biological Theories
        1. Wear and Tear
        2. Error
        3. Cellular Aging
        4. Autoimmune
        5. Cross-linkage
    B. Social Theories
        1. Disengagement
        2. Activity
        3. Continuity

        4. Modernization
7. Implications for Nurses
    A. Chronological Age versus Functional Age
    B. Functional Disabilities
    C. Health Care
        1. Availability
        2. Potential Barriers
    D. Hypothetical Situations

The behavioral objectives for the continuing education seminar were as follows:

1. Identify current demographics that relate to the elderly population in the United States.

2. Describe major characteristics of the elderly.

3. Differentiate facts from myths about the elderly.

4. State two biological theories.

5. Identify examples from nursing practice that suggest nurses are influenced by one of the theories of aging.

6. Compare and contrast the major functional impairments of the institutionalized elderly with those of the elderly residing in the community.

7. Describe barriers that prevent the elderly from using preventive and promotional health services.

8. Review and analyze presented information and apply it to hypothetical situations.

9. Summarize potential actions available to nurses in the hypothetical situations.

Instrument

Although there are many gerontological instruments available, the Facts on Aging Quiz: Parts One and Two was best suited for the purposes of this study. The aim for this study was to assess the results of a gerontological continuing education seminar on the knowledge base of registered nurses. This instrument, which was validated as a measure of knowledge of aging by Laner (1981), focuses on factual rather than attitudinal aspects of aging. Some researchers (Fishbein & Ajzen, 1975; Palmore, 1982) have indicated that an accurate and correct knowledge base can have an impact on the formation of the belief system which, in turn, will influence the formation of the attitudes and ultimately behavior. It is believed that adaptation of this conceptual framework to the knowledge level about the aging process in nurses will have a positive influence toward the ultimate outcome of nurses' behavior toward the elderly (Strumpf & Mezey, 1980; Ziv, 1989). The initial steps in this process, to determine the current level of knowledge in registered nurses about the aging process and then the delineation of a successful educational approach to obtain an increase in this knowledge base, was undertaken by this study. To this end, Palmore's Facts on Aging Quiz: Parts One and Two was chosen as the measurement instrument.

Although each quiz in Palmore's Facts on Aging Quiz:

Parts One and Two is short (25 test items), the quizzes are comprehensive and are confined to factual statements that have been documented by empirical research (Palmore, 1977, 1980, 1981a 1981b, 1988). The Facts on Aging Quiz: Parts One and Two is designed to cover basic physical, mental, and social facts and common misconceptions about aging, (Palmore, 1977) which was one of the main concerns for this study.

Possible uses of Palmore's (1988) tools are: (a) to stimulate group discussion and clarify misconceptions, (b) to measure and compare different groups' overall levels of information about aging, (c) to identify the most frequently encountered misconceptions about aging, and (d) to measure bias toward the aged. This research study was focused on the first three uses of the instrument as defined by Palmore.

Instruments published earlier, such as Golde and Kogan's (1959) content analysis of a projective stimulus instrument, Kogan's (1961) Old People Scale, McTavish's (1971) Semantic Differential Scale based on sociological theories, Rosencranz and McNevin's (1969) Aging Semantic Differential Tool, and Tuckman and Lorge's Attitude Towards Old People, 1953) focused on the measurement of attitudes. Each of these instruments had disadvantages, such as confusion of factual statements with attitudinal statements,

time-consuming length, and vague or doubtful documentation and validity of items. However, as Palmore (1982) pointed out, the following general conclusions can be derived from these studies:

> 1. Most persons of all ages, including young children, consistently distinguish between various age groups.
> 2. Images of older persons tend to be more negative than those of younger persons.
> 3. About one-fifth to one-third of persons endorse the core negative stereotypes of the aged.
> 4. Older people hold fewer negative stereotypes about aging than younger persons.
> 5. There are no consistent differences between the sexes in attitudes toward the aged.
> 6. Better-educated groups have fewer negative stereotypes than less-educated groups.
> 7. There is no consistent relationship between contact with aged persons and attitudes toward them. (p. 338)

The Facts on Aging Quiz: Parts One and Two was developed by Palmore (1988) to "measure the effects of lectures, courses and other training experiences" (p. x). It is not a tool for direct measurement of attitudes toward the elderly. According to Palmore, the Facts on Aging Quiz: Parts One and Two are the only published tests of knowledge that are both short and documented. Palmore refined and revised his original instruments utilizing the suggestions of Miller and Dodder (1980) and Courtenay and Weidemann (1985). These refinements resulted in a better instrument (i.e., the number of positive and negative bias statements are equal in number, there is less ambiguity in the wording

of test items, and double-barreled statements are eliminated). Palmore's Facts on Aging Quiz is readily understood, easily administered and scored, and provides the basis for an intelligent exchange of information and feelings regarding the aged (Holtzman & Beck, 1979). The inclusion of a don't know response, which eliminates guessing, permits a distinction between misconception and ignorance of test items. Ignorance is revealed in the number of don't know responses. Thus, there are three different scores possible on Palmore's (1988) instrument: the percentage correct (which measures the overall amount of knowledge), the percentage wrong (which measures the amount of misconceptions), and the percentage of don't know responses (which measures the amount of ignorance that needs to be corrected).

Further analysis (comparison of Palmore's Facts on Aging Quiz: Part One data results with results of Aging Semantic Differential tool on the same subjects, n = 479, by Holtzman and Beck [1979]) showed that Palmore's Facts on Aging Quiz actually measured knowledge rather than bias. Laner (1981) also concluded that the Facts on Aging Quiz measured a change in knowledge.

Palmore (1988) reported that group score reliability is high (as shown by the consistency with which comparable educational groups have similar mean scores and by similar

scores on test and retest in control groups). In 1980, Palmore documented 25 different studies using the Facts on Aging Quiz: Part One that involved a total of 3,351 individuals and supported a high reliability statistic. Romeis and Sussman (1982) concurred with Palmore that the validity of the Facts on Aging Quiz was demonstrated by the fact that those with increasing levels of education in gerontology tended to receive progressively better scores.

Palmore (1981b, 1988) stated that the Facts on Aging Quiz: Part Two can more accurately measure the effects of courses and workshops by avoiding the practice effects of using the first form twice. Although it is a parallel test, Palmore states that together, the two parts, provide a more comprehensive coverage of the basic facts on aging. According to Palmore, the average correlation of the first form with the second is .50 (with groups equally weighted). Groups in which subjects knew more about aging, such as graduate students and staff at the Center on Aging and Human Development, have higher correlations (.70 to .80). Palmore stated that data are not available for a correlation of scores on both parts of the Facts on Aging Quiz when taken at the same time after a don't know response was added to the quiz. Palmore stressed that using a don't know response reduces guessing and will increase the correlation score (presently .50 to .80) between Parts One and Two of the

Facts on Aging Quiz. For this study the Facts on Aging Quiz: Parts One and Two were combined and included a don't know response. The combined quiz was administered at the same time to each sample group. The questions from both quizzes were randomly combined so as to prevent the correct answering pattern (false then true on Part One and 2 true then 2 false on Part Two that was developed for ease of scoring by Palmore) from becoming apparent to the subjects.

Palmore reported that the primary purpose of his instrument was derived from Carver's (1974) term, edumetric (i.e., designed to yield measurements that are directly interpretable in terms of specified performance standards rather than psychometric, and not designed to place a person relative to a normative group on a relatively stable trait such as intelligence). The specified performance standard for Palmore's instrument is the ability to distinguish correctly the truth or falsity of statements about aging (Palmore, 1988). Carver defined an edumetric test as one that reflects the within-individual growth that traditionally has been of primary interest to educational testing. Its primary purpose is to measure the gain or growth of individuals, not to produce normative rankings.

Klemmack concluded that Palmore's Facts on Aging Quiz Part One was not a valid measure of knowledge about aging. He argued that the individual item correlation coefficients

to the total measure were not high enough. Palmore (1978) responded that Klemmack's factor loadings were not independent of the knowledge of aging validity issue, and therefore his criticism was not cogent. Romeis and Sussman (1982) concurred that if a general measure of selected knowledge about aging is needed for research or to sensitize individuals to the problems of aging, the Facts on Aging Quiz has many desirable features.

Age as a Variable

There is conflicting evidence about age as a variable. Gillis (1973) reported that nurses with less than 2 years of experience in nursing or more than 9 years of experience in nursing had more favorable attitudes than those with between 2 and 9 years of nursing experience. Futrell and Jones (1977) found that nurses who had worked longer and were older held more positive attitudes toward the elderly. Although Brower (1985) found that the age of nurses was not a significant determinant of their attitudes toward the elderly, but that the work setting of the nurses was more significant. Brower reported that older nurses working in nursing homes had the most positive attitudes toward the elderly. It would seem reasonable that the older the nurse the more experience and learning the nurse would have accumulated, and therefore the greater the knowledge base.

Educational Level as a Variable

Again there have been conflicting research findings regarding the relationship between the educational level and the gerontological knowledge level in registered nurses. Earlier research (Campbell, 1971; Gunter, 1971) found an inverse relationship between educational level and the prevalence of age stereotypes. However Wolk (1986 cited in Palmore, 1988) found that advanced educational levels of registered nurses did not increase gerontological knowledge.

Summary of Procedures

The procedures followed in this study were as follow:

1. A 3 contact-hour continuing education seminar was developed and submitted for approval to the Texas Nurses' Association (TNA), Continuing Nursing Education Review and Approval Program. The continuing education seminar was submitted on July 14, 1991 and approval was obtained on August 27, 1991 (see approval letter in Appendix).

2. The continuing education seminar was scheduled for presentation at local health care agencies. These agencies were composed of a small (100 bed) community hospital, 3 medium-sized (300 bed) hospitals and a local school of nursing. The seminar was offered without cost to the health care agencies or seminar participants. Common advertisement posters and flyers for the seminar were provided for the health care agencies. The agencies then provided sign up

sheets for employees and other interested seminar participants.

3. Subjects volunteered to attend a continuing education seminar titled "Myths and Realities of Aging: Implications for Nurses" presented at various health care agencies in Tyler, Texas during an 8-week period in the fall 1991.

4. Subjects were then randomly assigned to either an experimental group or a comparison group through previously numbered and randomized packets containing two sections. For the comparison group, the first section of the packet was Palmore's Facts on Aging Quiz: Parts One and Two and the second section was a demographical information and preference survey. The experimental group received a packet that had the demographic information and preference survey as the first section and Palmore's Facts on Aging Quiz: Parts One and Two as the last section (see research packet in Appendix)

5. Time was allowed for completion of the first section of the research packet. For the comparison group, this involved the completion of Palmore's Facts on Aging Quiz: Parts One and Two. For the experimental group this involved the completion of a demographical information and preference survey. Each of the sections of the research packet took approximately the same length of time to complete.

6. The experimental treatment, a continuing education seminar based upon the Facts on Aging Quiz information and gerontological knowledge, was presented to both groups. The continuing education seminar consisted of a lecture and discussion type format that provided clarification and correction of any misinformation and misconceptions that were present in the sample group. During the experimental treatment, ample time was provided for question-and-answer sessions and generalized discussion for the sample group.

7. After the treatment phase, the comparison group completed the demographical information and preference survey while the experimental group completed Palmore's Facts on Aging Quiz: Parts One and Two.

8. The completed research packets were collected from the sample group.

It was stressed that the subjects' responses would remain confidential and that all information would be pooled. Names were not requested on the research instruments. Permission was obtained for use of the copyrighted instrument (see permission letter in Appendix).

Sample

The sample included 75 registered nurses who attended a gerontological continuing education seminar. All nurses in the sample groups were currently licensed in the State of Texas and were employed in the city of Tyler. There are 1,214 registered nurses licensed by the State of Texas in Smith (Tyler) County (Board of Nurse Examiners for the State of Texas, 1989). According to this same source, there are 93,427 registered nurses licensed by the State of Texas for the entire state.

CHAPTER FOUR

ANALYSIS AND INTERPRETATION OF DATA

Sample

Of the 75 registered nurses sampled, 8 returned instruments that were not utilized due to failure to complete the quiz items or demographical data, previous completion of the Facts on Aging Quiz, or refusal to participate in the study. The study sample ($\underline{N}$ = 67) represented 5.5% of the registered nurse population in Smith county and included .07% of all registered nurses in Texas. The ages of the subjects in the sample ranged from 27 years to 65 years of age. The distribution of subjects by age within the two sample groups, as shown in Table 1, was fairly even among three major age groups -- 27 to 39 years (32.8% of the total sample), 40 to 49 years (41.8% of the total sample), and 50 to 65 years (25.4% of the total sample). A frequency distribution of the data demonstrated that the mean age of the subjects was 43.7 years, with a standard deviation of 8.6 years. The median age of the subjects was 42 years,and the mode for the subjects' age was 35, 41 and 45 years. Each of the modal age frequencies contained 5 subjects.

Table 1

Distribution of Subjects by Age Within the Sample Group

Age	Comparison group	Experimental group	Total
27-39	14	8	22 (32.8%)
40-49	14	14	28 (41.8%)
50-65	5	12	17 (25.4%)
Total	n=33 (49.3%)	n=34 (50.7%)	N=67

The sample group for this study was composed of 63 female and 4 male subjects. According to the Board of Nurse Examiners for the State of Texas (1989), male nurses account for 5% of the total population of registered nurses in the state. The distribution of the subjects by gender for the sample is shown in Table 2.

Table 2

Percentage of Sample Group According to Gender

Gender	Comparison group	Experimental group	Total
Male	0	4	4 (5.9%)
Female	33	30	63 (94.1%)
Total	33 (49.3%)	34 (50.7%)	

The experimental treatment, the continuing education seminar for registered nurses, was offered at four acute care hospitals and one school of nursing in Tyler, Texas. The distribution of subjects from each agency is portrayed in Table 3.

Table 3

Distribution of Sample Group According to Agencies

	Subjects	
	Number	Percent
Hospital 1	16	23.9%
Hospital 2	14	20.9%
Hospital 3	5	7.5%
Hospital 4	22	32.8%
School 1	10	14.9%
Total	N=67	

On the variable, years in position as a registered nurse, the sample group ranged from 1 year to 44 years. The number of years in practice as a registered nurse as reported by each subject is shown in Table 4. The mean for the number of years in practice was reported by the subjects to be 16.4 years with a standard deviation of 9.9 years.

The median for the number of years in practice reported by the subjects was 15 years, and the mode was 14 years.

Table 4

Distribution Based on the Number of Years in Practice as a Registered Nurse

Years	Comparison Group	Experimental Group	Total
1-10	7	10	17 (25.4%)
11-20	17	16	33 (49.2%)
21-44	9	8	17 (24.4%)
Total	*n*=33 (49.3%)	*n*=34 (50.7%)	

The presence of previous gerontological training (as defined by attendance at previous workshops or continuing educational courses) was tallied for the sample groups. Most (79.1%) of the nurses reported no previous gerontological training before attendance at the study's continuing education seminar. This finding echoes the lack of accessible continuing education and gerontological training identified in a suvey conducted by the American Nurses' Association (1986) as one of the crucial issues facing the nursing profession. Data related to previous

gerontological training reported by the sample groups is reflected in Table 5.

Table 5

Previous Gerontological Training Present in Sample Groups

Training	Comparison Group	Experimental Group	Total
Yes	8	6	14 (20.9%)
No	25	28	53 (79.1%)
Total	n=33 (49.3%)	n=34 (50.7%)	N=67

Chi square analyses were used to determine whether differences between the comparison and experimental sample groups existed on any of the demographic variables. The analyses yielded no significant differences. Continuous variables were checked for deviations from normality, and no significant skewness or kurtosis was found on variable distribution. The sample groups supported the null hypotheses of equal varability.

In summary, 94.1% of the nurses in the sample were female, their mean age was 43.7 years and 49.2% of the nurses had been registered nurses for 11-20 years. Only 20.9% of the nurses in the sample had experienced previous gerontological training before attending the continuing

education seminar, Myths and Realities of Aging: Implications for Nurses.

Data Analysis and Hypotheses Testing

All data from the subjects were transferred to coding sheets. Specific conversion codes (codebook) are provided in the Appendix. Data were analyzed using the Statistical Package for the Social Science (SPSS). The hypotheses for this study were tested by the following statistical procedures:

The first hypothesis, a continuing education seminar for registered nurses will have a significant positive effect on their level of knowledge about the aging process, was suppported. Based on the work of Campbell and Stanley (1963), the t-test was the optimal test for the design of this research study. To determine the significance of the treatment effect, a t-test for independent samples was utilized. The mean and standard deviation of the Facts on Aging Quiz: Parts One and Two scores of each group are reported in Table 6. The experimental group had a significantly larger mean score (.7842) than did the comparison group (.5982). The effect of treatment, the continuing education seminar, was significant, t (df = 65)= -7.60, $p < .001$). The learning outcomes of the experimental

group were influenced positively by the continuing education seminar.

Table 6

Mean and Standard Deviation of Scores on Quiz

Group	Mean	Standard Deviation
Comparison	.5982	.111
Experimental	.7842	.089

Note. $t = -7.60$, $df = 65$, $p < .001$

The second hypothesis, the level of knowledge about the aging process by the sample group will be approximately equal to that which is reported in the literature for registered nurses was supported. Earlier research (Glasspoole & Aman, 1990; Hagan, 1983; Harrison & Novak, 1988; Palmore, 1988) found that mean scores for registered nurses on Palmore's Facts on Aging Quiz: Part One ranged between 60% and 72%. Although only 2 documented studies (Courtenay & Weidemann, 1985; Palmore, 1981b) have reported the scores from Part Two of the quiz, Palmore stated that the proportion of items that are known and responded to correctly is about the same in the two parts of the quiz. As reported in Table 6 the mean score for the comparison

group was 59.82%, which approximates the bottom range of scores reported for registered nurses in the literature. The level of knowledge in the comparison group, then, closely approximates the target population's mean for this measurement. The experimental group's mean score of 78.42% is closely related to the score of 83% reported by Palmore (1988) for students majoring in gerontology. Palmore also reported scores of 90% to 94% for gerontological university faculty and graduate students in gerontology.

The third hypothesis, there will be a significant positive relationship between the age of the registered nurses and their level of knowledge about the aging process as measured by the Facts on Aging Quiz: Parts One and Two, was not supported. A chi-square test was used to determine if the number of subjects in each of the three age groupings of each sample group was significant. There was no significant difference at the alpha .05 level ($r = 4.5$, $df = 2$). To further analyze the relationship between age and the quiz score a one-way analysis of variance was calculated, $F\ (2,64) = .8066$, $p = .45$. Age was not significantly related to the quiz score obtained on Palmore's Facts on Aging Quiz: Parts One and Two by the subjects. This ANOVA is depicted in Table 7.

Table 7

One-Way Analysis of Variance of Quiz Score and Subject's Age

Source	df	Sum of Squares	Mean Squares	F Ratio
Between groups	2	.0305	.0152	.8066
Within groups	64	1.2390	.1089	
Total	66	1.2695		

The fourth hypothesis, there will be a significant positive relationship between the nurses' number of years in practice and their level of knowledge about the elderly as measured by the Facts on Aging Quiz: Parts One and Two, was not supported. A chi-square test was used to determine if the number of subjects in each of the years in practice groupings was significant, (r = .603, df = 2). There was no significant difference at the alpha .05 level. Further analysis of this relationship using a one-way analysis of variance yielded an F ratio that was not significant, $F\ (2,64) = .5783$, $p = .5637$. This ANOVA is depicted in Table 8.

Table 8

One-Way Analysis of Variance Between Years in Practice and Score on Quiz

Source	df	Sum of Squares	Mean Squares	F ratio
Between groups	2	.0220	.0110	.5783
Within groups	64	1.2170	.0190	
Total	66	1.2390		

The fifth hypothesis, there will be a significant positive relationship between the educational preparation of registered nurses and their level of knowledge about the elderly as measured by the Facts on Aging Quiz: Parts One and Two, was not supported. A chi-square test was used to determine if the number of subjects in each of the four educational groupings was significant, (r = 3.62, df = 3). There was no significant difference at the alpha .05 level. A one-way analysis of variance was done between the scores obtained on the Facts on Aging Quiz and the educational preparation of the registered nurses ($F[3,63] = .5987$, $p = .6182$). There was no significant difference at the alpha .05 level. This finding agrees with research by Wolk (1986, cited in Palmore, 1988), who also found that advanced educational levels of registered nurses did not increase

their gerontological knowledge. Although Gillis (1973), Huckstadt (1983), and Tollett & Adamson (1982) reported education as a variable that positively affected level of knowledge about the aging process, the results of this study did not agree with their findings. Palmore (1988) also added that test sophistication and academic success increased with educational level attained; this was not supported by the results of this study. The mean and standard deviation of the scores of each educational level of the experimental group are reported in Table 9. Table 10 depicts the one-way analysis of variance of this variable.

Table 9

Mean Scores and Standard Deviation by Educational Level of the Sample Groups

	Comparison Group			Experimental Group		
Educational level	n	M	SD	n	M	SD
Associate degree	7	.6086	.0944	13	.7846	.1093
Diploma	4	.5500	.0258	6	.7633	.0804
Bachelor degree	15	.5720	.1328	11	.8055	.0682
Master + PhD	7	.6714	.0773	4	.7600	.0966
Total	33	.5982	.1113	34	.7847	.0888

Table 10

One Way Analysis of Variance of the Educational Level and the Score on Quiz

Source	df	Sum of Squares	Mean Squares	F
Between groups	3	.0343	.0114	.5987
Within groups	63	1.2046	.0191	
Total	66	1.2389		

The last hypothesis, there will be a significant positive relationship between the nurses' amount of previous gerontological training and their level of knowledge as measured by the Facts on Aging Quiz: Parts One and Two, was not supported. An analysis of variance was calculated between the scores of the Facts on Aging Quiz and the amount of previous gerontological training of the registered nurses. The insignificant finding reported may be explained by small sample size (n = 14) or by the prevalence of incorrect knowledge in the nursing profession regarding the aging process. Or that previous training sessions of the nurses did not address basic gerontological information about the aging process. A more precise measurement of previous gerontological training is needed before conclusions can be stated about this variable. The findings regarding this variable are reported in Table 11.

Table 11

Presence of Previous Training in the Sample Group

Previous Training	Comparison Group n	M	SD	Experimental Group n	M	SD	Total
None	25	.6008	.1191	28	.7893	.0900	n=53
Yes	8	.5900	.0888	6	.7633	.0871	n=14

In order to further analyze the relationship between the variables, a stepwise multiple regression was performed. The score on Palmore's Facts on Aging Quiz: Parts One and Two was the dependent variable and the subjects' group membership, age, previous gerontological training, and educational level were the independent variables. The correlation coefficients and the results of the regression analysis are reported in Table 12. In the regression equation, the only significant predictor of the dependent variable by the independent variables was group membership (being in the comparison group versus the experimental group). For group membership, R for regression was significantly different from zero, $F(1,65) = 57.69971$, $p < .0001$. $R^2 = .47025$ (adjusted $R^2 = .46210$). Addition of the other independent variables to the regression equation did not reliably improve R^2. Group membership accounted for 47% of the variance of the subjects' score on Palmore's

Facts on Aging Quiz: Parts One and Two. Palmore (1988) found similar findings. He stated that "knowledge levels do not seem to vary significantly or consistently between the sexes, between age groups, between sections of the country, between blacks and whites, between occupational groups, or with regard to any other grouping that has been studied so far, once educational levels are controlled" (p. 40). The only variables that Palmore found that consistently related to knowledge levels were gerontological education and attitudes toward the aged. Greenslade (1986 cited in Palmore, 1988) reported a 22% increase in the scores of the Facts on Aging Quiz: Part One after a postgraduate geriatric nursing program (n = 10), while there was no significant change among a control group (n = 10). Hannon (1980) also found a significant increase in the score on the Facts on Aging Quiz: Part One in graduate nursing students after a semester course in aging.

The results of this analysis supports the premise that continuing education is a successful approach that can remedy the knowledge deficit that is present in the nursing profession today about the aging process. A beneficial aspect of this finding is that most employing agencies of nurses can easily integrate this approach into their existing organizational structure.

Table 12

Stepwise Regression Analysis for Group Membership

	Correlation Coefficient matrix						
	Group	Age	Yrs. in Practice	Prev. Train.	ADN	Diploma	Bachl.
Group	1.000	.1497	-.0279	-.0811	-.1860	.0775	-.1344
Age	.1497	1.000	.6027*	.2149	.1167	.2600	-.3055
Yrs. in Practice	-.0279	.6027*	1.000	.3023*	-.2825*	.1863	-.0711
Prev. Train.	-.0811	.2149	.3023*	1.000	-.0144	-.2153	.0427
ADN	-.1860	.1167	-.2825	-.0144	1.000	.2732*	-.5195*
Diploma	.0775	.2600*	.1863	-.2153	-.2732	1.000	-.3335*
Bachelor	-.1344	-.3055*	-.0711	.0427	-.5195*	-.3335	1.000

*p < .05

Variable	B	SE B	BETA	SE BETA	t	Sig t
Variables Not in Equation:						
Age					-.261	.7951
Yrs. in Practice					-.368	.7141
Prev. Train.					-.578	.5652
ADN					.192	.8483
Diploma					-1.100	.2754
Bachelor					-.411	.6821
Variables In Equation:						
Group	.1865	.0245	.6857	.0902	7.598	0000
Constant	.5981	.0174			34.197	0000

R = .6857, R^2 = .47025, R^2 adj = .4621, t = 7.596, ***p < .001

Another purpose of this study was to identify areas of misperceptions and lack of knowledge regarding the aging process in the sample groups. Interestingly the most frequently missed question on Palmore's Facts on Aging Quiz: Parts One and Two by both the comparison and experimental group was item 23. This item, "Social Security benefits automatically increase with inflation," is concerned with cost of living adjustments (COLAs). Some confusion may exist in this area since, in 1982, COLAs were delayed due to economic conditions of the time. Although that was a temporary historical condition that is no longer true, it may have become an ingrained part of the subjects' knowledge base and caused confusion in the subjects. Also, this quiz item is part of the Part Two component of Palmore's Quiz. Palmore (1988) stated that the second part of his quiz has not been as widely circulated and, thus the information is not as well known by society. As Palmore has stated, a misperception is more difficult to remedy than is simple ignorance (or absence of knowledge).

For the comparison group, the most frequently missed questions compromised 20% of all the questions on Palmore's Facts on Aging Quiz: Parts One and Two. Whereas the most frequently missed questions by the experimental group were 12% of the total questions on the quiz. The percentages of the questions frequently missed on Palmore's Facts on Aging

Quiz: Parts One and Two are identified in Tables 13 and 14 by sample groups.

Table 13

Most Frequently Missed Items of the Comparison Group

Item	Subjects Who Missed Item	
	Number (n=33)	Percent
23. Social Security benefits automatically increase with inflation.	27	81.81
14. The aged have a lower rate of poverty than the rest of the population.	26	78.78
29. The aged have higher rates of criminal victimization than younger persons.	26	78.78
35. The majority of old people say they are seldom bored.	25	75.75
40. Blacks' life expectancy at age 65 is about the same as whites.	24	72.72
9. Aged drivers have fewer accidents per driver than those under age 65.	23	69.69
10. The health and economic status of old people will be about the same or worse in the year 2000 (compared to younger people).	23	69.69
11. Older persons have more injuries in the home than younger persons.	23	69.69
34. The proportion widowed among the aged is decreasing.	23	69.69
36. At least one-tenth of the aged are living in long-stay institutions (nursing homes, mental hospitals, homes for the aged).	23	69.69

table continues

Table 13 continued

Most Frequently Missed Items of the Comparison Group

Item	Subjects Who Missed Item	
	Number (n=33)	Percent
18. The aged do not get their proportionate share of the nation's income	22	66.66
49. The majority of old people have incomes below the poverty level (as defined by the federal government.	22	66.66

Table 14

Most Frequently Missed Items of the Experimental Group

Item	Subjects Who Missed Item	
	Number (n = 34)	Percent
23. Social Security benefits automatically increase with inflation.	25	73.5
40. Blacks' life expectancy at age 65 is about the same as whites.	22	64.70
18. The aged do not get their proportionate share of the nation's income.	18	52.94
36. At least one-tenth of the aged are living in long-stay institutions (nursing homes, mental hospitals, homes for the aged).	18	52.94
10. The health and economic status of old people will be about the same or worse in the year 2000 (compared to younger people).	17	50.34

table continues

Table 14 continued

Most Frequently Missed Items of the Experimental Group

Item	Subjects Who Missed Item	
	Number (n = 34)	Percent
44. Supplemental Security Income guarantees a minimum income for needy aged.	16	47.05
14. The aged have a lower rate of poverty than the rest of the population.	14	41.18

Palmore (1988), after reviewing studies that reported the most frequent questions on the Facts on Aging Quiz: Parts One and Two, concluded that most of these missed items represent negative stereotypes about the aged. He reported the set of the most frequently missed items on Part One of the Facts on Aging Quiz included beliefs that at least one-tenth of the aged live in long-stay institutions (item 36), the majority of the elderly are usually unable to adapt to change (item 32), the majority of elderly are often bored (item 35), over 15% of the population is over the age of 65 (item 47), the majority have incomes below the poverty line (item 49), old people tend to become more religious as they age (item 3) and the the majority of the elderly are often irritated or angry (item 4).

The most frequently missed items on the second part of the Facts on Aging Quiz as reported by Palmore, included the

beliefs that older persons have more injuries in the home than younger persons (item 11), the life expectancy for whites at age 65 is greater than for blacks (item 40), Social Security benefits do not automatically increase with inflation (item 23), Supplemental Security Income does not guarantee a minimum income for needy aged (item 44), the aged do not get their proportionate share of the nation's income (item 18), the aged have higher rates of criminal victimization (item 29), there are about equal numbers of widow and widowers among the aged (item 34), the majority of elderly live alone (item 24), and the majority of parents have serious problems adjusting to their "empty nest" (item 16).

For the nurses in the sample group, the number of frequently missed items for Part One of the Facts on Aging Quiz agrees with only one of the items found by Palmore (item 36) whereas for Part Two the sample group agreed with 7 out of the 9 items reported by Palmore. The greater number of missed items associated with Part Two of the Facts on Aging Quiz can be attributed to less publicity of the second quiz and as a result less use of the quiz in educational, business or training settings. Or it may reflect a lack of interest by members of society to pursue more information about the conditions of its elderly members once it knew a minimal amount of information.

Another informative aspect of the data is in regard to the don't know response included in the revised forms of Palmore's Facts on Aging Quiz: Parts One and Two. As depicted in Table 15, the mean number of times nurses in the comparison group indicated don't know is significantly different from the mean number of times the experimental group indicated don't know as an answer. In other words, the experimental group answered don't know less often than did the comparison group (t = 2.16, df = 39, p = .037).

Palmore (1988) emphasized that ignorance is (a) decreased with knowledge and (b) easier to correct than misconceptions. The results of the data support the first half of Palmore's beliefs. A significant reduction was evident in the number of times the don't know response was indicated by nurses in the experimental group. The experimental group had a significantly higher score on the Facts on Aging Quiz: Parts One and Two than did the comparison group. This suggests that the continuing education seminar was successful in attaining higher scores for the experimental group by reducing the ignorance of the subjects regarding the normal aging process. The t-test for independent samples of this result are displayed in Table 15.

Table 15

Number of Times Don't Know Response Used by Groups

Group	n	Mean	Standard Dev.	df	t
Comparison	33	3.5152	5.142	39	2.16*
Experimental	34	1.4706	1.762		

*$p < .05$

Another area explored by this study was the relationship between the two parts of the Facts on Aging Quiz. Palmore (1988) stated that Part One and Part Two are alternate forms of a test of knowledge about the aging process. Palmore (1988) reported the equivalency of Part One to Part Two when these quizzes were administered together and included a don't know response was unknown. Data from previous research (Courteny & Weidemann, 1985; Palmore, 1981b) found the average correlation between Part One and Part Two (with groups being equally weighted) was .50 and with groups that were more knowledgable about the aging process, the correlation was .70 to .80. The correlation in this study was .77 for the nurses scores between Part One and Part Two.

An estimate of internal consistency reliability was calculated for the quiz scores the subjects obtained on each part of the Facts on Aging quiz. A general form of the

Kuder-Richardson formula 20 (Cronbach's Coefficient Alpha) was employed for this purpose. Borg and Gall (1989) stated that the formula 20 is the most satisfactory method of determining reliability in educational and psychological measurements. The computed Cronbach's Coefficient Alpha was .86 for the scores of the sample group. According to Nunnally (1972), it is expected that the reliability coefficient for commercially distributed tests be at least .80 and preferably .90 or higher. The findings of this study support Palmore's premise that Part One and Part Two are alternate forms of a test of knowledge about the aging process.

The final area analyzed was the nurses' preference for providing nursing care to selected age groups. One point that needs to be kept in mind is that the sample used was experimentally accessible and was not a random selection from all registered nurses. Also, the subjects volunteered to attend a continuing educational seminar on gerontology; therefore, registered nurses interested in obstetrical or pediatric patient caseloads would not normally be expected to volunteer to attend this type of continuing education. The subjects' preferences for providing nursing care to selected age groups showed the 65 years and older age group to be the least favorite adult age group of patients. The results of the preference by the subjects by groups, with

the lowest mean score indicating the greatest preference, are depicted in Table 16. From this data it is apparent that each of the sample groups of registered nurses most preferred working with adults in the 31 to 60 years age group, and least preferred working with adults over the age of 61 years. Some of the factors that can explain these differences are the following: (a) the elderly have more chronic illnesses which are less amenable to a cure, (b) the age of the preferred patients was within the same age range of the majority of the subjects' age range, and (c) previous research (Levin, 1988) on age discrimination has shown that individuals prefer the 31 to 60 year old age range more than any other.

This reluctance on the part of registered nurses to rank elderly individuals as preferred clients has been found by Futrell and Jones (1977), Geiger (1978), and Lubkin (1985). This reluctance has also been consistently demonstrated to be present in nursing students (Gunter, 1971; Hart, Freel, & Cromwell, 1976; Heller & Walsh, 1976). Further research is needed in this area before any relationships can be confidently expressed about patient preferences by registered nurses.

Table 16

Ranking of the Means of the Preferences by Subjects for the Age of Patients

Age of Patients	Group: Comparison (n = 33)		Experimental (n = 34)	
	Mean	Stan Dev.	Mean	Stan Dev.
Infant under 1 year of age	4.53	1.83	4.66	2.10
Children 1 to 12 years of age	4.80	1.07	4.60	1.00
Adolescents 13 to 18 years of age	4.20	1.21	4.10	1.09
Adults age 18 to 30 years of age	2.69	1.28	2.51	1.29
Adults age 31 to 60 years of age	1.96	1.18	1.90	1.02
Adults over 61 years of age	2.88	1.30	2.93	1.50

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

The major finding of this study was that a 3-hour continuing education seminar had a significant positive effect on registered nurses' level of knowledge about the aging process. The results clearly demonstrate that registered nurses who attended a continuing education seminar had significantly higher scores on Palmore's Fact on Aging Quiz: Parts One and Two than did registered nurses who had not attended such a seminar. The results of this study suggest that continuing education is an effective and productive strategy for expanding the knowledge base of registered nurses about the aging process.

There is an increasing need for specialized continuing education programs to assist in improving gerontological nursing knowledge (Brower, 1985). As Penner, Ludenia, and Mead (1983) concluded, "educational programs which address misconceptions about the elderly may increase the number of new nurses who are willing to work with elderly patients" (p. 117). Although the continuing education seminar of this study provided information and knowledge in the direction proposed by Brower, it is not clear if it supported the path suggested by Penner et al.

The Palmore's Facts on Aging Quiz: Parts One and Two proved to be a satisfactory measuring instrument for this study. The coefficient alpha yielded an internal consistency coefficient of $\underline{r}$ = .86.

A number of other variables thought to affect nurses' level of knowledge regarding the aging process were also investigated in this study. The lack of significant findings regarding the variables of subjects' age, gender, educational level and previous gerontological training appear more reflective of the complexity in the development of a perons' knowledge base and the ensuing learning process than of the role these variables were shown to play in this study. Or, it may be indicative of how wide-spread and accepted misconceptions and stereotypes are in our culture regarding the aging process. From the findings of this study, it is not clear what role these variables play in determing the knowledge base of registered nurses concerning the aging process.

Based on the findings of this study, it seems justified to conclude that there is a lack of preference in geriatric practice. Nurses ranked the clients 65 years of age and older as the least preferred of the adult client population. This finding agrees with those of Tollett and Adamson (1982). In view of the increasing number of elderly in the U.S. population, these data identify a significant problem

in the provision of health care services to an expanding segment of the population. A solution for this dilemma may not be forthcoming soon from the schools of nursing. The American Nursing Association's survey (1986) of nursing schools raised significant questions about the preparation of both faculty and students in gerontology. This survey emphasized academia's responsibility in preparing nurses to work effectively and extensively in the role of major provider of health services for the elderly. Heller and Walsh (1976) warned that "while nurse are committed to provide the best possible nursing care to all who are in need of nursing service, professional ethics are in conflict with the emerging social pattern of rejection, isolation, intolerance, and neglect of the aged" (p. 11). It would be prudent for the nursing profession to finally act upon this warning.

It is evident that questions are raised by this study regarding registered nurses' level of preparation concerning a significant portion of their clientele. This study demonstrated a feasible and effective approach for raising nurses' educational knowledge concerning the aging process. Ziv (1989) and Strumpf & Mezey (1980) emphasized that accurate and balanced information must first be presented about the aging process before long-term effects can be realized in gerontological nursing. Tollett et al, (1986)

expanded this implication by stating that "the benefit to the vast number of aged patients who seek health care would be increased greatly if education endeavored to promote positive attitudes and regard for older people" (p. 580). It is hoped that if this course of action would be followed by the nursing profession, the findings by Tyzenhouse (1974), that nurses in nursing homes were uncomfortable about planning care for the elderly due to a lack of knowledge about aging and nursing care, would not be repeated. The results of the present study contribute toward this effort.

Education of others regarding the aging process is an important educational endeavor since those who will benefit most from it in the future are the middle-aged population of today. Presently this population (those born between 1946 and 1964) comprises one-third of the population of the United States. It would be wise and insightful for this segment of society to plan now for the future. As Knox stated, "the middle generation of adults between their thirties and sixties tends to carry the burden of concern for programs, pennies, and progress" (p. 54). The registered nurses in this sample realized this and unanimously reported of the need for continued educational activity in the area of gerontology on the end-evaluation form of the continuing education seminar. Gerontological

education and training can help open not only the nurse's mind to a more realistic positive view of later life, but also every person that nurse will meet in future interactions.

For most (79.1%) of the sample, the continuing education seminar was the first gerontological training or workshop they had attended. It is hoped that nurses continue to demand gerontological educational training from their employers, educators and the nursing profession in the future. This type of seminar not only benefits nurses; it benefits a majority of their future clients as well. Reducing the impact of negative stereotypes concerning age can increase the strength of the elderly in their relationships with the professionals with which they will have integral, and hopefully reciprocating, relationships with in the future. For, as Levin and Levin (1980) pointed out, the elderly "draw their entire population from the young who have been socialized as majority group members to accept negative stereotypes about old age" (p. 127).

The findings of this study can not be assumed to apply to all registered nurses. Although nurses were randomly assigned to the treatment and comparison groups, some bias may have been introduced by using subjects who volunteered to attend the gerontological continuing education seminar. It is hoped that further use of the continuing education

seminar in this study will help standardize a component of nursing's gerontological curriculum and give impetus to a future series of seminars directed toward registered nurses concerning the aging process and nursing care of elderly clients.

It is evident from the findings of this study that the knowledge level of registered nurses concerning the aging process is slightly above that of members of the general public with a high school degree (54% to 58% as reported by Palmore [1988] versus 59.82% for the present study). This finding is disturbing because the nursing professionals are in a position to increase their involvement with the elderly. Nursing's involvement should include an advocacy role for this group of clients. An accurate and comprehensive knowledge base is essential if this advocacy role is to be mutually beneficial to the elderly and the nurses.

Although many nursing leadership groups have responded to the need for consciousness-raising activities regarding gerontological training for nurses in the last few years, actual education and training has been slow in coming. Gerontological nurses have recognized and want gerontological education. Their demands have not been met as of yet. Further research is needed in order to ascertain which educational vehicles provide the most acceptable and

effective, and still humanistic, financial return.

If this study would be replicated several changes should be considered. Consideration of the research design would include expansion to the Solomon four design described by Campbell and Stanley (1963). This design would control for all threats to internal and external validity and allow for stronger inferences to be drawn. Secondly a longidutinal study should be employed which would determine if the positive effect on the quiz scores were the result of short-term memory versus true incorporation of the seminar information into the nurses' cognitive base.

And lastly, a larger sample size would support generalization of the findings to the total population of registered nurses.

APPENDIX

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PLEASE REFER TO THIS NUMBER IN FUTURE CORRESPONDENCE :

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Dear Ms. Burris:

Thank you for your request of 25 February 1991 to reprint from our publication:

THE FACTS ON AGING QUIZ by E.B. Palmore; 1988

the following material :

The FActs on AGing Quiz, Parts one and two, pp. 3-5, 11-13

Your reprint is requested for inclusion in: (Title, Author, Publisher, Date)

Dissertation research, Roberta Burris, The University of North Texas, 1991

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A CONTINUING NURSING EDUCATION REVIEW & APPROVAL PROGRAM

Sponsored by the Texas Nurses Association

TO: Roberta Burris

FR: CNE Committee

DT: August 27, 1991

RE: Offering: Approval of Educational Offering

We are pleased to inform you that the educational offering "Myths and Realities of Aging: Implications for Nursing" CNE # 0-A0-3501-8-91, which you have submitted for review, has been approved by the CNE Committee for 3.0 contact hours.

This approval expires the end of 09/23/92.

You will note that the CNE ID number, the contact hours awarded, the title of the offering, and an expiration date have been noted on this form. CNE approval is granted for one calendar year plus 30 days from the date the offering is reviewed by the CNE Committee. Please be aware that participants in this educational activity must attend the offering in its entirety in order to receive credit.

As of January 1, 1983 CNE procedures require that providers of CNE approved offerings provide verification of attendance to all participants. Please be sure to include the above mentioned vital information in your certificate of attendance.

We are also enclosing an "Application for Offering Approval" for you to complete when requesting approval for your next offering.

We look forward to your continued participation in the CNE program.

CFL003C-87

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Texas Nurses Association is Accredited as an Approver of Continuing Education for Nursing
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East Texas Medical Center
Name of Organization

Texas Nurses Association
CNE Assessment/Evaluation for
OFFERING APPROVAL

Offering Title: Myths and Realities of Aging: Implications for Nursing

Approval: YES ✓ [illegible] NO ______ DEFERRED ______

Comments: An excellent application! Revision of evaluation form is needed to address each objective + faculty member. Good Luck!

Contact Hours Awarded: 3 Date Received: 17 Jul 91

CNE ID#______ Date Reviewed: 19 Aug 91

Approval Expiration Date:______ Reviewer: [illegible]

2.0 points will be deducted for each missing item. a minimum of 84% must be achieved for an offering to be approved.

Criterion I - Planning	YES	NO
1. Is the offering coordinator identified?	1. (✓)	( )
2. Is the summary vitae sheet included for the offering coordinator?	2. (✓)	( )
3. Are the members of the planning committee identified?	3. (✓)	( )
4. Is there evidence that two or more RN's are on the planning committee; one of whom holds a BSN or higher degree in nursing?	4. (✓)	( )
5. Are summary vitae sheets included for each member of the planning committee?	5. (✓)	( )
6. Is there evidence that potential participants, content experts and educators were involved in the planning process?	6. (✓)	( )

Criterion II - Target Audience	YES	NO
1. Is the target population's defined?	1. (✓)	( )
2. Are the target population's characteristics identified?	2. (✓)	( )
3. Is there evidence that the learning needs of RN's for this offering were determined as a result of a needs assessment?	3. (✓)	( )
4. Is there evidence that the offering accommodates educational needs for RN's in relation to:	4.	
a) Content	a) (✓)	( )
b) Location	b) (✓)	( )
c) Scheduling	c) (✓)	( )
d) Method of presentation	d) (✓)	( )

Criterion III - <u>Offering Overview</u>	YES	NO
1. Is the offering overview present in the required format?	1. (✓)	( )
2. Is there an overall description of the offering?	2. (✓)	( )
3. Are the objectives stated in measurable behavioral terms?	3. (✓)	( )
4. Are the objectives consistent with:	4.	
a) The time allotted for the offering?	a) (✓)	( )
b) The characteristics of the target population?	b) (✓)	( )
5. Is there evidence that content is:	5.	
a) Consistent with each objective?	a) (✓)	( )
b) Will contribute to the achievement of each objective?	b) (✓)	( )
6. Is there evidence that the teaching/learning strategies are:	6.	
a) Consistent with each objective?	a) (✓)	( )
b) Will contribute to the achievement of each objective?	b) (✓)	( )
7. Is an adequate amount of time allotted for each content area, learning activity and evaluation?	7. (✓)	( )
8. Is content appropriate for the level of the target population?	8. (✓)	( )

Criterion IV - <u>Faculty</u>	YES	NO
1. Are faculty members identified by name?	1. (✓)	( )
2. Is there a summary vitae sheet present for each faculty member?	2. (✓)	( )
3. Is there evidence that the faculty took an active part in planning and evaluating their presentation?	3. (✓)	( )
4. Is there evidence that all faculty engaged to teach are qualified by experience and/or education to assume responsibility for the assigned content?	4. (✓)	( )

Criterion V - <u>Teaching Method</u>	YES	NO
1. Are teaching/learning strategies identified?	1. (✓)	( )
2. Is there evidence that principles of adult learning are used in the teaching/learning strategies?	2. (✓)	( )

Criterion VI - <u>Physical Facilities</u>	YES	NO
1. Is there a description of how the chosen physical facility accommodates the following:	1.	
a) Teaching/learning strategies	a) (✓)	( )
b) Environmental comfort	b) (✓)	( )
c) Accessibility to target pop.	c) (✓)	( )

Criterion VII - Evaluation	YES	NO
1. Is there a list of method(s) utilized to evaluate this offering?	1. (✓)	( )
2. Is the overall evaluation tool present?	2. (✓)	( )
3. Does the evaluation tool address:	3.	
a) Learner's achievement of each objective?	a) ( )	(✓)
b) Teaching effectiveness of each faculty member?	b) ( )	(✓)
c) Relevance of the content?	c) (✓)	( )
d) Effectiveness of teaching methods?	d) (✓)	( )
e) Appropriateness of the physical facilities?	e) (✓)	( )
f) Achievement of personal objectives?	f) (✓)	( )
g) Identification of future topics	g) (✓)	( )

Criterion VIII - Coprovidership	YES		NO
1. Is this offering cosponsored?	1. ( )	N/A	( )
2. Is there a written coprovidership agreement that includes:	2.		
a) Administration of budget	a) ( )		( )
b) Determination of content and objectives	b) ( )		( )
c) Selection of faculty	c) ( )		( )
d) Awarding of contact hours	d) ( )		( )
e) Record keeping for offering	e) ( )		( )
f) Evaluation	f) ( )		( )

Criterion IX - Record Keeping	YES		NO
1. Is there a signature which indicates commitment to maintainance of required record keeping?	1. (✓)		( )
2. Is there a certificate of attendance for contact hours that includes:	2.		
a) Name of approved provider?	a) (✓)	include hosp name	(✓)
b) Name of participant?	b) (✓)		( )
c) Title of offering?	c) (✓)		( )
d) Day/month/year of offering?	d) (✓)		( )
e) City/state offering held?	e) (✓)		( )
f) Number of contact hours?	f) (✓)		( )

Criterion X - Publicity	YES	NO
1. Are promotional materials publicizing this offering included?	1. (✓)	( )

TOTAL SCORE: 94%

THIS PACKET CONTAINS RESEARCH MATERIAL.

PLEASE WAIT FOR INSTRUCTIONS BEFORE

OPENING THIS PACKET. THANK YOU.

INFORMED CONSENT STATEMENT

Before agreeing to participate in this study, it is important that the following explanation of the proposed procedures be read and understood. It describes the purpose, procedures, benefits, risks and precautions of the study.

Participation in this study involves completion of two short "quizzes" and involvement in a continuing education seminar on the process of aging. Duration of the participation will be approximately two hours. A better understanding of the aging process and improved nursing care as a result of an increase in knowledge about geriatric clients are possible outcomes of this study.

There are no foreseeable risks or discomforts to the subjects associated with participation in this research project. Participants in this study are free at any time to withdraw their consent and discontinue participation without any penalty.

Completion of the enclosed quizzes will constitute your informed consent. Do not write your name on the quizzes. Collected data will be pooled for analysis. Anonymity of your responses is guaranteed.

Any questions that you have concerning any aspect of this study will be answered by Roberta M. Burris at (903) 566-7320.

THIS PROJECT HAS BEEN REVIEWED BY UNIVERSITY OF NORTH TEXAS COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (817) 565-3940.

PART ONE

DATA SHEET

______________ Your age in years. ______Male ______Female
(Check one)

I am a: (check all that apply to you)
______ Registered Nurse
______ Licensed Vocational Nurse
______ Nurse Aide or Tech
______ Other (specify title ______________________________)

How long have you held the above title (in years)
______________________.

If you are employed as a nurse, your usual work setting is:
____

My educational background is: (check all that apply to you)
______ LVN Dipolma
______ Associate Degree in Nursing
______ Dipolma in Nursing
______ Bachelor Degree in Nursing
______ Bachelor Degree in another field of discipline
(specify ____________________)
______ Master Degree in Nursing
______ Master Degree in another field of discipline
(specify ________________________)
______ Ph. D. in Nursing
______ Ph. D. in another field of discipline (specify
______________________________)

Yes No Have you ever taken a course in human growth and development?

Yes No Have you ever taken a course in lifespan psychology?
If Yes, when (approximate date)____________________

Yes No Have you ever taken a course in aging or attended an aging workshop?
If Yes, Approximate date and name of course
____

Yes No Have you ever taken Palmore's Facts on Aging Quiz?
If Yes, when?____________________

Yes No Do you have personal contact and interaction with an elderly person?
If Yes - How many hours a week _______________
Do you enjoy this contact and interaction? ______________

Would you please write a short reply to the following situation.

Mrs. J., an 80 year old widow, has been assigned to your client caseload. She has a history of diabetes and arthritis. As her primary nurse in developing her nursing care plan, what would be the area(s) of concern to you?

Would you rank the following potential clients in your order of preference for providing nursing care for? (1 for most favored to 6 for least favored)

______________________ Infant under 1 year of age

______________________ Children 1 to 12 years of age

______________________ Adolescents 13 to 19 years of age

______________________ Adults age 20 to 30 years of age

______________________ Adults age 31 to 60 years of age

______________________ Adults age 61+ years of age

On the back of this paper, could you state your feelings toward the elderly in a few sentences?

PART TWO

PALMORE'S FACTS ON AGING QUIZ*

Please answer the following questions by:
Circling _T_ for True; _F_ for False; and _?_ for Don't Know.

T F ? 1. The majority of old people are working or would like to have some kind of work to do (including housework or volunteer work).

T F ? 2. Lung vital capacity tends to decline in old age.

T F ? 3. Old people tend to become more religious as they age.

T F ? 4. The majority of old people say they are seldom irritated or angry.

T F ? 5. A person's height tends to decline in old age.

T F ? 6. The rate of poverty among aged blacks is about three times as high as among aged whites.

T F ? 7. It is almost impossible for the average old person to learn something new.

T F ? 8. Older workers have less absenteeism than do younger workers.

T F ? 9. Aged drivers have fewer accidents per driver than those under age 65.

T F ? 10. The health and economic status of old people will be about the same or worse in the year 2000 (compared to younger people).

T F ? 11. Older persons have more injuries in the home than younger persons.

T F ? 12. The majority of old people feel miserable most of the time.

T F ? 13. Men's life expectancy at age 65 is about the same as women's.

T F ? 14. The aged have a lower rate of poverty than the rest of the population.

T F ? 15. Old people usually take longer to learn something new.

T F ? 16. When the last child leaves home, the majority of parents have serious problems adjusting to their "empty nest".

T F ? 17. In general, old people are tend to be pretty much alike.

T F ? 18. The aged do not get their proportionate share of the nation's income.

T F ? 19. More older persons (aged 65 and over) have chronic illnesses that limit their activity than do younger persons.

T F ? 20. There are proportionately more older persons in public office than in the total populaticn.

T F ? 21. The aged are the most law abiding of all adult age groups.

T F ? 22. Physical strength tends to decline in old age.

T F ? 23. Social Security benefits automatically increase with inflation.

T F ? 24. The majority of old people live alone.

T F ? 25. Older workers usually cannot work as effectively as younger workers.

T F ? 26. Participation in voluntary organizations (churches and clubs) tends to decline among the healthy aged.

T F ? 27. There are about equal numbers of widows and widowers among the aged.

T F ? 28. Older persons who reduce their activity tend to be happier than those who do not.

T F ? 29. The aged have higher rates of criminal victimization than younger persons.

T F ? 30. The majority of medical practitioners tend to give low priority to the aged.

T F ? 31. Older workers have fewer accidents than younger workers.

T F ? 32. The majority of older people are unable to adapt to change.

T F ? 33. The proportion of blacks among the aged is growing.

T F ? 34. The proportion widowed among the aged is decreasing.

T F ? 35. The majority of old people say they are seldom bored.

T F ? 36. At least one-tenth of the aged are living in long-stay institutions (nursing homes, mental hospitals, homes for the aged).

T F ? 37. The five senses (sight, hearing, taste, touch and smell) all tend to weaken in old age.

T F ? 38. Older persons have more acute (short-term) illnesses than do younger persons.

T F ? 39. The majority of old people are socially isolated.

T F ? 40. Blacks' life expectancy at age 65 is about the same as whites.

T F ? 41. The majority of old people (age 65+) have no interest in, nor capacity for, sexual relations.

T F ? 42. The majority of old people are senile (having defective memory, are disoriented, or demented).

T F ? 43. Medicare pays over half of the medical expenses for the aged.

T F ? 44. Supplemental Security Income guarantees a minimum income for needy aged.

T F ? 45. The aged are more fearful of crime than are younger persons.

T F ? 46. Older people tend to react slower than younger people.

T F ? 47. Over 15% of the population are now age 65 or over.

T F ? 48. Over three-fourths of the aged are healthy enough to carry out their normal activities.

T F ? 49. The majority of old people have incomes below the poverty level (as defined by the federal government).

T F ? 50. More of the aged vote than any other age group.

*used by permission Facts on Aging Quiz, Palmore, E., Springer Publishing Company, Inc., New York 10012, 1988.

CODE BOOK

Data List 1

Column	Variable
1-3	Subject number
5	Group membership
7-9	Subjects' age
11	Subjects' gender
13	Being a registered nurse
15-17	Years in a position as a registered nurse
19	Usual work setting
21	LVN
22	Associate Degree in Nursing
23	Diploma in Nursing
24	Bachelor in Nursing
25	Other Bachelor Degree
26	Master in Nursing
27	Other Master Degree
28	PhD in Nursing
29	Other PhD
31	Human Growth & Development Course
32-34	How many months since course taken
36	Lifespan Psychology course taken
37-39	How many months since course taken

Data List 1 cont'd

Column	Variable
41	Gerontology course/workshop taken
42-44	How many months since taken gerontology workshop
46	Taken Palmore's Facts on Aging Quiz before
47-49	How many months since taken the quiz
51	Have contact with the elderly
52-54	Hours of contact per week with the elderly
56	Enjoy contact with the elderly

Data List 2

Column	Variable
5-14	Quiz items 1-10
16-25	Quiz items 11-20
27-36	Quiz items 21-30
38-47	Quiz items 31-40
49-58	Quiz items 41-50

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