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Frank O. Leuthold, Major Professor

We have read this thesis
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AN ANALYSIS OF NON-METROPOLITAN WEST TENNESSEE NURSING HOME FACILITIES

A Thesis

Presented for the

Masters of Science

Degree

The University of Tennessee, Knoxville

by
Victor Romando Wilburn

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ABSTRACT

This study was intended to describe the current status of our elderly population and determine the perceived need for an increase in non-metropolitan west Tennessee nursing home facilities. In describing the various circumstances and problems of the elderly population, three general areas were chosen: 1) the trends and changes of nursing home facilities over the past 60 years; 2) the economic and sociological backgrounds that are characteristic of the elderly population; and 3) the health care and the growing need for increased funding for the physical and mental problems of the elderly population.

The population under investigation consisted of 46 non-metropolitan west Tennessee nursing home facilities. A systematic sample was selected to determine the facilities to represent the population geographically and by size. Twenty-five facilities were selected and the administrators interviewed.

The results of this study failed to indicate distinctive patterns between facilities when analyzing the physical and mental characteristics of the elderly population and their mobility status. Further analysis also indicated that the average age residents enter into nursing homes, with respect to gender, is similar across various facilities. The 1990 to 2000 decade is not predicted to bring about an increase in the overall elderly population in non-metropolitan west Tennessee counties. However, there will be increasingly large numbers of the elderly entering into the 85 and above age cohort by the year 2000.

This study serves as a strong indicator that currently, there is not a major need for an increase in nursing home facilities or beds. The

aging of the elderly in the 1990 to 2000 decade would increase demand by 10 percent. The analysis of the waiting list indicates some additional need of at most 20 percent more nursing home beds. An estimated 5.4 percent of the elderly were in nursing homes which is between the 5 and 6 percent shown in other studies for the U. S. elderly population. However, future trends may prove otherwise. Many facilities have residents who are utilizing level 1 or intermediate care and may not need that level of care. It was suggested by several administrators that a large percent of their residents in intermediate care could adequately exist on their own, with limited monitoring, if certain services were provided for them. This idea introduces an intermediate level between nursing home care and family care of their elderly, in which, some facilities are now developing small quarters for those residents who have the capability to maintain their independence.

The home health care industry is another very important factor in determining the need for increased nursing home facilities. If there continues to be an increase of the home health care industry, there will be a reduced need for an increase in nursing home facilities.

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CHAPTER I

INTRODUCTION

Throughout the years, there have been increasing concerns on the issue of ageism. Ageism is the belief that persons over 65 years of age are more of a drain on the social unit of which they are a part than they are contributors which can lead to discrimination against such individuals. Like most isms, it denotes a problem that, if not addressed properly, could cause major problems in the future. Currently, the United States is one of the many countries that is experiencing the explosion of ageism and aging. Being that we are faced with this problem, the question must be asked, "How are we to adequately deal with such a problem," at the time when there is extensive federal government deficit, low local and state tax bases?

The difficulty in answering this question is illustrated by the reoccurrence of these problems throughout our society. However, present preparation and planning must take place if we are to better prepare for the problem of aging in our future population.

With an increase in the chronological age of a society, the physical and mental illnesses within that population tends to increase as well. Innovative changes in medical technology have prolonged the life of many persons who suffer from chronic illnesses. In fact, many of the illnesses of the past that the elderly population suffered are now less of a threat to their lives. These problems were pneumonia, heart failure and strokes (Ebersole and Hess, 1990). Today, a person reaching his or her 65th birthday is expected to live at least 18 more years (Johnson and Grant, 1985). With the most rapidly growing age group of elderly being those 85

and above, there exists a definite need to assess the current status of our nursing home facilities and determine the future needs of the elderly population so that we may better prepare for the service of the elderly in the future. Today, 12.3 percent of the total United States population is age 65 and over. Among this cohort, 42 percent are age 75 and over (Ebersole and Hess, 1990).

The major focus in this study addresses the conditions of our elderly population within nursing homes. There exists a need to analyze the current status of the nursing home facilities and better prepare for the elderly population. It is very important that we determine how much of an increase we will be faced with and what type of care is being provided for the elderly population. Currently, the nursing home facilities in the non-metropolitan counties of west Tennessee have no less than 95.4 percent occupancy rate (Light, 1992). This would suggest that if there were an increase in the proportion of elderly population requiring these services, expansion of these facilities would need to occur. According to Tinker, only 6 percent of the elderly population reside in nursing home facilities at any given time. It is my belief that future trends will require a need for a higher proportion of the elderly to require these services.

I. PURPOSE OF THE STUDY

The purpose of this study is to determine whether or not there is a perceived need for an increase in nursing home facilities for the elderly population in non-metropolitan west Tennessee counties.

Studies have shown that there will likely be a substantial increase

in the United States population who are elderly within the next twenty years. It is very important that we identify and prepare for the effects of this increasing demographic change on non-metropolitan west Tennessee counties. This will better enable us to determine the status of the elderly in non-metropolitan west Tennessee and identify trend and structural changes that may occurr in this area.

There exists a great need to determine the quality and characteristics of nursing home facilities currently existing in non-metropolitan west Tennessee, and determine the mental and physical composition of the residents. This is to better improve their quality of living and care in the future.

II. STATEMENT OF THE PROBLEM

The United States, as well as many other industrialized nations, is experiencing an increase in the proportion of the population that is aged. Earlier researchers have projected this development and the repercussions anticipated as a result of aging in our society. It is very important that we be aware of the demographic changes that are occurring to better prepare our society, with respect to policies on retirement and social security, and health care facilities to adjust to the changing needs of the elderly in our aging society.

III. IDENTIFYING THE PROBLEM OF AGING

Recently there has been increasing concern for an interest in the elderly. Now that this class or group is becoming an increasingly larger portion of our American society, the elderly are developing a stronger

political voice and are demanding changes in health care and government funding.

Ageism appears to be growing most rapidly in the industrialized nations. In fact, this is one of the major problems in the highly industrialized nations of the world. Prior to the 1950's very little emphasis was placed on the elderly, with respect to research. However, today the field of gerontology and many related disciplines are becoming very active fields of study. It is estimated that between 1950 and 2025, the total population of persons aged 60 and above in the world would increase from 214 million to about 1.1 billion (Ageing and Urbanization, 1991). Currently, ageism is mainly a problem of the developed nations of the world, but it is a problem that will effect many of the underdeveloped nations as well. It is estimated that by 2025, more than 12 percent of the population of the lesser developed regions of the world would be 60 yrs and older. The developed regions would exceed 25 percent, with 70 percent of the elderly population residing in developed countries.

Even though the problem of aging is a worldwide problem, for the purpose of this study, analysis was limited to the structural changes of aging in the non-metropolitan counties of west Tennessee. Based upon recent demographic studies, aging is expected to increase because people are living longer and healthier lives due to medical and nutritional improvements in our society. Also, large cohorts of the population will be moving into the elderly age group in the future. These are direct indications that our society will undergo enormous structural and demographic changes. Other indications of increased elderly are due to improved nutrition, reduction in infectious and parasitic diseases,

improved health care, increased education and income of families. These improvements in the American standards of living along with other things are the basis for the estimation that by 2005, 30 percent of the elderly Americans would be over 80 years of age (Aging and Urbanization, 1991).

Due to improved medical technologies, chronological age becomes less a determining factor towards one's ability to live a more healthy and independent life. When dealing with the elderly, our focus should be to create conditions to assist the elderly in maintaining their independence. However, the problem with this is that the constant improving of the quality of life has pushed a considerably larger percent of the elderly population into the age groups of 80's and 90's; many of the new technologies used prolonged the problem instead of curing the problem. Consequently, this has lead to increasing numbers of elderly with multiple chronic problems (Ward and Tobin, 1987).

IV. HYPOTHESES

Based on the literature review and the current conditions of the nursing home facilities in west Tennessee, there exists a need for an expansion of nursing home facilities in the non-metropolitan areas of west Tennessee.

The fastest growing elderly cohort consists of those 85 and above. As the chronological age increases, the chances of physical and mental problems occurring during their life span also increases. It is hypothesized that there will exist future needs to increase the size of nursing home facilities, and especially the skilled care units in these facilities.

V. DELIMITATIONS

The research deals strictly with the elderly population in non-metropolitan west Tennessee counties and especially those residing in the nursing home facilities. In the interviewing process, direct contact was made with the administrators and social workers within various nursing homes throughout non-metropolitan west Tennessee.

VI. LIMITATIONS

Confining this study to the non-metropolitan counties of west Tennessee resulted in the inability to compare the results of the west Tennessee nursing homes with those of the east or middle Tennessee nursing homes. It was also limited in the comparison of non-metropolitan nursing homes with metropolitan nursing homes in west Tennessee.

VII. BASIC ASSUMPTIONS

Based on a review of the available literature, certain assumptions are deemed most important when analyzing the basis for this study:

1. With our society being effected by the problems of ageism and the most rapidly growing cohort of elderly being that of 85 and older, there exists a need to analyze the current structures and operations of our nursing home facilities.

2. Administrators and social workers are the most informed professionals when addressing some of the physical and mental conditions of the elderly, various needs and wants of the elderly, and future goals towards dealing with this population of elderly.

3. Society, in general, needs to take an active role in eliminating biased idea and false perceptions about the elderly.

4. Quality of life is just as important as the extension of life through improved medical technologies.

In addressing the problem of aging, these basic assumptions open the door for exploring the psychological and social implications of dealing with the elderly population. In that our negatively perceived views and perceptions of the aged subconsciously create a situation in which neglect of the elderly population occurs at the economical, political, and social levels. As a result of this, persons 65 and older receive the lowest incomes to support their families and themselves, fewer or the policies and laws passed are directed in the best interests of the elderly population, and few opportunities exist for independence as their conditions weaken and they have limited funding available for their well-being (Hess, 1985).

VIII. DEFINITION OF TERMS

Due to the fact that various terms convey several ideas and opinions concerning their true meaning or origin, the following terms are defined as they are related to this study.

Aged, or elderly: persons at or over age 65, the age at which most retirement and pension plans pay full benefits.

Aging: a term used to describe the continuous processes of biological, psychological, and sociological changes which occur throughout life.

Ageism: the belief that persons over 65 years of age (or other selected years) are more of a drain on the social unit of which they are a part than they are contributors which can lead to discrimination against

such individuals.

Good Health: the condition of being sound in body, mind, or spirit; freedom from physical or mental disease or pain.

Health Care Professionals: Personnel who have high levels of training and are able, trained and willing to provide quality health care to those in institutions, the community and home care settings.

Nursing Home: a privately or publicly operated establishment where maintenance and personal or nursing care are provided for persons (as the aged or the chronically ill) who are unable to care for themselves properly.

Medicare programs: programs which provide funding for qualified patients in need of post-hospital convalescence care.

Medicaid programs: programs that provide funding for qualified patients in need of skilled care services.

Convalescence facility: a place where patients reside to recover or gather strength gradually.

Life span: the maximum survival potential of a particular species.

Chronic illness: an illness that is usually of long duration and incurable.

CHAPTER II

LITERATURE REVIEW

I. HISTORY OF NURSING HOMES

It was not until 1935, with the passing of the Social Security Act[1], that the U. S. Government got involved with the activities and procedures of nursing homes in a major way. This Act created federal and state assistance programs for the elderly called Old Age Assistance. This legislation prohibited the use of these funds for public institutions such as county and city public poorhouses. This also brought about the emergence of voluntary and proprietary nursing homes. One of the first comprehensive national survey of nursing homes took place in 1954[2]. This survey showed that there were around 9,000 facilities that offered care for elderly patients in need of skilled care. Of these facilities, 86 percent were proprietary facilities, 10 percent were voluntary nonprofit facilities and only 4 percent were public facilities (Katz, Sidney and Adams, Carl E., 1986).

An important change took place in 1950. This was the passing of federal legislation requiring states to create programs to govern and license nursing homes. Unfortunately, this legislation did not specify the standards and enforcement procedures (Katz, Sidney and Adams, Carl E., 1986). The 1954 Hill-Burton Act provided funds for nonprofit organizations to build facilities for the care of skilled patients. These facilities had to meet certain criteria for hospital-like building

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1Social Security Act 49 Stat.620 (1935)
[2]Hospital Survey and Construction Act 60 Stat.1040 (1946)

standards (Katz and Adams, 1986).

Federal funding also increased, by way of old age assistance. This took place in 1956 with the amendments to the Social Security Act. The Hill-Burton Act was replaced by the Kerr-Mills Act[1] in 1960 that contained a more extensive program called the Medical Assistance for the Aged (MAA). This was the first program created for the purpose of covering persons in need of medical treatment. Within five years, 47 states had incorporated this program, with more than 300,000 recipients and a total cost of $1.3 billion dollars a year (Katz and Adams, 1986).

During this time period problems concerning the quality of care in nursing homes were becoming of great importance and concern in the United States. In 1955 the Council of State Governments reported that the majority of the nursing homes were functioning at low standards of care and that frequently the personnel had little training. This was characteristic of nursing home facilities prior to the 1960's. In 1959, it was concluded, by the Senate Subcommittee on Problems of the Aged and Aging, that the existing problems of poor services and unskilled personnel were mainly due to the reluctance of states to enforce existing regulations because of the shortage of nursing home beds. It was the general feeling that enforcing these regulations would drive many facilities out of business and add to the current problem of dealing with the aged requiring these services (Katz and Adams, 1986). Even though there were many problems concerning the quality of care in these facilities, studies indicate that the number of nursing home beds doubled between 1963 and 1973. This exemplifies the strong need for care of the

[1]Kerr-Mills Act 74 Stat.924 (1960)

elderly (Johnson and Grant, 1985).

According to the 1974 Moss Committee Report, some states were reluctant to enforce regulations because of the difficulty of handling patients if facilities that failed to meet the minimum standards were closed. Also, the only real threat that states had, during that time, was the threat of license revocation. This was of little effect because of the legal procedures required to close a facility. Judges usually did not close facilities when the administrators claimed that their deficiencies were being corrected (Katz and Adams, 1986). Even though government programs were created for the purpose of improving the standards in the nursing homes, there was not a major change as of the mid 1970's. According to a U. S. Congressional report in 1974, 50 percent of the nursing homes provided a substandard quality of care. It was also found that these facilities suffered from untrained staffs, inadequate provision of health care, unsanitary conditions, poor food quality, unenforced safety regulations, and excessive profiteering (Johnson and Grant, 1985).

In 1965, the Medicare and Medicaid programs were enacted as a means of further federal funding for nursing home services. These programs, were enacted by the U. S. Department of Health, Education, and Welfare (HEW) and set stricter standards for those facilities desiring participation in the program (Katz, 1986). Studies throughout the 1970's and 1980's displayed a gradual increase in the quality of care in nursing homes. This was due to the constant strengthening of rules and regulations. In 1980, the Health Care Financing Administration (HCFA) established new rules concerning the activities of nursing homes. Many of these changes are made and are consistent with the 1992 rules and

regulations of nursing homes.

Currently there are over 18,000 nursing homes in the U. S. which house an estimated 1.4 million individuals. Although these facilities provide services for only 5 percent of the elderly population at any given time, almost one-quarter of the elderly persons will reside in a nursing home at some period of time (Johnson and Grant, 1985). With such a large number of people being serviced by these facilities, there exists a need to continue to improve the quality of service.

II. THEORIES OF AGING

Current demographic trends indicate two inevitable circumstances. First, longevity has increased and, second, the fertility rate has declined over the past three decades so relatively fewer people will be in the employment sector of the population. Consequently, with a lower proportion of the population in the work force and a greater proportion drawing from social security funds, this will create an imbalance in our socio-economical structure between the wage earners the dependent elderly population (Bergemer and Stahelin, 1986).

When dealing with the aging process and the elderly population, there have been several theories propounded. According to Birren and Bengtson, the major sociological theories have emerged from five general sociological perspectives: 1) structural functionalism, 2) exchange theory, 3) symbolic interactionism, 4) Marxism, and 5) social phenomenology. I have chosen to deal with two conflicting theories that derive from the general theories of structural fundamentalism and symbolic interaction. The disengagement theory, which is a form of structural

functionalism, suggests that elderly persons recognize their expected roles toward disengaging with the normal activities of society. Accordingly, this allows society to replace them with more efficient young people. It also gives the aged time to prepare for their withdrawal from social responsibilities of life and eventually death.

According to the disengagement theory, when a country becomes more industrialized, there exists a decline in the functional need for the elderly population as a contributing sector of society. The elements of medical technology, economic technology, urbanization, and mass education inevitably leads to the lowered status of the elderly population. This theory does not take into account that the elderly population are living longer and healthier lives. It should also be noted that this is one of the earlier theories that revolutionized social gerontology.

Activity theory, which is a form of symbolic interaction, is in direct opposition to disengagement theory. It implies that the satisfaction an elderly person receives with their life is directly related to the person's role in staying active in society. This theory stresses the concept of social interaction to enhance personal satisfaction among the elderly. The disengagement theory expresses the inverse relationship between statue of the elderly and the level of societal industrialization.

It is further suggested that there is a close relationship between an individual's self-concept of themselves and the role that person plays in society. With old age comes a loss of some major social roles. According to this theory, in order for the elderly to maintain a positive sense of value within themselves, they have to continue to be active and

involved by creating new goals or roles in society.

It is argued by this theory that the elderly have to continuously be active to be satisfied with themselves and have a sense of value. However, research has shown that the elderly population is generally more active when there is a large concentration of elderly within a given society. This would seem to imply that there is a shared psychological and sociological motivation to interact within their own age group. This may yield some support to certain aspects of the disengagement theory, in that, elderly persons recognize their need to disassociate with the mainstream of society. This denotes a learned age inferiority that is eliminated when the elderly population exists within all elements of society.

III. ELDERLY INCOME STATUS

Some of the major problems affecting the elderly are 1) low income levels, 2) rising health needs and medical costs, 3) problems associated with home ownership and taxation, and 4) loss of interaction in the work force. The latter factor is the major reason why many elderly in the population are against forced retirement.

In 1959, more than one-third of the elderly population fell below the poverty threshold and one-half of the elderly population, had incomes as high as the poverty rate for all persons. In 1978, 14 percent of the elderly population existed at the poverty rate compared to an overall level of 11.4 percent (Hess and Markson, 1985). Further studies indicated that, in 1980, the elderly poverty rate rose to 15 percent and declined to 14 percent by 1983. In 1983, only 10 percent of persons in their early 60's were poor, as opposed to 18 percent of persons age 72 and over (Hess

and Markson, 1985). Over 90 percent of the current elderly population receive a supplementary income in the form of social security. Another supplementary program for the elderly population is Medicare. This program covers over 90 percent of the elderly population. These programs are not indicators of poverty, in that they are available to qualifying elderly persons, regardless of income. However, 6.5 percent of elderly families receive food stamps and 13.3 percent are on Medicaid (Botwinick, 1981).

The main reason large numbers of the elderly experience poverty conditions is due to the fact that society places a high value on a person according to their contributions to society in the form of production. The fact is that many elderly persons are retired or unable to work. Retirement often reduces income level for persons compared to the years of employment. Some retirees are able to maintain their pre-retirement level of income, but most face a reduced level of income, especially if they fail to have a pension based upon a full working career.

IV. SOCIAL PROBLEMS

The elderly population has been victimized by biased perceptions. In view of the elderly population throughout society, there is the perceived vulnerability of the non-institutionalized elderly. Researchers may have been biased in their studies by focusing more on the conditions of the institutionalized or chronically ill elderly population rather than applying it to the elderly in general or to those who live in their own households and care for themselves.

Family relationships and status

It was generally viewed that as industrialization and urbanization occurs throughout societies, it will inevitably lead to unfavorable conditions for the elderly (Age and Aging, 1992). For example, increased geographical mobility of workers would lead to the breakdown of the extended family and increasing technological advancements would lead to the earlier retirement and higher unemployment of elderly workers. However, this point of view is an error based upon the studies done solely on the needy elderly population in society and is not typical of the elderly in industrialized societies (Shanas, 1970). In fact, many surveys have shown that the aged are generally not isolated, even though most elderly people dwell in a house separate from their children. Most live near a child or a relative and visit family members regularly (Shanas et al., 1968 and Johnson and Grant, 1985). Currently, there are shifts within the family structure due to smaller average family size and the entrance of more women into the work force. There is less time for daughters to care for their elderly parents because more are employed. With a higher proportion of the population living longer, it is also becoming common to see four generational families in which children of the elderly are in their 60's themselves and also may experience chronic illnesses, the loss of a spouse, or a decline in one's income (Johnson and Grant, 1985).

According to Wells and Freer, there are many residence patterns of the elderly non-institutionalized population. They can be classified in five categories: 1) married couple only (35-45%), 2) widowed, divorced or separated and living alone (22-28%), 3) widowed or separated with child living in home (9-20%), 4) married couple with child in the house

(7-14%), 5) Living alone and never married (4-8%).

According to Wells and Freer, the objectives of the U. S. society, especially when dealing with the elderly population, should be to: 1) slow down the functional decline that occurs in old age, 2) maintain and improve the quality of life in old age, 3) provide support for the informal careers of older people, 4) keep older people at home as long as possible, and 5) help older people have a good death as well as a good life.

According to Tinker (1984), the vast majority of older people live in ordinary housing in the community. In contrast, nursing homes and hospitals accommodate approximately 6 percent of the elderly population. Among these are the most frail and vulnerable in society, and this figure is expected to increase in the future (Wells and Freer, 1988).

Much of the literature on the elderly has embarked upon the inequalities that occur in the various social classes and trend changes that indicate the level of social mobility between the classes. Extreme emphasis has been placed on the family structures of the elderly in our society and the many misconceptions that have taken place over time. Most of the elderly are not victims of family abandonment and, in fact, have adequate transportation, housing, medicare, and recreational facilities (Atchley and Seltzer, 1976). This is further supported by Johnson and Grant, in that, families usually go through great sacrifices to keep their elderly relatives out of nursing homes. It is further suggested that it is not until there are drastic changes in the behavioral and mental patterns of the elderly, or the cost and time of keeping and caring for them at home becomes too great, that families usually consider putting

their elderly relatives into nursing homes (Johnson and Grant, 1985).

It has also been suggested that many elderly residents in nursing homes do not have close family ties. In fact, there is a close relationship between family relationship and institutionalization, in that, studies have indicated that elderly persons who are childless and unmarried are more likely to be in institutions. One study showed that while 20 percent of the elderly population is childless, 46 percent of the elderly in institutions are childless (Johnson and Grant, 1985).

Societal discriminations

The elderly population are often victims of many injustices due to age grading. This is based on a set of beliefs that a person's age determines his beliefs, values, and abilities to carry out certain functions in society (Atchley and Seltzer, 1976). When analyzing the process of aging, it is very important that special emphasis is placed on time and the various effects that occurs a result of time. In many cases, the concept of time is distinguished between life time, historical time and social time. Life time is chronological age, and in many cases, is a poor predictor of physical or social capabilities. Historical time deals with the way in which society evolved over time. This is significant to the analysis of aging, in that, it allows a comparison of one time period to another and justifies the differences due to a changing society. Social time refers to the process of "age grading" and controls the expectancies put on by society.

The age structure of society is generally analyzed along the life course dimension and the historical dimension. The life course dimension

utilizes chronological age as an indicator of an individual's experience and abilities. The historical dimension analyzes the political, social, and cultural changes that have taken place in society over a period of time.

The concept of age stratification is very useful when studying the sociology of aging, in that, this analysis is restricted to a certain range of experiences and that each cohort can vary greatly from one to another. These variations are mainly due to the fact that each cohort has its distinctive historical events that individuals encounter throughout varying stages of their lives.

It is very important that the independence of the elderly is achieved for as long as possible. This can be achieved by providing the elderly with a level of income that will maintain a standard of living and by providing them with access to services that will aid in the prevention of loneliness (Wells and Freer, 1988).

Society is rapidly changing, in that, a person's chronological age may no longer be legitimately be used as a mechanism for discrimination against the elderly. Society measures people by special capabilities and experiences, and many persons are able to actively function in society at older ages. Studies have shown that many men do not decline in health or in morale after retirement. In fact, in communities where the density of the elderly population is high, there is increased social interaction among the aged in society (Shanas, 1970). This is an indication that our societal conceptions of the elderly need to change, and this is expected to change as the proportion of the elderly population increases.

Differences Between the Sexes

A major problem that occurs throughout society, between men and women is middle aged depression. It is believed that depression in women is mainly due to the hormone changes that occur during menopause. However, studies have shown that there is no significant relationship between the biological changes that occur during menopause and depression. It has been suggested that the lack of meaningful roles and low self-esteem are major contributing factors to depression in women (Hess and Markson, 1985).

When comparing the relationship between depression and mid-life crises, it is suggested that the major contributing factor to depression is very similar to that responsible for mid-life crises. However, due to the difference in the sex roles, the cause for depression is generally different. Generally speaking, the role of many women, pertains to the family. It usually revolves around the activities and accomplishments of the spouse or child. Later in life, as the family structure changes and children depart, women usually suffer from depression due to the declining role that the mother plays in the family structure. Similarly, men experience the same feelings of depression and loss of self-esteem when they reach the age of retirement, in that, much of their roles and responsibilities for 30 to 40 years were related to their employment (Hess and Markson, 1985).

There are increasing numbers of elderly citizens over 100 years of age. Among this group, the women have a ratio of 2.5 to 1.0 for men. According to Johnson and Grant, this ratio is especially representative of the age cohort of 75 and over. Few of this generation of women had jobs

that were outside of the home. Today, they are among the poorest cohort of people and are more likely to be institutionalized (Ebersole and Hess, 1990).

Future trends may require adjustments to this theory because of the changes in roles and responsibilities between men and women. Studies have shown that more and more women are entering the work force and are becoming more versatile in their roles throughout their lives. In theory, the lack of responsibility or feelings of social worth inevitably leads to low self-esteem and depression, and this is a problem of the middle aged and the elderly.

When dealing with the elderly population, with respect to gender, we find that the greatest distinction between the sexes lies in their life expectancies. According to the 1990 United States Vital Statistics, the life expectancy of a male is 72.0 years, whereas the life expectancy of a female is 79.7 years. It is projected that by 1995, the life expectancy of males will increase to 72.8 and females would remain at 79.7 (This information can be found in Tables 103, 104, and 105 of the Statistical Abstracts). It is this reason that elderly women are twice as likely as men to be widowed and three times as likely to be living alone. The financial implication of this is that those elderly women who never married or are widowed often have the lower incomes and fewer assets than those elderly who are married (Townsend, 1979).

Another important distinction between the sexes is health status. Elderly women have more long-standing health problems and more illnesses which in turn require them to have more frequent visits with a general physician than their male counterparts. They also appear to have poorer

psychological functioning, suffer from loneliness and anxiety, and a lower morale and life satisfaction level (Wells and Freer, 1988). It is commonly excepted that women, in general, live longer than men. Other studies have shown that women of all ages experience 1) more daily symptoms, 2) higher incidence of all types of acute conditions, 3) higher prevalence of non-fatal chronic diseases, 4) more physician visits per year, and 5) more hospital stays than men. These categories persist even if reproductive events and disorders are removed. Men have higher limitation rates from those problems and overall limitation rates, more hospitalization in older ages, and higher mortality rates for leading causes. Health statistics show that men are more bothered by serious life-threatening diseases, and this is illustrated in higher age specific death rates (Ward and Tobin, 1987).

These sex differences, in health rates, tend to be largest for young adults and smallest for older adults. In brief, women suffer more frequent, but less serious morbidity than men. Females tend to be sicker in the short run of life, but males in the longer run (Ward and Tobin, 1987).

It is projected that by the year 2000, the proportion of women to men over the age of 75 will be two to one. Average life span has continued to increase more rapidly for women than men from 1940's to the present. One of the major reasons women have longer life expectancies may be because of more frequent visits of physicians and utilization of health services throughout their lives (Ebersole and Hess, 1990).

Educational Status of medical and health care facilities

Many academic institutions are faced with the challenge of preparing health practitioners to care for the rapidly growing elderly population. This is essential because a study, conducted by the Institute of Medicine and the National Institute on Aging, found that very few physicians and other allied health workers had opportunities to enhance their capabilities in geriatrics and gerontology (Andreopoulos, 1989).

Barry and Hamn conducted a survey in 1985 which concluded that 72 percent of the medical schools had some required time for geriatric education, 19 percent had only elective curricula, and 9 percent had no curricula time in geriatrics. A similar survey conducted in 1978 showed that there were only 52 U. S. medical institutions that required geriatrics courses in the curricula. They also found that most of the geriatric courses were taught during the first and second years and most electives were taught during the third and fourth year of medical school. The same survey found that 10 percent of the U. S. medical schools had no faculty in geriatrics.

The major problem facing medical institutions is the lack of faculty members who specialize in geriatrics. In fact, the consensus is that nine to ten faculty members committed to the study of geriatrics are needed in a medical school to meet the demands. In essence 1,300 physician faculty members in clinical departments and 1,300 additional members in other departments are needed in medical schools. In order that we reach this goal by year 2000, it is estimated that 300 faculty members in geriatrics would have to be added to Academic medical school positions each year. Currently, only 95 to 140 new faculty members are being trained each year

for basic and clinical activities for medical school positions (Andreopoulos, 1989).

It has also been suggested that health care professionals need to be trained to work more in a interdisciplinary model of care. This embarks upon the proper functional approach to assessment, setting treatment goals, and the mobilization of several facility settings between the hospital, the nursing home and the patient's home. To accomplish this would require several changes in the curricula of medical institutions when dealing with clinical training. This would require that students spend a larger percent of their time outside of the acute-care hospitals and in nursing homes. They also would need to be given exposure to long-term care, ambulatory care and home care (Andreopoulos, 1989). There exists a need for a multi professional team to deal with the needs of the elderly. If this change does not take place, academic health centers will be required to plan for circumstances for which they are poorly prepared to handle. This is partly due to the fact of increasing longevity and the increasing numbers of elderly people will create a greater demand for long-term care than is presently the case (Andreopoulos, 1989).

V. HEALTH CARE

There are many forms of ageism that take place in our society that receive little attention. This is evident by the small percent of the welfare dollars that are spent for services for the aged and by the fact that research on the aged has been slow to develop in the biological and social sciences. Although 25 percent of the citizens in mental hospitals are elderly, less than 1 percent of the federal mental health budget is

invested on research for the elderly (Shanas, 1970). There has been a decline in the population of state mental institutions and an increase in nursing homes over the past 33 years. This is due partly to the shifting of patients in mental institutions to nursing homes. Patients over the age of 65 that suffered from chronic illness and were somewhat demented were usually moved to nursing homes (Birkett, 1991).

One of the major problems confronting health care facilities for the elderly is dealing with chronic and disabling illnesses. In fact, it is expected that the proportion of patients suffering from chronic illness as opposed to acute illness will grow in the future. Currently, 86 percent of the elderly population suffer from at least one chronic illness. Of this number, 20 percent have two illnesses and 33 percent suffer from three or more chronic illnesses (Johnson and Grant, 1985). The major causes of death in our society are chronic diseases such as cardiovascular disease, cancer, and strokes. Medical technology has prolonged life with little impairment of functional systems. There still exists a large number of persons who suffer from diseases that cause significant impairment of bodily functions. Examples of these disorders are chronic pulmonary disease, Parkinson's disease, visual and hearing impairments, and Alzheimer's disease. These conditions are primarily considered the diseases of the aged. This association probably accounts for the fact that, until recently, very little research has been done on these diseases. Now that there is increasing concern with the problems of the elderly population and their health problems, it is expected that these conditions will receive greater attention as the society becomes better in prolonging the life of those with these disorders. While our society

continues to make medical breakthroughs towards prolonging life, there must be greater consideration paid to quality of life issues (Andreopoulos, 1989).

Treating chronic illnesses outside of the hospital has two important implications: 1) it reduces the high cost of hospitalization and 2) it reduces the risk of illnesses that occur due to high use of prescribed medicine. Scitovsky and Capron conducted a study which showed that many of the highest cost hospitalizations are for those hospitalized due to chronic illness that could have been treated outside of the hospital if proper resources were available (Andreopoulos, 1989). Hospitals may need to become geared more towards chronic care than acute care; as indicated by a study done by Scitovsky and Capron, which shows that many of the highest costs of hospitalization are not from critical care, but from chronic illnesses. It also indicated that the medical treatment of these chronic illnesses could have been treated outside of the hospital had resources been made available. This change is being prevented because of the institutional and professional traditions that medical technology alone will solve the various medical problems that will occur. It has even been suggested that the U. S. has created a medical science that places strong emphasis on personal care. Oftentimes, when dealing with the elderly, physicians become disappointed with the progress of their elderly patients and look upon it as professional failure (Andreopoulos, 1989).

The major aim of health care facilities should be to assist in the proper management and care of the elderly and their disorders. Health care professionals need to be oriented more in the handling and caring of

elderly patients and this may be just as important as the medical advancements in technology. Many medical interventions for the elderly due to chronic illness can be accomplished outside of the hospital. Other facilities accomplish this task such as good nursing homes and home care under the supervision of experienced professionals (Andreopoulos, 1989).

Another problem that exists is the question of who will provide services for those who fail to have sufficient financial resources, such as the uninsured, the homeless, the abandoned, and the elderly with mixed physical and behavioral problems (Andreopoulos, 1989).

It has become increasingly important to make a distinction between the younger of the elderly cohorts such as those 65-74 and the older persons (those 75 and over). When comparing those aged 65-74 to those aged 75 and over, the older cohort have a greater number of long standing health problems. Those 75 and over experience more illnesses and require twice as much time and services as those age 65-74. The elderly aged 75 and over are more likely to be living under poverty stricken conditions and are more likely have insufficient incomes. However, the 75 and older elderly cohort are advantaged in comparison to their younger cohort, in that, they more often have larger families, are more likely to have a child living in the neighborhood, and they are more satisfied with their lives than the younger cohort (Wells and Freer, 1988).

VI. TENNESSEE NURSING HOME POLICIES AND PROCEDURES

Before any nursing home facility or hospital can operate in the State of Tennessee, it has to be licensed through the Tennessee Department of Public Health. This department has a committee known as the Hospital

Licensing Board, which serves to ensure that all health care facilities are operating in a manner that meets acceptable standards required by the State of Tennessee. Regulations and requirements have been published for nursing homes as guides and sources to their limitations.

According to The Tennessee Department of Public Health, these minimal standards for nursing homes consist of:

1. The construction or renovation of any facility over which it has jurisdiction, including the plumbing, heating, lighting, ventilation and other housing conditions which shall assure the health, safety and comfort of patients and their protection from fire hazards.

2. Regulation of the number and qualifications of all personnel, including management and nursing personnel, having responsibility for any part of the care given to patients.

3. Nursing care as related to the needs of patients based upon principles of good nursing care or on recommendations which may be made by the physician attending the patient.

4. All sanitary and related conditions within the facility and its surroundings, including water supply, sewage disposal, food handling and general hygiene to assure the health and safety of the patients.

5. Diet related to the needs of each patient, based upon good nutritional practice, to include any special dietary requirements ordered by the physician for any given patient.

6. The equipment essential to render appropriate care for the health and welfare of patients.

The Hospital Licensing Board has the authority to inspect and evaluate any facility at reasonable hours of the day and post the results of their inspection on the wall where applicants register for entrance into the facility. Also located on this entrance wall is a copy of their license for operation in the State of Tennessee. It is also a requirement that each licensed nursing home shall have a duly qualified and properly

licensed administrator at all times. Any changes in administrators must be reported to the department within 15 days.

The Tennessee Department of Public Health (TDPH) defines a nursing home as any institution, place, building or agency represented and held out to the general public for the express or implied purpose of providing care for one or more non-related persons who are not acutely ill, but who require skilled nursing care and related medical services.

There are several restrictions when considering entrance into nursing home facilities. For example, patients who have acute illnesses and those having or suspected of having any communicable diseases are not allowed for admittance into nursing home facilities. This also includes those who are carriers of a communicable disease such as typhoid fever and diphtheria. Patients who are addicted to drugs or suffer from some type of mental condition to the extent that their behavioral patterns disturb other patients are also not allowed admittance. There are also age restrictions, in that, children under the age of fourteen are not allowed admittance into nursing homes, unless the facility is licensed for handicapped children only. Lastly, patients shall not be admitted within six days of major surgery or within twenty-four hours of post operative or minor surgery, unless the patient is admitted by the physician responsible for the post operative care (Fowinkle, 1970).

Nursing homes with less than fifty beds are required to have a licensed nurse who is responsible for being on duty during normal operating hours. Those nursing homes exceeding fifty beds are required to have a licensed nurse, preferably a licensed registered professional nurse, on locational duty twenty-four hours a day.

It is required that nursing homes have a twenty-four hour nursing service equipped to adequately deal with the needs of the patients. This nursing staff includes registered professional nurses, licensed practical nurses, aides, and orderlies.

The Civil Rights Act of 1964 (Linton v. Commissioner) brought several changes to the operations and functions of Tennessee nursing homes and their methods of selecting and treating patients. Due to this, it was made mandatory that patients be accepted on a first come first serve basis, and that no facility could reject a patient on the grounds of racial or cultural discrimination or on the patient's financial ability to pay. Further, patients could not be clustered because of ethnic or cultural background or ability to meet their financial obligations.

Nursing home facilities have the option to choose whether or not they wish to be in the medical assistance program. Along with the requirements imposed by the Civil Rights Act of 1964, this program requires only one waiting list and that patients be accepted in a chronological order. If a bed becomes available and the applicant does not accept the bed but wishes to remain on the waiting list, they go to the bottom of the waiting list.

A facility may deviate from the "first come first serve requirement" of the waiting list under certain circumstances which consists on "order of necessity." These exceptions are 1) if a patient has just recently been discharged from a hospital and is in immediate need of a nursing home, 2) if a patient previously resided in a nursing home or, 3) moves from one level of care to a different level of care. Further, certain parts of a nursing home may be divided in such a way that it serves a

specific sex. If a bed in a specific area becomes available, then deviation from the waiting list may occur if the next person on the waiting list is of the opposite sex. Deviation to the waiting list may also occur due to the evacuation of another facility (Public Necessity Rules, 1991).

If a nursing home chooses to terminate their agreement through the medical assistance program it can do so, but procedures must be carried out so that there is little inconvenience to the patients. If a facility chooses to terminate from this program there is a minimum of two years before participation in this program can occur again. The facility must provide the Tennessee Department of Human Services with a reason and necessary information on their Medicaid patients. Patients who are currently Medicaid-eligible are to be informed of this decision and also informed that they may remain in this facility as a Medicaid patient as long as they wish. These patients shall also be informed that if they choose to transfer to another facility, the current nursing home will aid in their relocating process.

Those patients who are not Medicaid-eligible shall be informed, on a separate letter, of the decision of the facility and that if they ever become eligible for medicaid, they could not receive services at that facility. These changes came into effect June 30, 1991.

A nursing home facility that is participating in the Medicaid program is not allowed to involuntarily transfer or discharge a Medicaid-eligible patient because Medicaid is the only source of funding. Also, the facility may not seek additional funding from a Medicaid-eligible patient other than what is specified by the Tennessee Department of Human

Services.

In participating in the Medicaid program, a facility is not allowed to transfer or discharge a resident from the facility unless the condition of the patient has become so severe that they are no longer qualified to provide services for the patient. If the condition of the patient's health has improved to a point where they no longer require services from a nursing home, the patient after reasonable time allocation who has failed to pay the debt obtained at the nursing home facility may be transferred or discharged (Public Necessity Rules, 1991). Other results of the Linton Act mandated that nursing homes participating in the Medicaid program had to certify that all their beds rather than only certain beds that, were certified for Medicaid patients (Public Necessity Rules, 1991).

VII. SUMMARY

Over the past 60 years, U. S. nursing home facilities have undergone numerous changes in their policies. These changes consist of 1) the rules and regulations for nursing home operations, 2) government involvement through funding, 3) the manner in which nursing homes are required to provide services and care, and 4) the way in which facilities must select residents.

In determining the general characteristics of the elderly U. S. population, many are poverty stricken. In fact, more than 90 percent of the elderly receive some form of supplementary non labor income to help them sustain minimum standards of living.

Studies have shown that there are usually strong support and family

bonds between the elderly and their children. In many cases, the elderly usually reside near at least one child or relative, or have frequent visitation from them. However, with decreasing family size, more mobility of persons and women in the work force, the conditions are more difficult for families to care of their elderly parents and other relatives. It should be noted that only a small percent of the elderly are unable to adequately care for themselves. On the whole, the elderly population is living longer and is healthier. With increased longevity, many of the misconceptions and stigmatism that society associated with the aged are under attack. Demographic changes in the elderly population are causing society to 1) analyze the structure of our policies towards the elderly, 2) change retirement policies, 3) restructure the rules and regulations of our nursing homes and 4) find ways to improve the governmental funding of the elderly population.

CHAPTER III

METHODOLOGY AND DESIGN

I. SAMPLE SELECTION

The population under investigation consists of 46 nursing home facilities located in the 19 non-metropolitan west Tennessee counties. Only 5 of the 46 facilities are owned and operated by a local government body. Since this group was small, no separate sample was made of nursing home facilities operated by a local governmental body. All facilities were listed in order of capacity. A list of the nursing homes, in the 19 counties, was retrieved from the 1991 reports of the Tennessee Department of Health. By using a table of random numbers to determine the starting point and the sampling interval being 4, a total of 16 facilities was chosen from the population of nursing homes in non-metropolitan west Tennessee. This sample displayed a good representation of facilities according to size. However, several west Tennessee non-metropolitan counties were excluded. Nine other facilities were chosen for the purpose of visiting at least one facility in each county, so a total of 25 of the 46 nursing homes were selected. The purpose of this method of sampling was to ensure adequate representation of facilities by size and inclusive of all counties in the region.

II. INSTRUMENTATION

A total of six questionnaire pre-tests were administered prior to the actual conducting of the study. Some of these were nursing homes outside of the study area. The pre-test was to help determine and improve

the response rate and to eliminate the problems of mis-interpretation of questions. Necessary corrections were made and inducted into the final questionnaire.

The survey instrument used for the purpose of collecting data consisted of a scheduled interview with the facility administrator or social worker. Upon scheduling the interview, an oral questionnaire was conducted with the administrators. In a few cases a tour of the facility was given, but this was not part of the formal data gathering process. The average interviewing process lasted from 45 minutes to an hour. A copy of the questionnaire schedule is shown in Appendix A. The questionnaire focused upon four major areas: 1) the general characteristics of the facility, 2) physical and mental conditions of the elderly, 3) composition of the residents by age, sex, and race, 4) quality of care provided.

III. INTERVIEW PROCEDURES

The selected facilities were contacted and visited for the purpose of data collection. The purpose and objective of the study was discussed with the administration. The statement of "consent" was administered to and signed by each person being interviewed. It was stressed that accuracy in responses was of great importance and opinionated questions were restricted to the characteristics prevalent in the individual facilities.

Prior to conducting the interviews with a nursing home administrator, it was necessary for them to sign and date a consent form. The purpose of this was to give the researcher permission to conduct the

interview with them and inform them of their right to decline to answer any question and the right to terminate the interviewing process at any time. It also insured them that their facility, personal identity and patient identity were confidential. A copy of this form can be found in Appendix B.

Hypotheses

Five major hypotheses have been developed for this study. These were stated in the null hypothesis form. The first hypothesis was that there is no relationship between the size of the facility and the percent of elderly residents suffering from an extreme case of mental illness. The second hypothesis was that there is no relationship between the size of the facility and the percent of elderly residents suffering from an extreme case of physical illness. The third hypothesis was that there is no relationship between the proportion of patients who are mobile without the assistance of a nurse or some type of physical support device and the proportion suffering from little physical deterioration. The fourth hypothesis was that there is no relationship between the size of the facilities and the percentage of residents suffering from Alzheimer's disease. The fifth hypothesis was that there is no relationship between the average age of females upon entrance into the facilities and the percentage of residents suffering from extreme mental conditions.

VI. STATISTICAL TREATMENT AND DATA ANALYSIS

Collected survey data was analyzed using a Spearman's rho and Pearson r for the purpose of determining nonparametric measures of association

between interval-level variables. Both tests yielded similar results, however, stronger emphasis was placed on the Spearman's rho due to the assumptions for use of the Pearson r. For example, the Pearson r test assumes that the variables are normally distributed and that there is a linear relationship between the two variables of interest. The data in this study were unable to fully meet these two assumptions.

The null hypothesis that there was no relationship between size of facility and the physical and mental characteristics of the residents was tested using the Spearman's rho. The following formula was used:

$$r^s = 1 - \frac{6\sum D^2}{N(N^2 - 1)}$$

where

D^s = squared differences between the two sets of ranks

N = sample size

Tennessee population projections were analyzed to determine demographic trend changes prevalent in west Tennessee. This information was compared to future projections on the composition of elderly in the nursing homes throughout west Tennessee counties.

VII. THE PERCEIVED NEED FOR AN INCREASE IN NURSING HOMES

The opinions of administrators concerning the perceived need for an increase in nursing homes or beds were unanimous when speaking of future projections for expansion. However, when speaking of current expansion of facilities many administrators felt that the needs of the rural elderly

were being met.

Many administrators felt that the amount of future expansion of nursing home facilities would really depend on the future role of the home health care industry and Medicaid funding by the State of Tennessee. It was suggested that expansion of facilities is heavily dependent upon the availability of future funding by the State of Tennessee. Although feelings towards the home health care industry are varied, it is the general feeling that alternate forms of care for the aged are necessary because there are residents in these nursing homes who do not need the level of care provided. It was felt that a relatively large portion of the residents in nursing homes can function well on their own with limited supervision and someone to assist them with certain activities such as meal preparation and bathing.

Administrators in opposition to this opinion felt that an extra strain has been put on their facilities by the home health care industry because they are unable to compete with them in finding qualified help. Due to the demand for qualified LPN's and RN's, many nursing homes find themselves at a disadvantage for hiring qualified help and feel that, in many cases, their workers pursue career opportunities with the home health care industry because nursing homes are unable to pay more.

VIII. SUMMARY

The purpose of this chapter was to describe the population from which a sample was taken and provide the procedures taken to give an adequate geographical representation of the population and an adequate sample by size and type of facility.

Emphasis is also placed on the development of the survey instrument and the method of conducting the interviews and a summary of the results of this study.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

The objectives of this chapter are 1) to analyze the changes within the elderly population, 2) identify age cohort trends, 3) and determine the relationships of various facilities throughout the west Tennessee counties. The data presented is from a collective analysis of 25 nursing homes in non-metropolitan west Tennessee counties. This survey places special emphasis on the mental and physical characteristics of the elderly population, the age, sex, and race composition of the elderly in nursing homes, and the current condition and status of nursing homes.

The result of the age cohorts shown in Table 1 indicate that in the 19 non-metropolitan counties, between the years of 1990 and 2000, the elderly population ages 65 plus is projected to decline by 1.9 percent. However, for those age 65 to 69 there will be a 6.9 percent decline. Only four counties (Fayette, Hardin, Henderson, and Tipton) are projected for an increase (appendix table 16). On the other hand, nearly one-half (47 percent) of the non-metropolitan west Tennessee counties are projected to have more than a 10 percent decline of the 65-69 age cohort from 1990 to the year 2000. The reason for this decline is that persons born during the 1930's depression year will enter this age cohort. The birth rate had declined substantially during the major depression period. However, persons entering this age cohort in 2010 would have been born during the early 1940's when the birth rate had increased after the depression years, and the 2000 to 2010 decade shows a 16.5 percent increase in persons age 65 to 69. In later decades from 2010, this trend will continue with the post World War II baby boom. All counties except Lake County and TABLE

TABLE 1: PROJECTED POPULATION AND PERCENTAGE CHANGE FOR THE TOTAL ELDERLY POPULATION, AGE 65 PLUS, IN WEST TENNESSEE COUNTIES FOR YEARS 1990, 2000, AND 2010

COUNTIES	Year		Percentage Change	Year	Percentage Change
	1990	2000	1990-2000	2010	2000-2010
BENTON	2597	2628	1.2	2778	5.7
CARROLL	4946	4901	-0.9	4982	1.7
CHESTER	1918	2007	4.6	2161	7.7
CROCKETT	2541	2165	-14.8	2025	6.5
DECATUR	1980	1942	-1.9	2004	-3.2
DYER	5208	4979	-4.4	5209	4.6
FAYETTE	3320	3376	1.7	3656	8.3
GIBSON	8516	8075	-5.2	7605	-5.8
HARDEMAN	3340	3179	-4.8	3057	-3.8
HARDIN	3514	3899	11.0	4227	8.4
HAYWOOD	3006	2818	-6.3	2627	-6.8
HENDERSON	3298	3617	9.7	3924	8.5
HENRY	5484	5490	0.1	5544	1.0
LAKE	1055	908	-13.9	811	-10.7
LAUDERDALE	3524	3105	-11.9	3004	-3.3
McNAIRY	3615	3820	5.7	4147	8.6
OBION	4936	4678	-5.2	4936	5.5
TIPTON	4057	4256	4.9	4804	12.9
WEAKLEY	5139	4816	-6.3	4785	-0.7
Total	71994	70659	-1.9	72286	2.3

Source: Dr. Donald W. Hastings, "The Total Population Projections on West Tennessee Counties." The University of Tennessee, Knoxville, 1992 for population estimates for years 2000 and 2010.

Note: For information concerning the percentage changes by counties and age cohort, refer to appendices 18-22.

Haywood County are projected to experience a population increase in the 65 to 69 age cohort from 2000 to 2010. According to these projections, only Lake County and Haywood County are projected to experience a continuous decline in this age cohort from 1990 to 2010.

The projections of the age cohort 70 to 74 shows that from 1990 to year 2000 that the 70 to 74 age cohort will decline by 6.0 overall and in 13 non-metropolitan west Tennessee counties (Appendix Table 17). According to these projections, one third of the counties will have more than a 10 percent decline in their population of persons age 70 to 74. Special emphasis needs to be placed on the fact that Crockett County, Lake County and Lauderdale County are projected to experience more than a 20 percent decline in that cohort population. The projections from year 2000 to 2010 are continuous, in that, the total population for this age cohort is expected to continue to decline. The 70-74 year age cohort in 2010 would have been born during the 1930's depression years when fertility levels were low.

The elderly between the ages of 75 to 79 will experience a decline in 12 counties with one fourth of the counties experiencing more than a 10 percent decline (Appendix Table 18). It is projected that by year 2010, this age cohort will continue to decline in population, in that, one half of the counties will continue to decline in population by year 2010. Further, most of these will experience more than a 10 percent decline in their population in this age cohort. For all counties the decline is estimated at 4.1 percent from 1990 to 2000 and 6.8 percent from 2000 to 2010 (Table 2).

By year 2000, the age group of 80 to 84 will experience a slight

TABLE 2: SUMMARY OF THE NUMBER OF ESTIMATED ELDERLY POPULATION BY AGE COHORT FOR THE YEARS 1990, 2000, 2010 FOR 19 NON-METROPOLITAN WEST TENNESSEE COUNTIES*

Age Cohort	number in years			percent change		
	1990	2000	2010	1990-2000	2000-2010	1990-2010
65-69	21,219	19,761	23,012	-6.9	16.5	8.4
70-74	18,181	17,095	16,683	-6.0	-2.4	-8.2
75-79	15,315	14,684	13,685	-4.1	-6.8	-10.6
80-84	9,927	9,863	9,233	-0.7	-6.4	-7.0
85+	7,352	9,256	9,673	25.9	4.5	31.6
Total	71,994	70,659	72,286	-1.9	2.3	0.4

*The estimates for 1990, 2000 and 2010 were made by Dr. Donald W. Hastings, Department of Sociology, University of Tennessee.

decline of 0.7 percent, but from 2000 to 2010 a larger decline of 6.4 percent (Appendix Table 19) is projected to occur.

Of the 19 counties, Lake County and Hardeman County are expected to suffer large declines in the 80 to 84 age group (Appendix Table 19). The changes in the other counties are small. By year 2010, this age cohort is projected to suffer a larger decline of 7.0 percent. Crockett, Gibson, Haywood, Lake, Lauderdale, Obion and Weakley counties are projected to have the greatest rate in decline. None of the counties with a projected increase, however, is expected to have a large increase.

Data in table 2 show that between the time frame of 1990 and 2000 the elderly population age 85 and above is expected to experience a sizeable increase. Fifteen non-metropolitan counties are projected to experience an increase of more than 20 percent between 1990 and 2000 (Appendix Table 20). All counties are projected to have an increase in

this age cohort with the range consisting of 8.2 percent in Hardeman County to 38.7 percent in Chester County. The projections from year 2000 to 2010 showed a continued increase, but at a much smaller rate. Some counties are projected to have a decrease and only five to have an increase above 10 percent. For all counties the projected increase was 25.9 percent from 1990 to 2000 and 4.5 percent from 2000 to 2010 for those 85 or more (Table 2).

Table 2 shows that from 1990 to 2000, the age cohort of 85 and above is the only group that will experience an increase in their population (25.9%). However, from 2000 to 2010, the age group of 65 to 69 will experience a 16.5 percent increase and the age group of 85 and above will experience a 4.5 percent increase. All other age cohorts have a projected decline in both decades.

When looking at the overall elderly population, for the 20 years from 1990 to 2010, the elderly are projected to experience a population increase of only 0.4 percent. However, the significant increase in the 85 plus age cohort, from 1990 to 2000 should be taken under consideration in terms of demand for nursing home care. The large percent of people in the 85 and above age cohort is an indication that more nursing homes may be needed even with a slight overall decline in the number of elderly. For instance, Table 3 shows that 5.4 percent of the total elderly population in non-metropolitan west Tennessee counties are currently residing in nursing homes, but this varied greatly by age cohort. The proportion of the elderly population in nursing homes by age cohort for the 19 non-metropolitan counties was 0.9 percent for the 65 to 69 age cohort, 2.1 percent for the 70 to 74 percent age cohort, 4.2 percent for the 75 to 79

TABLE 3: ESTIMATED PROPORTION OF THE 1990 ELDERLY POPULATION BY AGE COHORT IN THE 46 NON-METROPOLITAN WEST TENNESSEE NURSING HOMES

Age Cohort	Number		Proportion
	Total Population	In Nursing Homes	
65-69	21219	190	.0090
70-74	18181	387	.0213
75-79	15315	637	.0416
80-84	9927	940	.0947
85+	7352	1744	.2372
Total	71,994	3,898	.0541

Note: This information was retrieved from the 1991 Joint Annual Report of Nursing Homes.

age cohort, 9.5 percent for the 80 to 84 age cohort and 23.7 percent for the 85 and above age cohort.

Using these percentages and change in number of persons by age cohort between 1990 and 2000, the estimated residents in nursing homes would increase from 3,898 to 4,283 between 1990 and the year 2000 or an increase of 9.9 percent based upon changes in population by age cohort if use of nursing homes remained unchanged by age (Table 4). By year 2010, it is projected that the elderly population who are 85 and above, living in nursing homes will consist of 2294 residents or 31.5 percent greater than in 1990.

Table 5 shows that nursing home facilities are unequal in their population by sex of patients. Of the facilities interviewed, only 26.2 percent of the residents were men. Table 5 also shows that over 66.7

TABLE 4: SUMMARY OF THE ESTIMATED NUMBER OF ELDERLY RESIDING IN THE 46 NURSING HOMES BY AGE COHORT FOR 1990[1], 2000, 2010 FOR NON-METROPOLITAN WEST TENNESSEE NURSING HOMES

Age Cohort	Number of elderly in nursing homes			Percent change		
	1990	2000	2010	1990-2000	2000-2010	1990-2010
65-69	190	178	207	-6.3	16.3	8.9
70-74	387	364	355	-5.9	-2.5	-8.3
75-79	637	611	569	-4.1	-6.9	-10.7
80-84	940	934	874	-0.6	-6.4	-7.0
85+	1,744	2,196	2,294	25.9	4.5	31.5
Total	3,898	4,283	4,299	9.9	0.4	10.3
Total Elderly	71,994	70,659	72,286	-1.9	2.3	0.4

[1]The 1990 data was obtained from the 1991 joint annual reports. The data for 2000 and 2010 were estimated from the projected age cohorts for these plans and level of use by age cohort in 1990.

TABLE 5: SUMMARY OF AGE AND SEX DISTRIBUTION OF PERSONS IN 25 NURSING HOME FACILITIES LOCATED IN NON-METROPOLITAN COUNTIES IN WEST TENNESSEE, 1991.

Age Cohorts	Number			Percent	Sex Ratio in Facility	Sex Ratio of Tennessee Population
	Females	Males	Total			
Less than 65	63	67	130	5.7	0.9 - 1.0	1.0 - 1.0
65-69	70	39	109	4.7	1.8 - 1.0	1.2 - 1.0
70-74	131	71	202	8.6	1.8 - 1.0	0.9 - 1.0
75-79	230	107	337	14.4	2.1 - 1.0	1.6 - 1.0
80-84	400	124	524	22.4	3.2 - 1.0	2.0 - 1.0
85-89	437	118	555	23.8	3.7 - 1.0	2.7 - 1.0[1]
90-94	256	60	316	13.5	4.3 - 1.0	--- ---
95-99	114	23	137	5.9	5.0 - 1.0	--- ---
100+	24	2	26	1.1	12.0 - 1.0	--- ---
Total	1,725	611	2,336	100.0	2.8 - 1.0	1.4 - 1.0

Footnote: Data was obtained from the 1991 Joint Annual Reports. The sex ratios for the State of Tennessee was obtained from the 1990 Census of Population and Housing. Summary Tape File 1, Profile 2.

[1] This sex ratio of women to men is in relation to those 85 and over. the comparable ratio for those in the 25 nursing home facilities is 4.1 to 1.0 when the four cohorts are totaled.

percent of the residents in these facilities were age 80 or greater. The greatest frequency of persons was in the 85 to 89 age cohort, 23.8 percent. However, not all persons in nursing homes were elderly. Some 130 persons or 5.7 percent of the patients were under the age of 65.

Table 5 also shows a comparison of sex ratios for residents in the 25 nursing homes surveyed and those in the State of Tennessee for the given age cohorts. According to this table, the ratio of females in nursing homes to men in nursing homes is higher than for the State of Tennessee.

In the nursing homes interviewed, the total population consisted of 2.8 females to every 1.0 male. However, the state ratio consists of 1.4 females to every 1.0 male of those who are elderly.

I. SERVICES AND SUPPORT

The total number of patients in these 25 facilities was 2,336 and the average occupancy was 93 residents per facility. All facilities had participants in the Medicaid support program. Of all facilities, Medicaid was the main source of funding. Table 6 shows that the average percentage of residents receiving Medicaid funding was 83.6 percent and all but five of the facilities had 85 percent or more of their residents funded through Medicaid.

It is also interesting to note that 21 of the 25 facilities interviewed were strictly intermediate care facilities, which would account for the low percentage of patients funded through Medicaid.

When addressed with the question of expansion, the study showed that 19 facilities have undergone some type of expansion within the last five years and 7 facilities have plans to expand the size of their facilities in the near future. Of the seven facilities planning to undergo expansion, five have also reported expansion within the last five years. According to some administrators, a major obstacle affecting the ability to expand the size of their facility is obtaining the "Tennessee Certificate of Need." This is a process in which any Tennessee nursing home desiring to expand the size of its facility would have to go through. Some of the administrators expressed concern about future long-term health care programs and the availability of resources to fund treatment and

TABLE 6: THE PERCENTAGE OF RESIDENTS FUNDED THROUGH MEDICAID

Funding	Percentage of Patients
Medicaid	83.6
Private pay	12.3
Medicare	4.1

services of the elderly. Eighteen of the twenty-five facility administrators (72%) reported that the conditions of the patients do not vary much by age. However, administrators considered few of the patients in their 90's to be mentally alert. Those facilities that reported a significant physical and mental condition variation by age had extremely high percentages of Alzheimer patients.

When addressing the question of whether or not patients are reluctant to enter into nursing home facilities, the administrator stated that most patients are apprehensive, but realize that there are limited options and that their family members can no longer provide the type of care needed for them. Even though the residents come from various backgrounds and suffer from many different conditions, the elderly patients suffer from fears. Sociologically speaking, the elderly residents fear that they are being "left there to die" and "that their family will not visit them regularly." There is much concern about visitation among the elderly residents. Many studies have shown that old age often brings depression. The elderly population are more secure about themselves and the facility they are placed if there are frequent visits from friends and family. The

feelings associated with nursing home care, by the elderly, is mainly due to the insecure feelings that the current procedures and operations of the facilities are similar to past perceptions of nursing homes. Presently nursing home facilities are governed by stricter policies and procedures that protect the residential rights of patients than in the past.

Physically speaking, the many elderly residents fear their mental and physical conditions will worsen to the point they will lose control over themselves and become incapacitated. There is usually more concern towards becoming senile or demented than their physical condition. There is also much concern about falling and hurting themselves. It is interesting that death is not a great fear among the residents. Many are content with themselves and their lives and are realistic in accepting the fact that death is inevitable. Residents are generally not reluctant to enter into nursing home facilities. Some 76 percent of the administrators responded that their patients are generally not reluctant to enter into their facilities.

This study also showed that residents requiring services from nursing homes who fall under the intermediate level of care are suffering from three major illnesses that, in many cases, are directly related to each other. An estimated sixty-four percent of the intermediate care residents suffer from some form of senile/dementia. Strokes make up the second most significant illness, in that, 60 percent of the residents are ill due to this disorder. The third most prominent illness is Alzheimer's disease. Even though this is less prominent than strokes and dementia, several administrators have reported that, over the years, there has been a significant increase in patients suffering from Alzheimer's disease.

Currently, 26 percent of the sampled population have been diagnosed as having Alzheimer's disease.

When considering the primary dysfunctions of the elderly in skilled care, it was found that an extremely high percent of residents were suffering from strokes (75%). It was assumed that the distinguishing factor between the stroke patients in skilled care and those in intermediate care is related to the availability of therapeutic programs and care at the facility and to the level of seriousness of the strokes. The second most prominent response was fractured hips (50%). In analyzing the third major condition causing the need for skilled care services, this study showed that the responses varied and there was no dominant response.

The major problems expressed by administrators were the size of the waiting list and the procedures that must be followed. It was the general opinion that guidelines regulating the order of the waiting list should be changed. Facilities that had large waiting lists reported that the size of their waiting list was not a good indicator of the actual number of clients needing immediate entrance into their facilities. Some facilities reported difficulty in filling their beds when availability occurred. It was stated that clients desiring entrance may be on several lists within a given area, with the assumption that when they do require the services of the nursing homes, their names will already be in the system and their services would be met more expediently.

Table 7 shows that there is an incorrect assumption in the perceived idea of clients concerning the length of time they must wait after being placed on a waiting list. The average length of time a needy client remains on a waiting list is about 7.7 months. It is quite possible

TABLE 7: THE AVERAGE LENGTH OF TIME AN APPLICANT REMAINS ON A WAITING LIST

Facility	Number of Facility Beds	Number on Waiting List	Average Time On Waiting List	Ratio of Waiting List to Beds
1	182	230	4.0	1.26
2	174	154	6.0	0.89
3	142	172	4.5	1.21
4	140	31	6.0	0.22
5	139	124	3.0	0.89
6	138	30	3.0	0.22
7	134	60	3.0	0.45
8	130	80	3.0	0.62
9	127	30	6.0	0.24
10	121	300	6.0	2.48
11	121	50	4.0	0.41
12	120	260	2.0	2.17
13	100	20	1.0	0.20
14	94	200	36.0	2.13
15*	90	---	3.0	----
16	83	120	6.0	1.45
17	73	40	6.0	0.55
18	71	94	6.0	0.32
19	68	45	3.0	0.66
20	66	80	6.0	1.21
21	62	63	18.0	1.02
22	56	293	6.0	5.23
23	55	15	3.0	0.27
24	49	50	24.0	1.02
25	48	100	3.0	2.08
Total/Mean	2,583	2,641	7.7	1.13

*This facility just completed an expansion that removed all persons from their waiting list. This was a temporary event and normal waiting list time would be 3 months for the former sized facility.

that this may be considered a long time for relatives of clients suffering from serious illnesses, however, alternate methods should be sought until space is available in a nursing home.

Data in Table 8 show that the average length of stay of patients in intermediate care is 41 months as opposed to the average length of stay of patients in skilled care of slightly more than 5 months (Table 9). In the survey, only 4 facilities had both skilled and intermediate levels of care.

In determining the mental status of the patients, three categories were created and administrators were asked to place the proportion of patients in each category: extreme, significant, and insignificant. The extreme category represented patients "who did not know who they were or who others were." Patients fell under the category of significant if they, "generally knew who others were, but frequently forget." The category of insignificant was those who were considered to be operating on a normal mental standpoint and fully comprehensive and able to hold a conversation. The weighted average response of residents categorized as extreme represented 28 percent of the sampled population (Table 10). Also, Table 10 shows patients categorized as significant accounted for a larger percentage of the population (36%). Another 36 percent of the sampled population fell into the category of insignificant.

The various measures produced slightly different distributions such as weighted means, unweighted means and medians. However, these variables have large standard deviations. This is an indication that there is either great variability between the 25 facilities studied, in terms of the mental conditions of the residents or that administrators

TABLE 8: THE AVERAGE LENGTH OF STAY OF A RESIDENT IN INTERMEDIATE CARE

Facility	Number of Intermediate Beds	Average Length of Stay in Intermediate in Months
1	166	60
2	157	24
3	142	60
4	140	12
5	139	36
6	138	36
7	134	24
8	130	42
9	128	48
10	121	30
11	121	84
12	90	60
13	90	48
14	83	29
15	71	36
16	68	36
17	62	36
18	55	12
19	49	60
20	48	30
Weighted Average		41

Note: The total size of facility was adjusted to exclude those facilities that chose not to respond to the question. Five facilities chose not to respond to the question pertaining to the average length of stay of residents in intermediate care.

TABLE 9: THE AVERAGE LENGTH OF STAY OF A RESIDENT IN SKILLED CARE

Facility	Number of Skilled Beds	Average Length of Stay in Skilled in Months
1	32	3.0
2	30	2.5
3	17	1.5
4	16	18.0
Weighted Average	95	5.1

TABLE 10: THE PERCENTAGE OF RESIDENTS SUFFERING FROM EXTREME, SIGNIFICANT AND INSIGNIFICANT CASES OF MENTAL DETERIORATION

Facility	Size of Facility	Mental Condition: Extreme Mental Illness	Significant Mental Illness	Insignificant Mental Illness
		percentage		
1	187	50	30	20
2	174	15	50	35
3	142	25	25	50
4	140	60	30	10
5	139	07	11	82
6	138	25	50	25
7	134	25	50	25
8	130	20	40	40
9	128	25	50	25
10	121	60	25	15
11	121	30	20	50
12	120	26	31	43
13	100	02	40	58
14	94	50	30	20
15	90	25	35	40
16	83	40	30	30
17	73	10	35	55
18	71	20	30	50
19	68	15	40	45
20	67	05	80	15
21	62	15	35	50
22	56	20	21	59
23	55	50	40	10
24	49	18	72	10
25	48	25	15	60
Weighted Mean		27.9	35.9	36.2
Unweighted Mean		26.5	36.6	36.9
Median		25.0	35.0	40.0
Standard Deviation		16.4	15.9	19.2
Spearman's Rho Coefficient With Size of Facility		.25	-.29	-.12
Spearman's Rho Coefficient With Extreme Physical Condition		.21	----	----

were poor judges of mental condition. There is no way of assessing this item.

Since more elderly people are being diagnosed with Alzheimer's disease, and the origins of this incurable disorder is unknown, more people are becoming unable to care for themselves due to mental disorders and depression than the physical problems and disorders that may occur. It is assumed that there is a relationship between the size of a facility and the status of a resident's mental awareness.

Hypotheses Testing

Null Hypothesis 1: There is no relationship between the size of the facility and the percent of elderly residents suffering from an extreme case of mental illness.

In computing a Pearson r value, an attempt was made to determine whether there was any association between the size of a facility and the percentage of residents suffering from extreme mental conditions. The result indicated that there was no relationship between the two variables. The Spearmans Rho was also calculated to measure the association and yielded similar results.

The final results of these tests indicated that there is no relationship between these two variables, and the null hypothesis at the .05 level of probability can not be rejected. In testing the relationship between size of facility and residents whose mental status is "insignificant," there was found to be no relationship between these two variables. It is concluded that there is not enough evidence to support

a positive or negative relationship between size of facility and mental condition of patients.

Table 11 shows that in determining the physical status of the residents in these nursing home facilities, three categories were created: extreme, significant, and insignificant. The extreme category represented patients suffering from terminal illness and/or the later stages of Alzheimer's disease. The significant category was of patients suffering from chronic conditions of arthritis, osteoporosis, and respiratory problems. Those with insignificant category included those with little physical deterioration, other than normal aging and no acute illness. Patients suffering from extreme illness represented an estimated 29 percent of the sampled population based on the weighted mean of data from the administrators. The largest portion of residents were represented in the category of significant (50%). Only 21 percent of the sampled population fell in the category of insignificant or little physical deterioration beyond normal aging.

The measures of central tendency were somewhat inconsistent with each other in the categories of extreme physical illness and insignificant physical illness. The median figures were different from the means at both extremes. In both instances the medians were less than the means. Strongest emphasis should be placed on the weighted average considering the fact that several facilities reported that they had no elderly suffering from extreme physical illnesses and insignificant physical illnesses. The administrators may have been poor judges of physical conditions, at least, in terms of the three categories outlined.

TABLE 11: THE PERCENTAGE OF RESIDENTS SUFFERING FROM EXTREME, SIGNIFICANT AND INSIGNIFICANT CASES OF PHYSICAL DETERIORATION

Facility	Size of Facility	Percent of Patients		
		Extreme Physical Illness	Significant Physical Illness	Insignificant Physical Illness
1	187	70	20	10
2	174	10	80	10
3	142	50	25	25
4	140	70	20	05
5	139	51	39	10
6	138	25	50	25
7	134	10	90	0
8	130	20	60	20
9	128	20	70	10
10	121	0	90	10
11	121	30	65	05
12	120	30	50	20
13	100	05	25	70
14	94	06	05	89
15	90	40	50	10
16	83	06	14	80
17	73	20	25	55
18	71	10	70	20
19	68	10	70	20
20	67	0	90	10
21	62	85	15	0
22	56	16	41	43
23	55	50	35	15
24	49	18	80	02
25	48	20	80	0
Weighted Mean		29.3	49.6	21.1
Unweighted Mean		26.9	50.4	22.6
Median		20.0	50.0	10.0
Standard Deviation		23.5	27.1	25.2
Spearman's Rho Coefficient With Size of Facility		.28	-.14	-.02
Spearman's Rho Coefficient With Extreme Mental Condition		.21	----	----

Hypotheses Testing

Null Hypothesis 2: There is no relationship between the size of the facility and the percent of elderly residents suffering from an extreme case of physical illness.

A Pearson's r test was conducted on data shown in Table 12 to determine whether there was a relationship between the size of the facilities and the extreme and insignificant physical statuses of elderly residents. The test showed that there was not a significant relationship between the size of a facility and the percentage of residents suffering from extreme physical conditions. In computing the Spearman's Rho, similar results were calculated.

In testing the relationship between size of facility and residents suffering from insignificant physical problems, Pearson's r indicated that there was no relationship between the two variables. Likewise, the Spearman's Rho indicated the same results.

Pearson's r yielded similar relationships when analyzing the extreme and insignificant mental status as opposed to analyzing the extreme and insignificant physical status. Since there was little relationship between the size of a facility and both the extreme mental and physical status of the elderly resident, it is questionable whether or not there is any relationship between the residents suffering from extreme mental conditions as opposed to the residents suffering from extreme physical conditions. However, it was hypothesized that there would be a strong relationship between the elderly suffering from extreme physical conditions and those suffering from extreme mental conditions. Pearson's

TABLE 12: THE PERCENTAGE OF PATIENTS WHO ARE MOBILE WITHOUT THE AID OF A NURSE OR PHYSICAL SUPPORT DEVICE, MOBILE WITH THE ASSISTANCE OF A NURSE OR PHYSICAL SUPPORT DEVICE AND BED CONFINED

Facility	Size of facility	Mobility		
		Patients Mobile Without Assistance	Patients Mobile With Assistance	Bed Confined and Immobile Without Assistance
		- - - - - - percentage - - - - - - -		
1	182	08	30	62
2	174	30	30	40
3	142	10	15	75
4	140	10	75	15
5	139	10	39	51
6	138	10	50	40
7	134	10	75	15
8	130	05	40	55
9	127	30	30	40
10	121	15	30	55
11	121	10	20	70
12	120	25	50	25
13	100	70	15	15
14*	94	60	30	10
15	90	25	50	25
16	83	23	70	07
17	73	10	50	40
18	71	15	50	35
19	68	05	75	20
20	66	0	40	60
21	62	15	10	75
22	56	23	18	59
23	55	15	10	75
24	49	20	04	76
25	48	04	30	66
Weighted Mean		19.9	38.7	41.1
Unweighted Mean		18.3	37.4	44.2
Median		15.0	30.0	40.0
Standard Deviation		16.3	21.2	23.0

* In facility number 14, no response was given for the "patient mobility without assistance," therefore, no percentage could be calculated for the "bed confined." However, approximations have been made in view of other responses.

r indicated that there was no relationship. The results of these tests indicated that there was not a large enough relationship between the variables to reject the null hypothesis.

Table 12 shows that 21 percent of the sampled population was able to move around relatively easy, without the aid of a nurse or any type of physical support device. Another 39 percent of the population was able to move around with the aid of some type of physical support device such as a cain, walker or wheeler. The data show that 40 percent of the sampled population was unable to leave their beds or go to the bathroom without the assistance of a nurse. There was, however, a large variation in facilities when dealing with patients who are mobile without the assistance of a nurse or any type of physical support device. The responses ranged from zero to 70 percent. It is interesting that when dealing with patients who are mobile without assistance, the percentage residents who are mobile did not increase as the size of the facility increased. The facilities that have significantly large percentages of residents who are mobile are extreme cases and are not characteristic of facilities in non-metropolitan west Tennessee.

Hypothesis Testing

Hypothesis 3: There is no relationship between patients who are mobile without the assistance of a nurse or some type of physical support device and residents suffering from little physical deterioration.

A Spearman's Rho was computed to determine whether there was any relationship between those residents who had little to no physical and mental deterioration and the mobility of residents. This test showed that

when dealing with residents who were able to move around relatively easily without the assistance of a nurse or mechanical support device, there no relationship with regards to those with insignificant mental problems. The relationship between the proportion of residents having mobility without assistance and proportion residents with little to no physical deterioration yielded no significant relationship. The null hypothesis was not rejected.

Further analysis indicated that when comparing the proportion of patients with mobility of residents requiring mechanical devices or a nurses assistance with those residents with the proportion reported to have little physical deterioration, it was found that no relationship existed. Also, when comparing the mobility of residents requiring mechanical devices or a nurses assistance with residents with little to no mental deteriorations, no relationship between the two variables occurred.

Maybe the little relationship found between mobility without assistance and the insignificant physical and mental deterioration of residents was due to the fact that the majority of the residents in these facilities require some type of assistance from nurses or mechanical devices to help them move around.

Hypotheses Testing

Hypothesis 4: There is no positive relationship between the size of the facilities and the percentage of residents suffering from Alzheimer's disease.

A Spearman's Rho test was conducted on data in table 13 to determine

the relation between proportion of residents suffering from Alzheimer's disease and the size of the facility. However, no relationship was found. Since there exists no relationship between the two variables, the null hypothesis cannot be rejected.

Table 14 shows that the average age of females and males upon entering the nursing home facilities are somewhat similar. On a weighted average, females were 78 years old when they enter into nursing homes and males were 75 years old. However, 8 facilities reported an age of 85 as being the mean age of females when they enter their facility and ten facilities reported an age of 75 for males. The administrators of 15 facilities reported a higher average age for women, six reported a higher age for men and four reported the same age for women and men. The range in average age was great. It ranged from 65 to 90 for women and 65 to 90 for men.

Hypothesis Testing

Hypothesis 5: There is no relationship between the average age of females when they enter the facilities and the percentage of residents suffering from extreme mental conditions.

In conducting a Spearman's Rho on the variables it was concluded that no relationship between the two variables existed. Further analysis indicated that when considering the relationship between the average age of females upon entrance into the facilities and the percentage of residents suffering from insignificant physical conditions, there was no relationship. The results of this test

TABLE 13: THE PERCENTAGE OF PATIENTS WHO HAVE BEEN DIAGNOSED WITH ALZHEIMER DISEASE

Facility	Size of Facility	Patients with Alzheimer's (Percent)
1	187	20
2	174	15
3	142	50
4	140	02
5	139	18
6	138	30
7	130	75
8	128	08
9	121	10
10	121	30
11	120	10
12	100	20
13	94	43
14	90	40
15	83	27
16	73	10
17	68	50
18	67	40
19	56	18
20	55	15
21	48	18
Weighted Mean		25.8
Unweighted Mean		26.1
Median		27.0
Standard Deviation		17.9

Note: Four facilities chose not to respond to the question pertaining to the percentage of residents diagnosed with Alzheimer's disease.

TABLE 14: THE AVERAGE AGE OF MALES AND FEMALES WHEN THEY ENTER THE FACILITY

Facility	Size of Facility	Average Age of Female Upon Entrance	Average Age of Males Upon Entrance
1	187	75	75
2	174	78	85
3	142	75	75
4	140	78	75
5	139	75	75
6	138	74	75
7	134	80	75
8	130	85	73
9	128	85	85
10	121	69	75
11	121	88	85
12	120	73	78
13	100	81	78
14	94	85	69
15	90	90	80
16	83	85	82
17	73	74	70
18	71	85	73
19	68	85	75
20	67	65	70
21	62	70	68
22	56	85	65
23	55	85	80
24	49	80	75
25	48	70	75
Weighted Mean		78.8	76.4
Unweighted Mean		79.0	75.6
Median		78.0	75.0
Mode		85.0	75.0
Standard Deviation		6.7	5.2

failed to reject the null hypothesis.

Table 15 shows all rank order correlation tests conducted on the data obtained from the survey. The tests conclude that no relationship between the various facilities and the variables analyzed was sufficient to reject the null hypothesis. However, when looking at the relationship between the proportion of residents who suffer from extreme physical illnesses and those who are bed confined, the relationship is stronger than the relationship between residents who are bed confined and those suffering from extreme mental illnesses. The relationship between proportion of patients with alzheimer disease and the proportion with extreme physical and mental conditions of residents were equal, in that, both tests yielded no relationship.

I. SUMMARY

The large variation in responses denotes that there was little relationship of responses by size of facility and may indicate a lack of precision and exactness in responses of administration. Individually, there was little consistency of administrator's response with respect to size of facility and the physical and mental conditions of residents. However, collectively there may be fairly good accuracy in the responses of the administrators with respect to the overall general characteristics and status of the residents in non-metropolitan west Tennessee nursing home facilities. This is possible if the responses equally overstated and understated the actual situation. The central tendency of individual administrators assessments may present a more correct picture even though the assessment of individual facilities may be misleading. Nursing

TABLE 15: SUMMARY TABLE OF RANK ORDER CORRELATION TESTS

	Extreme physical	Bed confined	Size	Extreme mental	Age of males	Percentage Alzheimer's
1. Extreme physical	-----	.40	.28	.21	.11	-.24
2. Bed confined	.40	-----	-.23	.08	-.10	-.07
3. Size	.28	-.23	-----	.25	.31	-.04
4. Extreme mental	.21	.08	.25	-----	.30	-.24
5. Age of male entering	.11	-.10		.30	-----	-.22
6. Percentage alzheimer	-.24	-.10	-.04	-.24	-.22	-----

homes may attract similar types of patients who have numerous physical and mental problems. Thus, size of facility would not be associated in any systematic fashion with characterization of patients.

The vast range of responses by administrators may show that the categories used were "poor" or that many administrators were not good judges. For instance, the range and variation in the average age of entrance may indicate a lack of knowledge by administrators of a basic characteristic rather than major differences between facilities. There is not any known reason why mean age of persons at time of entrance would vary greatly between facilities. The range of age of women from 65 to 90 is huge and a standard deviation of 6.7 years is very large. The actual situation may be quite different and not associated very well with the estimates of nursing home administrators. On the other hand, the average age estimates of all administrators may be fairly close to the actual situation.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

I. CONCLUSION

Twenty-five west Tennessee nursing home facilities of the 46 in non-metropolitan west Tennessee counties were selected for the purpose of determining the demographic characteristics and the current status of nursing homes in non-metropolitan west Tennessee counties. The administrators of the 25 facilities were interviewed.

The percentage of elderly, between 1990 and 2000, is projected to decline by 1.9 percent. However, during this same time frame, the percentage of elderly in nursing homes is projected to increase 9.9 percent because of the aging within the elderly cohort. On the other hand, between year 2000 and 2010, the total elderly population is projected to increase by 2.3 percent, but only a small increase of 0.4 percent would enter into nursing homes based on age composition of the elderly.

The analysis from this study indicates that by year 2010, there will not be a major increase in the number of elderly persons in non-metropolitan west Tennessee nursing homes. However, the composition of the elderly by analysis of the five year age cohorts will undergo tremendous changes. From 1990 to 2000, the 85 and above age group will increase by 25.9 percent. The other age cohorts are projected to experience a decline in population ranging from -0.6 to -6.3 percent. However, from 2000 to 2010 the 65 to 69 age cohort will experience an increase of 16.3 percent, but nursing home use by this age cohort is low. The 85 and above age cohort will also experience an increase of 4.5

percent with the remaining age cohorts experiencing a decline in their size ranging from -2.5 to -6.9 percent. From 1990 to 2000, the most rapidly growing age cohort in the non-metropolitan west Tennessee counties is projected to be those 85 and above. Because of this the demand for nursing home beds would increase 10 percent from 1990 to 2000 in spite of a projected 2 percent decline in the total elderly population.

When analyzing the mental and physical status of residents in these nursing homes, it was concluded that there exists little to no relationship between the proportion of patients with certain characteristics and size of facilities. When speaking in terms of the mental and physical condition of the residents, this can be justified in the fact that residents who are requiring the services of these nursing homes are suffering from several disorders that are both difficult to classify in terms of seriousness and identifying what is the major physical or mental dysfunction. Collective judgement of administrators of the mental conditions of residents in these facilities indicated that 28 percent of the residents suffer from extreme mental illness and another 36 percent of the residents suffer from mental conditions that would be considered significant. The remaining 36 percent have mental conditions that would be considered insignificant.

When looking at the physical conditions of residents, 29 percent of the residents were placed in the category of having extreme physical problems other than of a chronic nature. The majority of the residents, 50 percent, fall in the category of significant physical problems. Only 21 percent of the residents were judged to have little to no physical problems beyond those of persons their age. In determining the percent of

residents who suffer from Alzheimer's disease, the study showed an estimated 26 percent of the residents suffer from this disease. This disorder was analyzed separately in this study because the various stages a patient could be in that would make it difficult to classify the disorder in the given categories and whether it is physical or mental.

The vast majority of the residents were either bed confined (40%), or were able to move about with the aid of a nurse or a walker, wheel chair, or cain (39%). The remaining 21 percent were able to move about without the aid of a nurse or any type of physical support device. It should be noted that some residents who may be able to move about relatively easy from a physical standpoint may not be mentally alert.

Several conclusions were drawn from the data presented in this study. The following conclusions appear to be most warranted:

1. This study showed that an estimated 5.4 percent of the elderly population in non-metropolitan west Tennessee are residing in nursing homes. This figure is near the national average.

2. When analyzing the composition of the elderly population who will be residing in nursing homes from 1990 to 2000, it is projected that the 85 and above age cohort will be the only cohort of elderly that is expected to increase while the total number of elderly will decline slightly.

3. When analyzing the total elderly population in the 19 non-metropolitan west Tennessee counties, the total elderly are expected to increase slightly from 2000 to 2010. Because of the age composition of the elderly population, no additional beds need to be built this decade if the rate of use does not change from the present time by age cohort.

4. The waiting list is a poor measure of the availability of nursing home beds in non-metropolitan west Tennessee counties. While the total waiting list equals the number of beds in the 25 facilities studied, the turnover rate indicates a need for no more than 20 percent greater capacity.

5. The majority of the residents in these nursing homes suffer from chronic physical and mental illnesses. Given the proportion of nursing home patients with major mental and physical problems, the probability is that at least one half of the patients have both a major mental and major physical problem.

6. Eighteen of the 25 facility administrators interviewed reported that age was not a good predictor of the mental and physical conditions of the residents in nursing homes.

7. Generally speaking, the greatest fear of the elderly population, according to the administrators, is being abandoned and left to die by their families. They also fear being unable to do anything for themselves.

8. The three major illnesses of residents in intermediate care is senile/dementia, strokes, and Alzheimer's disease. Residents in skilled care most often suffer from strokes and fractured hips.

9. The average length of stay for residents who are in intermediate care is 41 months or three and one-half years. The average length of stay for residents who are in skilled care is only 5 months for the four facilities that handle these.

10. There is very little distinction between the average age in which males and females enter nursing home facilities although women may be

slightly older on an average.

11. When comparing the sex ratios of residents in nursing home facilities with those of state proportions, the data shows that there is a much higher female sex ratio for residents in nursing home facilities as opposed to the state proportions. There are 2.8 females for every 1 male in the nursing homes, as opposed to 1.4 elderly females to every 1 elderly male in the State of Tennessee. This indicates that women are twice as likely to be in a nursing home than are men on an overall basis. However, a view by age specific cohorts show the difference to be about 60 percent greater. The proportion of females to males increased rapidly as the chronological age of residents in nursing homes increased. This direct relationship between age and proportion of females in the given cohorts is consistent with the State of Tennessees sex ratio.

12. The interview with health care professionals in west Tennessee confirmed that further improvements to nursing homes facilities could be met by the application of stricter regulations and more thorough monitoring of facilities.

13. This study did not reveal that ageism, or discrimination against elderly, was a major problem in non-metropolitan west Tennessee counties; however, this concept was not heavily addressed in this study.

II. RECOMMENDATIONS

1. The elderly population in the non-metropolitan west Tennessee counties may better be served by providing alternate means of long-term care for the elderly who are able to provide some forms of care for themselves. Some nursing homes are creating facilities in which residents

are able to live in a private bedroom that is separated from the nursing home unit. These types of facilities are appropriate for residents who are able to get around relatively easily, but may have problems bathing, preparing their meals, or monitoring their medication. This type of care would also better serve that population of elderly who are in nursing homes that need less frequent visits. By providing assisted living facilities, more nursing home beds would be available for people who are in a greater need for more intensive services.

2. With Alzheimer's disease becoming more prevalent among the elderly, maybe due to later mortality, facilities should become more specialized to deal with certain conditions that are most prevalent among the elderly population in west Tennessee.

3. Revisions should be made concerning the procedure of eliminating residents from the official waiting lists who are currently not ready for entrance or who are residing in another facility. Waiting lists should be kept regionally as an alternative method to individual facilities having separate waiting lists and often having the same applicants on several nursing home lists.

4. An increase in governmental funding should be appropriated to residents who are currently on Medicaid and Medicare. This will, in turn, allow facilities to upgrade the standard of services to the elderly residents and provide higher salaries of staff to prevent the loss of qualified staffing to other higher paying health care industries.

5. Hospital facilities as well as medical institutions should focus on long-term health care and geriatrics to better meet the needs of year 2000's health care needs.

6. Joint programs between local vocational and high schools should be conducted with nursing homes to provide health care training programs for students. This will accomplish two objectives. First, it will increase the awareness of the youth concerning the elderly population and serve to eliminate some of the societal misconceptions of the elderly population throughout our communities. Second, this program could provide students with additional career opportunities and experiences in dealing with the elderly, and help solve the nursing home crisis of finding properly trained staff.

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APPENDICES

APPENDIX A

NURSING HOME FACILITY INTERVIEW SCHEDULE

Questionnaire

1. Please describe the history and development of this nursing home facility? _____

   _____

   _____

   _____

   _____

2. How long has this facility been in operation?____

3. Is this facility on the medicaid support program?____

4. Have you previously been on the program?____ If yes, when did get off the program?____

5. Are there plans to expand the size of the this facility or move to a larger facility? ( ) yes ( ) no. If yes, please explain plans, how many new beds and when it will occur?

   _____

   _____

   _____

6. Has this facility been expanded within the last 5 years? If yes, how many beds did you have before expansion?_____

   _____

7. How is this facility owned and operated?

   ( ) Privately Owned Corporation for Profit
   ( ) Non-profit Owned Corporation
   ( ) Government Operated Facility
   ( ) Other _____

8. Is this facility operated in conjunction with any other nursing home facility? ( ) yes ( ) no. If yes, what other facilities _____

   _____

   _____

9. As a facility, what is your main source of funding? _____

_____

10. Please give estimate of the proportion of your patients who currently have medicaid and/or other funding:

Percentages	Funding
_____	medicaid funding
_____	private pay
_____	medicare funding plus other funding

11. How many residents suffer from a disease that requires daily medical intervention (drugs, etc)? _____

12. What are the primary dysfunctions that most of your patients in skilled care enter the facility?_____

_____

_____

13. With regards to those patients in intermediate care, what are three major dysfunctions that cause them to require the service of nursing homes?_____

_____

_____

14. What type of patients do you refuse to accept or are not equipped to provide care? _____

_____

_____

_____

_____

_____

_____

15. How many new residents entered your nursing home in 1992?____

16. How many candidates are currently on your waiting list? ____

17. What is the average length of time that someone remains on a waiting list?

    { } Single waiting list ____
    { } Intermediate care ____
    { } Skilled care ____

18. Are there any exceptions to your waiting list? If yes, please explain. _____

    _____

    _____

19. What are the problems caused by having a waiting list? _____

    _____

    _____

20. What is the average length of stay of the skilled care patients in your nursing home? ____

21. What is the average length of stay of the intermediate care patients in your nursing home? ____

22. What are the major reasons for the turn over in beds? (death, hospitalization, moved to more intensive care nursing home, returned home or to care of relative)? Please describe with regard to skilled care and intermediate care _____

    _____

    _____

    _____

23. Are patients reluctant to enter the facility? If yes, generally how long does it usually take them to adapt to the facility _____

    _____

    _____

24. Please provide the percentage of your patients who have various degrees of mental and memory deterioration.

_____ **Extreme**: patients who generally don't know who other people are or who they are
_____ **Significant**: Patients who generally know other people, but are frequently forgetful of names and events
_____ **Insignificant**: patients who generally know other people and remember names and events well

25. How many patients (or percent) suffer from problems that physically deteriorates the body?

_____ **Extreme**: Terminal illness, alzheimer's disease
_____ **Significant**: Arthritis, osteoporosis, respiratory problems
_____ **Insignificant**: little deterioration

26. How many patients (or percent) are able to move around relatively easy without the aid of a nurse or physical support? _____

27. How many or what percent of your residents are minorities? ____

28. How many or what percent of your patients are males? ____

29. Of those males, what is the average age when they enter the facility?____

30. What is the average age of females when they enter the facility? ____

31. What is the age distribution of residents? (Please express in Number or Percent)

AGE	
under 65	____
65-74	____
75-84	____
85+	____

32. What percent of the residents have regular visitors? ____

33. In your opinion, what is the greatest fear of the elderly?

_____

_____

_____

_____

34. What do they see in the future? _____

_____

_____

35. Does the condition of your patients vary much by age? Please explain _____

_____

_____

36. Do you require a nurse present on a 24 hour basis? ____

37. How many nurses do you require on your day shift?
RPN ____ LPN ____

38. How many nurses do you require on your night shift? RPN ____ LPN ____

39. How many part-time nurses do you have? ____

	Beds Occupied
Total Number	
Skilled Care	
Intermediate Care	
Medicaid Certified	

APPENDIX B

STATEMENT OF CONSENT FORM

STATEMENT OF PURPOSE AND CONFIDENTIALITY -- CONSENT STATEMENT

Studies have shown that there will be a substantial increase in the elderly population over the next 20 years, and the general purpose of this study is to determine the effects of this increasing demographic change on Non-metropolitan West Tennessee Counties.

One specific purpose of this study is to determine whether there is a need for an increase in nursing home facilities for the elderly population. The interview of about 45 minutes with you will ask about the general characteristics of the elderly population within your facility and general information concerning the nursing home facility with regards to the type of care provided and the current and future goals of the facility. Your participation is purely voluntary throughout the interview and can end at any time.

Your identity will be kept strictly confidential. Only the interviewer, Victor R. Wilburn, will have access to your individual comments. Any reference to your individual responses will be disguised to protect your identity. Only the aggregate opinions of all participants will be reported. All interview schedules will be kept by Mr. Wilburn for safe keeping. Your participation in this study will subject you or your facility and patients to no known risks.

If you have any questions regarding this research, either now or in the future, please contact Dr. Frank Leuthold, Department of Agricultural Economics and Rural Sociology, P. O. Box 1071, Knoxville, TN 37901-1071, or call 615/974-7231. Again, your participation in this study is voluntary and you may refuse to participate.

I have read and understood the explanation of this study and agree to participate.

_____

Name (please print)

_____

Signature

_____

Date

APPENDIX C

TABLE 16: PROJECTED POPULATION AND PERCENTAGE CHANGE FOR ELDERLY BETWEEN THE AGES OF 65 TO 69 IN WEST TENNESSEE COUNTIES

COUNTIES	Year		Percentage Change	Year	Percentage Change
	1990	2000	1990-2000	2010	2000-2010
BENTON	834	809	-3.0	948	17.2
CARROLL	1433	1330	-7.2	1551	16.6
CHESTER	583	573	-1.7	677	18.2
CROCKETT	681	501	-26.4	585	16.8
DECATUR	591	499	-15.6	633	26.9
DYER	1552	1331	-14.2	1712	28.6
FAYETTE	964	1030	6.8	1233	19.7
GIBSON	2455	2151	-12.4	2256	4.9
HARDEMAN	1039	918	-11.6	1003	9.3
HARDIN	1079	1135	5.2	1313	15.7
HAYWOOD	766	735	-4.0	709	-3.5
HENDERSON	1063	1135	6.8	1325	16.7
HENRY	1687	1490	-11.7	1696	13.8
LAKE	328	281	-14.3	258	-8.2
LAUDERDALE	986	806	-18.3	939	16.5
McNAIRY	1055	1036	-1.8	1311	26.5
OBION	1409	1397	-0.9	1677	20.0
TIPTON	1258	1309	4.1	1720	31.4
WEAKLEY	1456	1295	-11.1	1466	13.2
Total	21219	19761	-6.9	23012	16.5

Source: Dr. Donald W. Hastings, "Population Projections on West Tennessee Counties for the age group 65 to 69." The University of Tennessee, Knoxville, 1992.

TABLE 17: PROJECTED POPULATION AND PERCENTAGE CHANGE FOR ELDERLY BETWEEN THE AGES OF 70 TO 74 IN WEST TENNESSEE COUNTIES

COUNTIES	Year		Percentage Change	Year	Percentage Change
	1990	2000	1990-2000	2010	2000-2010
BENTON	640	649	1.4	656	1.1
CARROLL	1289	1195	-7.3	1141	-4.5
CHESTER	465	444	-4.5	475	7.0
CROCKETT	645	469	-27.3	478	1.9
DECATUR	500	469	-6.2	455	-3.0
DYER	1252	1174	-6.2	1194	1.7
FAYETTE	861	848	-1.5	898	5.9
GIBSON	2197	1984	-9.7	1713	-13.7
HARDEMAN	812	779	-4.1	669	-14.1
HARDIN	882	997	13.0	971	-2.6
HAYWOOD	782	662	-15.3	597	-9.8
HENDERSON	808	875	8.3	849	-3.0
HENRY	1416	1423	0.5	1332	-6.4
LAKE	229	174	-24.0	168	-3.4
LAUDERDALE	899	693	-22.9	697	0.6
McNAIRY	921	982	6.6	965	-1.7
OBION	1292	1103	-14.6	1202	9.0
TIPTON	1030	1085	5.3	1136	4.7
WEAKLEY	1261	1090	-13.6	1087	-0.3
Total	18181	17095	-6.0	16683	-2.4

Source: Dr. Donald W. Hastings, "Population Projections on West Tennessee Counties for the age group 70 to 74." The University of Tennessee, Knoxville, 1992.

TABLE 18: PROJECTED POPULATION AND PERCENTAGE CHANGE FOR ELDERLY BETWEEN THE AGES OF 75 TO 79 IN WEST TENNESSEE COUNTIES

COUNTIES	Year		Percentage Change	Year	Percentage Change
	1990	2000	1990-2000	2010	2000-2010
BENTON	517	535	3.5	520	-2.8
CARROLL	1007	990	-1.7	918	-7.3
CHESTER	393	429	9.2	427	-0.5
CROCKETT	565	471	-16.6	346	-26.5
DECATUR	417	424	1.7	358	-15.6
DYER	1164	1081	-7.1	930	-14.0
FAYETTE	678	617	-9.0	650	5.3
GIBSON	1856	1733	-6.6	1527	-11.9
HARDEMAN	665	692	4.1	617	-10.8
HARDIN	704	766	8.8	808	5.5
HAYWOOD	650	546	-16.0	518	-5.1
HENDERSON	695	783	12.7	839	7.2
HENRY	1133	1125	-0.7	997	-11.4
LAKE	235	209	-11.1	178	-14.8
LAUDERDALE	789	666	-15.6	544	-18.3
McNAIRY	760	791	4.1	779	-1.5
OBION	1094	947	-13.4	934	-1.4
TIPTON	864	856	-0.9	888	3.7
WEAKLEY	1129	1023	-9.4	907	-11.3
Total	15315	14684	-4.1	13685	-6.8

Source: Dr. Donald W. Hastings, "Population Projections on West Tennessee Counties for the age group 75 to 79." The University of Tennessee, Knoxville, 1992.

TABLE 19: PROJECTED POPULATION AND PERCENTAGE CHANGE FOR ELDERLY BETWEEN THE AGES OF 80 TO 84 IN WEST TENNESSEE COUNTIES

COUNTIES	Year		Percentage Change	Year	Percentage Change
	1990	2000	1990-2000	2010	2000-2010
BENTON	359	338	-5.8	343	1.5
CARROLL	713	744	4.3	680	-8.6
CHESTER	273	278	1.8	258	-7.2
CROCKETT	397	381	-4.0	278	-27.0
DECATUR	277	290	4.7	272	-6.2
DYER	718	690	-3.9	643	-6.8
FAYETTE	499	489	-2.0	479	-2.0
GIBSON	1166	1173	0.6	1050	-10.5
HARDEMAN	459	395	-13.9	375	-5.1
HARDIN	486	503	3.5	565	12.3
HAYWOOD	454	437	-3.7	369	-15.6
HENDERSON	431	447	3.7	485	8.5
HENRY	722	769	6.5	778	1.2
LAKE	143	110	-23.1	85	-22.7
LAUDERDALE	467	463	-0.9	354	-23.5
McNAIRY	498	503	1.0	532	5.8
OBION	633	639	0.9	541	-15.3
TIPTON	545	527	-3.3	553	4.9
WEAKLEY	687	687	0	593	-13.7
Total	9927	9863	-0.7	9233	-6.4

Source: Dr. Donald W. Hastings, "Population Projections on West Tennessee Counties for the age group 80 to 84." The University of Tennessee, Knoxville, 1992.

TABLE 20: PROJECTED POPULATION AND PERCENTAGE CHANGE FOR ELDERLY AGED 85 AND ABOVE IN WEST TENNESSEE COUNTIES

COUNTIES	Year		Percentage Change	Year	Percentage Change
	1990	2000	1990-2000	2010	2000-2010
BENTON	247	297	20.2	311	4.7
CARROLL	504	642	27.4	692	7.8
CHESTER	204	283	38.7	324	14.5
CROCKETT	253	343	35.6	338	-1.5
DECATUR	195	260	33.3	286	10.0
DYER	522	703	34.7	730	3.8
FAYETTE	318	392	23.3	396	1.0
GIBSON	842	1034	22.8	1059	2.4
HARDEMAN	365	395	8.2	393	-0.5
HARDIN	363	498	37.2	570	14.5
HAYWOOD	354	438	23.7	434	-0.9
HENDERSON	301	377	24.2	426	13.0
HENRY	526	683	29.8	741	8.5
LAKE	120	134	11.7	122	-9.0
LAUDERDALE	383	477	24.5	470	-1.5
McNAIRY	381	508	33.3	560	10.2
OBION	508	592	16.5	582	-1.7
TIPTON	360	479	33.1	507	5.8
WEAKLEY	606	721	19.0	732	1.5
Total	7352	9256	25.9	9673	4.5

Source: Dr. Donald W. Hastings, "Population Projections on West Tennessee Counties for the age group 85 and above." The University of Tennessee, Knoxville, 1992.

TABLE 21: THE NUMBER OF NURSING HOME FACILITIES AND STAFFED BEDS BY COUNTY IN 1990

Counties	Number of Facilities	Number of Staffed Beds
Benton	1	186
Carrol	3	326
Chester	1	88
Crockett	2	241
Decatur	1	118
Dyer	3	293
Fayette	2	206
Gibson	7	648
Hardeman	2	189
Hardin	4	222
Haywood	1	140
Henderson	2	176
Henry	3	314
Lake	1	120
Lauderdale	2	253
McNairy	2	232
Obion	3	259
Tipton	1	196
Weakley	5	459

***This information is from the Tennessee's Health Series, part 2. Health Planning Commission. Nashville, TN. 1992.

TABLE 22: PERCENTAGE OF ELDERLY RESIDENTS SIXTY-FIVE YEARS AND ABOVE WITHIN NON-METROPOLITAN WEST TENNESSEE COUNTIES IN 1990

Counties	Number of County Residents Age 65 or Above	Percentage of County Residents Age 65 and above
Benton	2597	18
Carrol	4946	18
Chester	1918	15
Crockett	2541	19
Decatur	1980	19
Dyer	5208	15
Fayette	3320	13
Gibson	8516	18
Hardeman	3304	14
Hardin	3514	16
Haywood	3006	15
Henderson	3298	15
Henry	5484	20
Lake	1055	15
Lauderdale	3524	15
McNairy	3615	16
Obion	4936	16
Tipton	4057	11
Weakley	5139	16
Total/Average	71994	16

Source: This information is from the Tennessee's Health Series, part 2. Health Planning Commission. Nashville, TN. 1992.

TABLE 23: SUMMARY OF AGE AND SEX DISTRIBUTION OF PERSONS IN 46 NURSING HOME FACILITIES LOCATED IN NON-METROPOLITAN COUNTIES IN WEST TENNESSEE, 1991.

Age Cohorts	Number			Percent
	Females	Males	Total	
Less than 65	115	114	229	5.6
65-69	127	63	190	4.6
70-74	265	122	387	9.4
75-79	454	183	637	15.4
80-84	701	239	940	22.8
85-89	760	217	977	23.7
90-94	414	98	512	12.4
95-99	183	34	217	5.3
100+	35	3	38	1.0
Total	3054	1073	4127	100.0

Note: This information was retrieved from the 1991 Joint Annual Report of Nursing Homes.

VITA

Victor Romando Wilburn was born in Nashville, Tennessee, on February 8,1969. His former years of education consisted of the Bolivar Central School System (completed in 1987). He received a B. S. in Rural Development from Tennessee State University in May 4, 1991. In the summer of 1989 and 1990, he completed an internship with the Farmers' Home Administration and the ASCS. He spent the summer of 1991 working as an Upward Bound Counselor at Tennessee State University. He received a fellowship and entered into the masters' degree program at the University of Tennessee in August of 1991.

He is a member of the Rural Sociological Society and served as vice president of the National Association for Minorities in Agriculture and Natural Resource Related Sciences. His plans are to pursue a Doctor of Philosophy degree in Rural Sociology and to serve society through research and instruction.

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